Minutes of the 291st meeting of the State Level Expert Appraisal Committee held on 6th October through Video Conference (VC) on National Informatics Centre (NIC).

In the wake of recent crisis of COVID-19, lockdown situation, the agenda of the present meeting was mailed to expert Committee in advance and a Video conference meeting on NIC was organised in this regard on 06/10/2021 at 13.30 hrs.

The 291st meeting of the State Level Expert Appraisal Committee (SEAC) was held online by Video conferencing 6th October 2021 at 13.30 hrs. Following members joined the meeting:

1.	Shri Akshay Kumar Saxena, Chairman, SEAC
2.	Dr. S. C. Pant, Vice Chairman, SEAC
3.	Dr. M. N. Patel, Member, SEAC
4.	Shri D. C. Chaudhari, Member, SEAC
5.	Shri J. K. Vyas, Member, SEAC
6.	Shri Anand Zinzala, Member, SEAC
7.	Shri B. M. Tailor, Member, SEAC
8	Shri A. V. Shah, Secretary, SEAC

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, EMP reports etc.

1	**SIA/GJ/IND2/175637/2020**	**M/s. Exemed Pharmaceuticals** Plot no. 133/1 & 133/2, Vapi GIDC Industrial Estate, Vapi, Valsad	EC Reconsideration

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

Project status: Expansion

- Project proponent (PP) submitted online application vide no. SIA/GJ/IND2/175637/2020 on dated 28/03/2021 for obtaining Environmental Clearance.
- Project proponent has submitted Form – 1, Pre-Feasibility Report & Environment Management Plan as per Notification issued by MoEF&CC vide S.O. 1223(E) dated 27th March, 2020 regarding consideration of proposals or activities in respect of Active Pharmaceuticals Ingredients (API) as B2 category.
- Earlier, this proposal was considered in the SEAC meeting dated 03.08.2021, however, PP

remained absent.

- This is an existing unit and now proposes for expansion in manufacturing of Synthetic Organic Chemicals plant(**API and its intermediate)** as below,

Sr. No.	Name of the Products	API OR Intermediate	CAS No.	Quantity MT/Month			End-use of the products
				Existing	Proposed	Total	
1	Hydroxyzine hydrochloride	API	2192-20-3	0.5	2	2.5	Antihistamine
2	Cetrizine hydrochloride	API	83881-52-1	0.5	1.5	2	Used for the relief of symptoms of hayfever and other allergic conditions.
3	p-chloro benzhydryl piperazine	Intermediates	303-26-4	3.25	1.75	5	Intermediate in the Hydroxyzine hydrochloride
4	2-(para-chlorobenzhydryl piperazine 2-ethoxyacetamide)	Intermediates	83881-37-2				Intermediate in the Meclizine hydrochloride
5	[2-(p-chlorobenhydryl piperazine 2-ethoxyacetic acid)]	Intermediates	627-03-2				Intermediate in the Cetrizine hydrochloride
6	2-(2-Chloroethoxy) acetic acid	Intermediates	14869-41-1				Intermediate in the Cetrizine hydrochloride
7	2-(2-Chloroethoxy) acetyl chloride	Intermediates	39229-33-9				Intermediate in the Cetrizine hydrochloride
8	2-(2-Chloroethoxy) acetamide	Intermediates	36961-64-5				Intermediate in the Cetrizine hydrochloride
9	Metformin DC granules	API	1115-70-4	50	50	100	Type 2 diabetes
10	Pharmaceuticals Formulations		-	2000 lac Tablet/ Capsule	2000 lac Tablet / Capsule	4000 lac Tablet / Capsule	
11	Favipiravir	API	259793-96-9	0	8	8	COVID-19

12	Levitracetam	API	102767-28-2					Epilepsy
13	Teneligliptine	API	760937-92-6					Type 2 Diabetes Mellitus.
14	Sitagliptin	API	486460-32-6					Type 2 diabetes
15	Vildagliptin and Intermediate	API	274901-16-5	0.35	7.65			Anti-diabetic
16	Cetilistate	API	282526-98-1					Lipase inhibitor
17	Ticagrelor and Intermediate	API	274693-27-5					Oral antiplatelet drug
18	Sofosbuvir	API	1190307-88-0		4.65			Treat chronic hepatitis C
19	Allopurinol and Intermediate	API	315-30-0					Decrease uric acid level
20	Bilastine and Intermediate	API	202189-78-4					Antihistamine
21	Imeglimin hydrochloride	API	775351-65-0	0	5	5		Type-2 diabetes treatments.
22	Pregabalin	API	148553-50-8					Epilepsy, Neuropathic
23	Omeprazole Powder and intermediate	API	73590-58-6	0	25	25		Duodenal and gastric ulcer.
24	Clopidogrel intermediate	Intermediates	28783-41-7	0	5	5		Intermediate in the synthesis of Clopidogrel
25	Pentaprazole	API	102625-70-7	0	2	2		Stomach ulcers
26	4, 7, Dichloroquinone	Intermediates	86-98-6	0	50	50		Used in the synthesis of hybrid aminoquinoline-triazine derivatives. HCQ Intermediate.
27	Dextromethorphan HBr & intermediate	API	125-69-9	0	5	5		Antihistamine and a cough suppressant
28	4 (2,3 Epoxypropoxy) 9H Carbazole	Intermediates	51997-51-4	0	2	2		Intermediate in the synthesis of Carvedilol
29	Montelucast	API	15176702-1	0	1	1		To prevent the wheezing and shortness of breath caused by asthma

30	Hydroxy Noval Diamime (HNDA)	Intermediates	69559-11-1	0	25	25	Intermediate of HCQ Sulphate
31	Hydroxychloroquine Sulphate	API	747-36-4	0	10	10	Used to treat COVID, Malaria, Lupus erythematosus, and Rheumatoid arthritis.
32	R & D product	API	-	0	0.1	0.1	API
	Total			**54.6**	**193.0**	**247.6**	

Brief Note of Product Profile:

1. **No of Manufacturing Plants: 2 Plant for API & its intermediates manufacturing and 2 Plants for API formulation.**
2. **Brief Note regarding number of Products to be manufactured considering plant capacity: At time 3 products manufacturing**

Specific end-uses of the products:

Sr. No	Name of the Product	CAS No. (Product)	Type/ Category of Product (API/ Intermediate)	In case of Intermediate stage of API			Said API is used for/End Use of said API
				Stage i.e. n-1, n-2, etc.	Name of API in which Intermediate Used/ End use of said Intermediate	CAS no. (API)	
1	Hydroxyzine hydrochloride	2192-20-3	API	-	-	-	Antihistamine
2	Cetrizine hydrochloride	83881-52-1	API	-	-	-	Used for the relief of symptoms of hayfever and other allergic conditions.
3	p-chloro benzhydryl piperazine	303-26-4	Intermediate	n-2	Hydroxyzine hydrochloride	2192-20-3	Intermediate in the Hydroxyzine hydrochloride

4	2-(para-chlorobenzhydryl piperazine 2-ethoxyacetamide)	83881-37-2	Intermediate	n-2	Meclizine hydrochloride	3188 4-77-2	Intermediate in the Meclizine hydrochloride
5	[2-(p-chlorobenhydryl piperazine 2-ethoxyacetic acid)]	627-03-2	Intermediate	n-1	Cetrizine hydrochloride	8388 1-52-1	Intermediate in the Cetrizine hydrochloride
6	2-(2-Chloroethoxy) acetic acid	14869-41-1	Intermediate	n-4	Cetrizine hydrochloride	8388 1-52-1	Intermediate in the Cetrizine hydrochloride
7	2-(2-Chloroethoxy) acetyl chloride	39229-33-9	Intermediate	n-3	Cetrizine hydrochloride	8388 1-52-1	Intermediate in the Cetrizine hydrochloride
8	2-(2-Chloroethoxy) acetamide	36961-64-5	Intermediate	n-2	Cetrizine hydrochloride	8388 1-52-1	Intermediate in the Cetrizine hydrochloride
9	Metformin DC granules	1115-70-4	API	-	-	-	Type 2 diabetes
10	Pharmaceuticals Formulations						
11	Favipiravir	25979 3-96-9	API	-	-	-	COVID-19
12	Levitracetam	10276 7-28-2	API	-	-	-	Epilepsy
13	Teneliglptine	76093 7-92-6	API	-	-	-	Type 2 Diabetes Mellitus.
14	Sitagliptin	48646 0-32-6	API	-	-	-	Type 2 diabetes
15	Vildagliptin and Intermediate	27490 1-16-5	API	-	-	-	Anti-diabetic
16	Cetilistate	28252 6-98-1	API	-	-	-	Lipase inhibitor
17	Ticagrelor and	27469 3-27-5	API	-	-	-	Oral antiplatelet

	Intermediate						drug	
18	Sofosbuvir	1190307-88-0	API	-	-	-	Treat chronic hepatitis C	-
19	Allopurinole and Intermediate	315-30-0	API	-	-	-	Decrease uric acid level	
20	Bilastine and Intermediate	202189-78-4	API	-	-	-	Antihistamine	
21	Imeglimin hydrochloride	775351-65-0	API	-	-	-	Type-2 diabetes treatments.	
22	Pregabalin	148553-50-8	API	-	-	-	Epilepsy, Neuropathic	
23	Omeprazole Powder and intermediate	73590-58-6	API	-	-	-	Duodenal and gastric ulcer.	
24	Clopidogrel intermediate	28783-41-7	Intermediates	n-1	Clopidogrel	113665-84-2	Intermediate in the synthesis of Clopidogrel	
25	Pentaprazole	102625-70-7	API	-	-	-	Stomach ulcers	
26	4, 7, Dichloroquinone	86-98-6	Intermediates	n-2	HCQ Sulphate	747-36-4	Used in the synthesis of hybrid aminoquinoline-triazine derivatives. HCQ Intermediate.	
27	Dextromethorphan HBr & intermediate	125-69-9	API	-	-	-	Antihistamine and a cough suppressant	
28	4 (2,3 Epoxypropoxy) 9H Carbazole	51997-51-4	Intermediates	n-1	Carvedilol	72956-09-3	Intermediate in the synthesis of Carvedilol	
29	Montelucast	151767021	API	-	-	-	To prevent the wheezing and shortness of breath caused by asthma	

30	Hydroxy Noval Diamime (HNDA)	69559-11-1	Intermediates	n-2	HCQ Sulphate	747-36-4	Intermediate of HCQ Sulphate
31	Hydroxychloroquine Sulphate	747-36-4	API	-	-	-	Used to treat COVID, Malaria, Lupus erythematosus, and Rheumatoid arthritis.
32	R & D product	--	API	-	-	-	API

- The project falls under Category B2 of project activity 5(f) as per the schedule of EIA Notification 2006 and amendment dated 27th March, 2020.
- The proposal was considered in the SEAC video conference meeting dated 06.10.2021
- Salient features of Water, Air and Hazardous Waste management are as under,

Sr. No.	Particulars	Details
A-1	Total **cost of Proposed** Project (Rs. in Crores):	

Existing	**Proposed**	**Total**
28.10 Crores	40 Crores	68.10 Crores

Break-up of proposed project Cost:

Details	**Existing (Rs. In Crores)**	**Proposed (Rs. In Crores)**	**Total (Rs. In Crores)**
Land	1.64	-	1.64
Building	10.60	8.50	19.10
Plant & Machinery (incl. EMP)	15.86	31.50	47.36

	Details of Environmental Management Plan (EMP)	As below:

EMP details (Capital cost & Recurring cost)
Bifurcation of EMP Cost

Sr. No	**Unit**		**Capital Cost (Rs.in Lacs)**	**Recurring Cost (Lac/Annum)**
1	Waste Water	ETP	10.00	264.00
		R.O. Plant	130.00	30.00
		Water Softener	10.00	18.00
		MEE Plant	375.00	228.00
		STP	25.00	12.00
		Sub Total	**550.00**	**552.00**
2	Air	Scrubber	35.00	60.00

		Bag filter	25.00	
		Sub Total	**60.00**	**60.00**
3	Hazardous Management		**15.00**	**746.00**
4	Fire & Safety	Fire hydrant network	35.00	2.40
		Safety equipment, PPE's, foam and fire extinguisher, Proximity suit and fire blanket.	10.00	5.00
		Smoke detecter , sprinkler system and MCP	20.00	1.00
		PLC System for Hydrogenation, Nitration and Chlorination.	20.00	1.00
		Occupational Health & OHC	2.00	2.00
		Sub Total	**87.00**	**11.40**
5	AWH Monitoring		**0.00**	**1.80**
6	Green Belt Development		**2.00**	**3.60**
7	CER Activity	Installation of solar street lights in Village: Valwada, Takula – Pardi, Dist. Valsad.	13.00	1.25
		15 KL R.O. plant for the Valwada village, along with storage tanks.	20.00	2.25
		Sub Total	**33.00**	**3.50**
		Grand Total	**747.00**	**1378.3**

Summary

Cost of Project in Crores per Annum:	40.00 Cr. (Proposed cost)
EMP Capital Cost in Crores per Annum and	7.47 Cr.; 18.68 % of the proposed project
EMP Recurring Cost in Crores per Annum	13.783 Cr.; 34.46 % of the proposed l project

A-3

Details of CER as per OM dated 01/05/2018 (In case of project falls under CPA/SPA, CER fund allocation to be at least 1.5 times the slabs given in the OM dated 01.05.2018 for SPA and 2 times for CPA in case of Environmental Clearance as per the mechanism published vide MoEF&CC's OM vide31.10.2019.)

% as per the OM	Rs. in Crores
1 %	40 Lakhs (1%)

Brief note on proposed activities:
As per OM no. 22-65/2017 on dated 01/05/2018 regarding "Corporate Environment Responsibility" (CER), Brownfield projects have to contribute 1% of the Additional Capital Investment, the company will contribute Rs. 40 Lakhs as funds for CER activities

Component	As per Norms	Allocation
CER	40 Lakhs (1%)	40 Lakhs (1%)

The total investment for the proposed project will be 40 Cr. considering its 1%, the unit has proposed to contribute 40 lakhs towards the CER activities. Unit has planned to dedicate 2 members from its unit which will interact with the Sarpanch to fulfil their needs as per discussion.

Sr. No.	Activity (On Need Basis)	1st Year	2nd Year	3rd Year
1	Installation of solar street lights in Village: Valwada, Takula – Pardi, Dist. Valsad.	13.00	1.25	1.25
2	15 KL R.O. plant for the Valwada village, along with storage tanks.	20.00	2.25	2.25
	Fund allocation (In Lakhs)	**33.00**	**3.50**	**3.50**

B	**Land / Plot ownership details:**	Ownership lies with the company. Land possession documents attached as Annexure 11 of Form 1.

B-1 Plot area

Existing	Proposed	**Total**
21404 Sq.m	--	21404 Sq.m

B-2 Brief note on **Area adequacy** in line to proposed project activities:
Unit shall carry out its activities in the land already procured and available with the unit. Unit proposes to provide 1022.3 Sq. Mt. for Raw material storage & Finished goods, 1053.41 Sq.mt for Utilities and 1620.1 Sq. mt for ETP & MEE.

B-3 Green belt area

	Existing (sq. meter)	Proposed (sq. meter)	**Total (sq. meter)**
Area in Sq. meter	7130	7130	7130
% of total area	33.31 %	33.31 %	33.31 %

Outside premises: Proposed:- Nil
Total proposed greenbelt: - 7130 Sq. m. (33.31%)

C Employment generation

Existing	Proposed	**Total**
405	30	435

D Water

D-1	**Source of Water Supply** (GIDC Bore well, Surface water, Tanker supply etc...)	G.I.D.C.
	Status of permission from the concern authority.	Unit has applied for additional water requirement from GIDC. Letter enclosed at Annexure C.

D-2 Water consumption (KLD)

Category	**Quantity - KLD**					**Remarks**
	Existing	**Proposed Additional**	**Total Proposed**	**Treated Water to Reuse**	**Fresh Water**	
(A) Domestic	5	25	30	0	30	Fresh water will be used.
(B) Gardening	25.31	-0.31	25	25	0	STP treated water will be reused.
(C) Industrial						
Process	0.85	43.15	44	0	44	R.O.

						Permeate water will be used.
Washings	13.09	-0.09	13	0	13	R.O. Reject water will be used.
Boiler	2.33	184.67	187	150	37	Only 1st batch run, unit shall require entire water, next batch onwards the steam condensate water 150 KLD will be reused back in the boiler.
Cooling Tower	25.5	174.5	200	54.8	145.2	54.8 KLD MEE condensate water will be reused.
Others, Scrubber, etc.	2	0.5	2.5	0	2.5	R.O. Reject water will be used.
R.O. Reject and D.M. Regeneration	0	6.5	6.5	0	6.5	It is the R.O. Reject and Softener Regeneration water generated from the respective plants.
Industrial Total	**43.77**	**409.23**	**453**	**204.8**	**248.2**	Total 453 KLD = 204.8 Reuse + 248.2 Fresh.
Total (A + B + C)	**74.08**	**433.92**	**508**	**229.8**	**278.2**	Total 508 KLD = 229.8 Reuse + 278.2 Fresh.

1. **Total water requirement** for the project: 508 KLD
2. Quantity to be **recycled**: 229.8 KLD
3. Total **fresh water** requirement: 278.2 KLD

(Total water requirement = Fresh water + Recycled water)

Summary of water requirement	Existing KLD	Proposed (Additional)	Total after Expansion KLD	Remarks

		KLD		
Total water requirement for the project (A)	74.08	433.92	508	Total water – 508 KLD
Quantity to be recycled (B)	--	229.80	229.80	Feasible to reuse.
Total fresh water requirement (C)	74.08	204.12	278.20	Total Fresh water – 278.20 KLD

Reuse/Recycle details (KLD) with feasibility. [Source of reuse & application area]

Source of waste water for reuse 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**
STP treated water	Gardening – 25 KLD	pH: 7-7.5 COD: <30 mg/l TDS: <1000 mg/l TSS: BDL	Feasible to reuse.
MEE Condensate water	Cooling Tower – 54.8 KLD	pH: 6.5 - 8 COD:< 150 mg/l TDS:< 200 mg/l	Feasible to reuse.
Steam Condensate	Boiler – 150 KLD	--	Feasible to reuse.

In case of no reuse/recycle of waste water, Give brief note on justification as why no reuse/recycle. – N.A.

D-3

Waste water generation (KLD)

Category	**Waste water - KLD**			**Remarks**
	Existing	**Proposed Additional**	**Total Proposed**	
(A) Domestic	4	+ 21	25	Will be treated in STP
(B) Industrial				
Process	0.66	+ 60.84	61.5	12 KLD High TDS effluent will be taken MEE and 49 5 KLD High COD effluent will be sent to in ETP.
R.O. Reject and D.M. Regeneration	--	+ 6.5	6.5	Will be taken to MEE
Washings	13.09	- 0.09	13	Will be taken to in ETP
Boiler	2.13	+ 1.87	4	Will be taken to MEE
Cooling Tower	1.8	+ 18.2	20	Will be taken to MEE

Scrubber	--	+ 2.8	2.8	Will be taken to MEE
Total Industrial waste water	**17.68**	**+90.12**	**107.8**	**62.5 KLD effluent will be treated in ETP and then passes through R.O. 10.5 KLD ETP R.O. Reject will be taken to MEE along with 45.3 KLD if high TDS process and utilities streams.**
Total [A + B]	**21.68**	**+ 111.12**	**132.8**	

Brief Note on worst case scenario for waste water generation(Qualitative and Quantitative):
Process water consumption & generation is calculated considering total 3 products to be manufactured at a time. Maximum effluent generating products are considered for quantitative load and high COD effluent is considered for qualitative load.

Brief justification in case of no process effluent generation or no industrial effluent generation or no high concentration effluent generation from proposed project (Whichever is applicable).

D-4 Mode of Disposal & Final meeting point (Existing and Proposed)

Existing and Proposed

Domestic :	Effluent after treatment to Gardening.
Industrial :	Effluent after treatment in M.E.E. to Reuse, Effluent after treatment in ETP to Vapi Green Enviro Ltd CETP.

D-5 Treatment facilities:

For Domestic waste water: Capacity of STP: 25 KLD

Sr. No.	Units
1	Oil Trap Tank
2	Collection Tank
3	Aeration Tank
4	MBR Tank
5	Back Wash Tank
6	Treated Water Tank

iv Treatment facility within premises with **capacity**
[In-house ETP (Primary, Secondary, Tertiary), MEE, Stripper, Spray Dryer, STP etc.
4. ETP Tank Sizes are as given below:

Sr. No.	Units	MOC	Sizes
1	Equalization Tank-1 – 1 No.	R.C.C.	5.50 x 2.00 x (3.00+2.5FB)
2	Equalization Tank-2 – 1 No.	R.C.C.	5.50 x 4.00 x (3.00+2.5FB)
3	Neutralization Tanks – 2 No.	R.C.C.	2.50 x 2.50 x (2.00+1.00HB+0.5FB)

4	Dosing Tank – 3 No.	HDPE	200 Liters
5	Flocculator – 1 No.	R.C.C.	1.50 x 1.50 x 1.5+0.20
6	Primary Clarifier – 1 No.	R.C.C.	3.00 ∅ x (2.50 SWD+0.5FB)
7	1st Stage Aeration Tank – 1 No.	R.C.C.	10.00 x 7.00 x (4.00+0.5FB)
8	Contact Tank – 1 No.	R.C.C.	1.50 x 1.00 x (1.50+0.5FB)
9	1st Stage Secondary Clarifier – 1 No.	R.C.C.	8.00 ∅ x (2.50 SWD+0.5FB)
10	2nd Stage Aeration Tank – 1 No.	R.C.C.	5.00 x 3.00 x (4.00+0.5FB)
11	Contact Tank – 1 No.	R.C.C.	1.50 x 1.00 x (1.50+0.5FB)
12	2nd Stage Secondary Clarifier – 1 No.	R.C.C.	8.00 ∅ x (2.50 SWD+0.5FB)
13	Intermediate Sump – 1 No.	R.C.C.	5.00 x 3.00 x (3.00+0.5FB)
14	Sludge Sump – 1 No.	R.C.C.	5.00 x 3.00 x (3.00+0.5FB)
15	Filter Press Shed – 1 No.	R.C.C.	6.00 x 4.00
16	MCC Panel Room – 1 No.	R.C.C.	4.00 x 4.00
17	Sludge Drying Beds – 4 No.	R.C.C.	4.00 x 4.00
18	Dual Media Filter – 1 No.	M.S.	0.60 ∅ x 1.8 HT
19	Activated Carbon Filter – 1 No.	M.S.	0.60 ∅ x 2.0 HT
20	Hazardous Waste Storage Area – 1 No.	R.C.C.	14.00 x 6.00
21	Office Cum Laboratory – 1 No.	R.C.C.	7.00 x 3.00

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

Total Industrial effluent generation: 107.8 KLD

1. 45.3 KLD (including 12 KLD High TDS process effluent) and 10.5 KLD ETP – RO Reject water will be taken to MEE plant.

2. 62.5 KLD including 49.5 KLD High COD Process effluent will be taken to ETP.

Stream 1: 55.8 KLD will be taken to MEE

Here, effluents from High TDS Process effluent, Boiler blow down, Cooling tower bleed off, R.O. reject, Softener regeneration, Scrubber effluent and part of ETP treated water will be taken to MEE for its treatment and reuse.

After treatment, Condensate water will be reused in to Cooling Tower and MEE salt will be sent to TSDF.

Characteristics of Effluent from Various Streams:

Sr. No.	Parameter	High TDS Process effluent	R.O. Reject and Softener Regeneration	Boiler Blow-down	Cooling Tower Bleed off	Scrubber	ETP Treated Water
		12 KLD	6.5 KLD	4 KLD	20 KLD	2.8 KLD	10.5 KLD
1.	pH	6-8	7 - 8	8 - 9	6 - 8	6 – 8	7 – 8
2.	TDS mg/L)	10000-12000	5000 – 7000	3000 - 4000	3000 - 4000	2000 – 3000	15000-17000
3.	COD (mg/l)	2000-3000	50 – 100	200 - 500	100 - 200	100 - 200	1500-1800

Hence, the inlet to MEE and its outlet quality will be as given below:

Sr. No.	Parameter	Composite to MEE	MEE Condensate water to Cooling Tower
		55.8 KLD	54.8 KLD
1.	pH	6.5 – 8.0	6.5 – 8.0
2.	TDS (mg/L)	7000-8500	< 250
3.	COD (mg/L)	750-1100	< 100

Stream 2:

Effluent to ETP: 62.5 KLD will be taken to ETP

Here the high COD stream from process effluent (49.5 KLD) and washings (13 KLD) summing up to total 62.5 KLD of effluent will be taken to ETP for its further treatment and disposal.

Sr. No.	Parameter	Process Effluent	Washings	Composite to ETP
		49.5 KLD	13 KLD	62.5 KLD
1.	pH	2 - 4	2 - 4	2 - 4
2.	TDS (mg/L)	6000 - 8000	3000 - 5000	5500 - 7500
3.	COD (mg/L)	20000 - 24000	2000 - 3000	16250 - 19700
4.	BOD (mg/L)	6500 - 7000	600 - 1000	5200 - 5800
5.	NH_3-N (mg/L)	100 - 150	20 - 50	80 - 130

Hence, the characteristics for the composite sample is as given:

Sr. No.	Parameter	Before treatment at the ETP inlet	After treatment (at the ETP outlets)	Standard/ Norms prescribed
1.	pH	2 - 4	7.0 -7.5	6.5 – 8.5

	2.	TDS (mg/L)	5500 - 7500	< 1000	< 2100
	3.	SS (mg/L)	200-300	< 50	300
	4.	BOD (mg/L)	5200 - 5800	< 250	< 400
	5.	COD (mg/L)	16250 - 19700	< 750	< 1000
	6.	Phenolic compounds (mg/L)	< 0.5	< 0.1	< 1
	7.	Ammonical Nitrogen (mg/L)	80 - 130	< 15	< 50

segregation, Separate ETP (ETP-1, ETP-2….) for each stream shall be proposed.

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.

5. CETP Vapi is maintaining the Norms of GPCB, hence section 18(1) (b) not applicable.

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

6. Not applicable

D-6 In case of Common facility (CF) like CETP, Common Spray dryer, Common MEE, CHWIF etc.

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

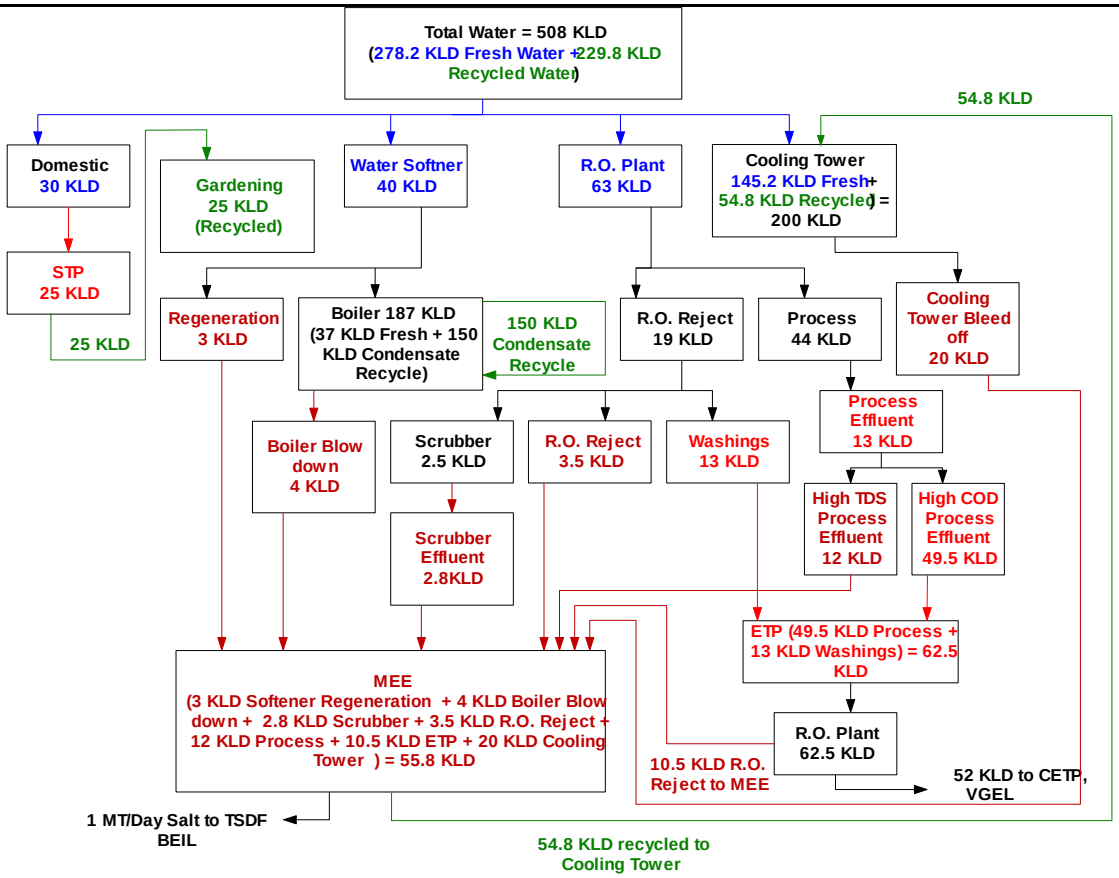
- Vapi Green Enviro Ltd CETP/CSWP, Vapi Green Enviro Ltd CMEE/MVR/CSD

Membership of Common facility (CF)

(For waste water treatment) – Membership No. 470 of Vapi Green Enviro Ltd. attached as **Annexure A**.

D-7 **Simplified water balance diagram with reuse / recycle of waste water**

Proposed Water Balance Diagram:



E	**Air**
E-1	**Brief Note on fuel based heat energy requirement and worst case scenario thereof:** Unit has proposed to discontinue its existing boilers. It proposed to install new boiler of 10 TPH and Thermic fluid heater of 6 Lack Kcal/hr. Which will consume Natural gas at the rate of 14640 SCM Day and 1610 SCM/Day respectively. The fuel consumption is given considering the worst case where utilities will be run for 24 Hrs. a day.
E-2	**Flue gas emission details** No. of Boilers/TFH/Furnaces/DG sets etc. with capacities viz. TPH, Kcal/hr, MT/hr, KVA etc. **Existing**

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 (Existing) – 0.6 TPH	31	Natural Gas	1500 SCM/day.	PM SO_2 NO_X	---
2.	Boiler (Existing) – 0.8 TPH					
3.	D.G. Set (Existing) – 750 KVA	11	Diesel	70 Lit./Hr.	PM SO_2 NO_X	N.A.

4.	D.G. Set (Existing) – 100 KVA	11	Diesel	10 Lit./Hr.	PM SO_2 NO_X	N.A.

Proposed

Sr. No.	Source of emission With Capacity	Stack Height (meter)	Type of Fuel	Quantity of Fuel MT/Day	Type of emissions i.e. Air Pollutants	Air Pollution Control Measures (APCM)
1.	Boiler (Proposed - Working) – 10 TPH	31	Natural Gas	14640 SCM/day.	PM SO_2 NO_X	Adequate stack height.
2.	Boiler (Proposed - Standby) - 10 TPH					
3.	Thermic fluid heater - 6 Lac Kcal (Proposed - Working)	20	Natural Gas	1610 SCM/day.	PM SO_2 NO_X	Adequate stack height.
4.	D.G. Set (Existing) – 100 KVA	11	Diesel	10 Lit./Hr.	PM SO_2 NO_X	N.A.
5.	D.G. Set (Proposed) - 1000 KVA	11	Diesel	125 Lit./Hr.	PM SO_2 NO_X	Adequate stack height.
6.	D.G. Set (Proposed) - 1000 KVA	11	Diesel	125 Lit./Hr.	PM SO_2 NO_X	Adequate stack height.

E-3 Process gas i.e. Type of pollutant gases (SO_2, HCl, NH_3, Cl_2, NO_x etc.)

Existing

Sr. No.	Stack attached to	Stack Height in meter	Type of Emissions	APCM	Parameter	Permissible Limit
1.	Reactor vessel	11	HBr Cl_2 NH_3	Caustic Scrubber	HBr Cl_2 NH_3	< 20 mg/Nm^3 < 9

2.	Reactor vessel	11		Caustic Scrubber		mg/Nm^3 < 175 mg/Nm^3
3.	Scrubber Autocoater	14	Dust Particle	Bag filter	PM	< 150 mg/Nm^3
4.	Scrubber for FBD 1,2,3	11	Dust Particle	Bag filter	PM	< 150 mg/Nm^3

Proposed

Sr. No.	Specific Source of emission (Name of the Product & Process)	Type of emission	Stack/ Vent Height (meter)	Air Pollution Control Measures (APCM)	Permissible Limit
1	Reactor vessel	NOx	11	Two Stage Caustic Scrubber	< 40 mg/Nm3
2	Reactor vessel	Cl_2	11	Two Stage Caustic Scrubber	< 9 mg/Nm3
3	Reactor vessel	NH_3	11	Two Stage Acid Scrubber	< 175 mg/Nm3
4	Scrubber Autocoater	Dust Particle	14	Bag Filter	< 150 mg/Nm3
5	Scrubber for FBD 1,2,3	Dust Particle	11	Bag Filter	< 150 mg/Nm3

Note:

- **Details of gaseous raw materials used in proposed project**

Sr. No.	Name of gaseous raw materials	Name of Product	Quantity MT/Month
1.	Ammonia gas	Imeglimin hydrochloride	0.9645
2.	Ammonia gas	Omeprazole Powder and Intermediates	25.8152
3.	Ammonia gas	Hydroxy Noval Di Amine (HNDA)	1.3170
4..	Hydrogen gas	Hydroxy Noval Di Amine (HNDA)	0.1563

- **Estimation of process gas emission (Product wise and Total)**

Sr. No.	Name of product	Production per month in MT	Product (Kg./batch)	Gas	Worst Case Scenario

							considering group capacity
			Main	Kg/Batch	Kg/Month	Kg/Day	Kg/Day
1	2-(2-chloroethoxy) acetyl chloride)	5	113	90	3982.30	132.74	132.74
2	2-(2-chloroethoxy) acetamide)	5	90	15	883.33	27.78	0.00
3	Omeprazole Powder and intermediate	25	920	93	2527.17	84.24	84.24
4	Clopidogrel intermediate	5	575	115	1000	33.33	33.33
5.	Hydroxy Noval Di Amine (HNDA)	25	560	5	223.21	7.44	7.44
	Total			**318**	**8566.02**	**285.53**	**257.75**

➢ **Requirement of the scrubbing media (KL per Day) considering solubility (Product wise and Total)**

Sr. No.	**Name of product**	**Production per month in MT**	**Product (Kg./batch)**	**Scrubbing Media**	**Scrubber liquid req.**				**By-product**
			Main		**Lts./Batch**	**Lts./Month**	**Lts /Day**	**Worst Case Scenario considering group capacity, Lts/Day**	
1	2-(2-chloroethoxy) acetyl chloride	5	113	Caustic scrubber	1120	49557.52	1651.92	1651.92	To ETP

	)								
2	2-(2-chloroethoxy) acetamide)	5	90	Acid Scrubber	144	8000	266.67	--	Ammonium sulphate crystal (Salable/ TSDF) & Waste Water to ETP
3	Omeprazole Powder and intermediate	25	920	Caustic scrubber	607	16494.57	549.82	549.82	Sodium Nitrate Salable
4	Clopidogrel intermediate	5	575	Caustic scrubber	885	7695.65	256.52	256.52	To ETP
5	Hydroxy Noval Di Amine (HNDA)	25	560	Caustic scrubber	30	1339.29	44.64	44.64	Ammonium sulphate Solution (Salable)
	Total				**2786**	**83087.03**	**2769.57**	**2502.83**	

Yearly generation of all bleed liquors (MT/KL per Annum) as mentioned above and its sound management in HW matrix.

Sr. No.	**Name of product**	**Production per month in MT**	**Product (Kg./ batch)**	**Scrubbed liquid**			**By-product**
			Main	**Lts / Batch**	**Lts/ Month**	**KL/ Annum**	
1	2-(2-chloroethoxy) acetyl chloride)	5	113	1210	53539.82	642.48	Waste Water to ETP. Details shown in

									hazardous waste table.
		2	2-(2-chloroethoxy) acetamide)	5	90	100	5555.56	66.67	Waste Water to ETP. Details shown in hazardous waste table.
		3	Clopidogrel intermediate	5	575	10000	8695.65	104.35	Waste Water to ETP. Details shown in hazardous waste table.
			Total			**2310**	**67791.03**	**813.5**	

E-4	**Fugitive emission** details with its mitigation measures: As below:
	Fugitive emissions will be in the form of VOC during material handling, transferring and at storage area. Regular monitoring of Volatile Organic Compounds (VOCs) will be carried out in the work zone area and ambient air. Following measures will be taken to control the VOC's: • Closed handling and charging system will be provided for chemicals. • Reflux condenser will be provided over Reactors/ Vessels. • Pumps will be provided with mechanical seals to prevent leakages. • Air borne dust at all transfer operations/points shall be controlled either by spraying water or proving enclosures. • A green belt will be developed all around the plant boundary and also along the roads to mitigate fugitive & transport dust emission.
F	**Hazardous waste** (As per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016. Note: ➢ Priorities for HW Management: Pre-processing, Co-Processing, Reuse/Recycle within premises, Sell out to actual users having Rule-9 permission, TSDF/CHWIH. ➢ Quantification of hazardous waste shall be based on mass balance and calculations shall be incorporated in EMP details separately. ➢ Disposal to scrap vendors/vendors/traders is not allowed **Existing & Proposed :**
F-1	-

Sr.	**Type/Name of**	**Specific Source of**	**Category**	**Quantity (MT/Annum)**	**Management of HW**

No.	Hazardous waste	generation (Name of the Activity, Product etc.)	ry and Schedule as per HW Rules	Existing	Proposed	Total	
1	Used Oil	Gear boxes	5.1	1.2 KL/ yr.	+ 0.8 KL/Yr.	2 KL/ Yr.	Collection, storage, transportation, disposal by selling to registered re-refiners.
2	Discarded Containers	Raw material storage	33.1	600 Nos /yr.	+ 9,400 No.'s/ Yr.	10,000 No.'s/Yr.	Collection, storage, transportation, disposal by selling to authorized recycler.
3	ETP waste + MEE Salt	ETP and MEE plant	35.3	26.2 MT/ yr.	+ 434.8 MT/Yr.	461 MT/ Yr.	Collection, storage, transportation, disposal at TSDF-VEGL, Vapi.
4	Spent catalyst/spent carbon	Product: 12, 15, 19, 20, 22, 23 & 25 to 31.	28.2	0.25 MT/ yr.	+ 229.75 MT/Yr.	230 MT/ Yr.	Collection, storage, transportation, disposal by incineration at RSPL / Co-processing.
5	Process Residue	Product: 7, 8, 17, 23 & 25.	28.1	2.4 MT/ yr.	+ 212.6 MT/Yr.	215 MT/ Yr.	Collection, storage, transportation sent to cement industries for co-processing / incineration at RSPL.
6	Off specification products	--	28.4	100 Kg/ yr.	+ 14.9 MT/Yr.	15 MT/ Yr.	Collection, storage, transportation, disposal at co-processing / incineration at RSPL.
7	Date Expired, discarded and off specification drugs/medici	--	28.5	2 MT/ yr.	+ 13 MT/Yr.	15 MT/ yr.	Collection, storage, transportation, disposal at co-processing / incineration at

	nes						RSPL.
8	Spent organic solvent	Product: 1 to 5, 7, 9,12-14,16,17,19, 25, 27-28 & 30.	28.6	96 KL/ yr.	+ 8521 KL/Yr.	8671 KL/ Yr.	Collection, storage, transportation, disposal by selling to authorized dealer / co-processing.
9	Sludge from wet scrubbers	Scrubbers.	37.1	1.2 MT/ yr.	--	1.2 MT/ yr.	Collection, storage, transportation, disposal at TSDF – VGEL, Vapi.
10	Inorganic salt (MnO_2)	Product: 6.	B15	57 MT/ yr.	+ 98 MT/Yr.	155 MT/ Yr.	Collection, storage, transportation, will be sold to authorized end user / disposal at TSDF – VGEL, Vapi.
11	Inorganic salt (KCl)	Product: 6.	B15	71 MT/ yr.	+ 84 MT/Yr.	155 MT/ Yr.	Collection, storage, transportation, will be sold to authorized end user / disposal at TSDF – VGEL, Vapi.
12.	Inorganic salt - Ammonium Sulphate	Product: 8 & 30.	B15	--	+ 3710 MT/Yr	3710 MT/ Yr	Collection, storage, transportation, disposal at TSDF – VGEL, Vapi / will be sold to authorized end user.
13.	Inorganic salt - Sodium chloride	Product: Imeglimin hydrochloride	B15	--	+ 51 MT/Yr	51 MT/ Yr	Collection, storage, transportation, disposal at TSDF – VGEL, Vapi / will be sold to authorized end user.
14.	Inorganic salt - Ammonium tartarate salt	Product: Imeglimin hydrochloride	B15	--	+ 81 MT/Yr	81 MT/ Yr	Collection, storage, transportation, disposal at TSDF – VGEL, Vapi / will be sold to authorized end user.
15	Distillation	Product: 1,	36.1	--	+ 953	953	Collection,

	.	residue	4, 5, 12, 13, 15,17,18,22, 23,30,31.			MT/Yr.	MT/ Yr.	storage, transportation sent to cement industries for co-processing / will be sent for incineration at RSPL.
	16	Scrubber liquid	Product: 7, 8 & 24.	--	--	+ 1022 KL/Yr.	1022 KL/ Yr.	Will be sent to ETP for its treatment and disposal.
	17	Piperazine HCl	Product: p-chloro benzhydryl piperazine	--	--	+ 115 MT/Yr.	115 MT/ Yr.	Collection, storage, transportation, disposal by selling to authorized end user / co-processing.
	18	Ammonium chloride	Product: 8.	B15	--	34 MT/Yr.	34 MT/ Yr.	Collection, storage, transportation, disposal at TSDF – VGEL, Vapi / will be sold to authorized end user.
	19	Inorganic salts	Product: 5, 12, 20 & 25	B15	--	+ 240 MT/Yr.	240 MT/ Yr.	Collection, storage, transportation, disposal at TSDF – VGEL, Vapi / will be sold to authorized end user.
	20	Spent organic solvent	Product: 1, 3, 4, 5, 12-15, 17-31.	28.6	--	+ 36840 KL/Yr.	36840 KL/ Yr.	Collection, storage, reused back in process in the same product.

F-2	Membership details of **TSDF, CHWIF** etc. **(For HW management)**	Membership details of TSDF, CHWIF and M.O.U with authorised recyclers are attached **Annexure B**
F-3	Details of Non-Hazardous waste & its disposal(MSW and others)	STP sludge will be used as manure.
G	**Solvent management**, VOC emissions etc. The unit has an efficient solvent recovery system, chilled water circulation jacketed condenser, chilled water traps are installed on the vent to arrest any escape of vapors from the reaction and distillation unit. The reactors are connected to water condenser system. The receiver is also jacketed with circulation of water. The recovered solvents will then be stored and reused back in process. Proper planning and maintenance enables to have an efficient solvent recovery from the system.	

G-1 Types of solvents, Details of Solvent recovery, % recovery, reuse of recovered Solvents etc. (Details in Table Format)

Sr. No.	Name of the Product	Solvent Name	Total consumption MT/Month	Recovered Qty (MT/Month)	% Recovery	% Losses in Air	% Losses in Effluent	% Losses in Distillation Residue	% Loss in Spent carbon	% Loss in Spent solvent
1	Hydroxyzine hydrochloride	Toluene	7.5595	7.3413	97.1129	0.1373	1.7000	1.0499	0.0000	0.0000
2	Cetrizine hydrochloride	Acetone	11.3061	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	100.0000
3	p-chloro benzhydryl piperazine	Toluene	17.2109	16.7007	97.0356	0.3644	2.6000	0.0000	0.0000	0.0000
4	2-(para-chlorobenzhydryl piperazine 2-ethoxyacetamide)	Toluene	10.5093	10.2315	97.3568	0.2621	1.5000	0.8811	0.0000	0.0000
5	[2-(p-chlorobenhydryl piperazine 2-ethoxyacetic acid)]	Toluene	31.6379	30.6897	97.0027	0.2074	1.7000	1.0899	0.0000	0.0000
6	Levitracetam	Methylene dichloride	92.8276	88.1655	94.9777	0.0000	3.9088	1.1135	0.0000	0.0000
		Ethyl acetate	31.0345	29.4621	94.9333	0.0000	3.9529	1.1138	0.0000	0.0000
7	Teneligliptine	Toluene	19.7447	19.1489	96.9828	0.0172	3.0000	0.0000	0.0000	0.0000
		Isopropyl alcohol	14.3972	13.5957	94.4335	0.1665	5.4000	0.0000	0.0000	0.0000
		Methanol	7.5532	7.2482	95.9624	0.1596	0.0000	3.8779	0.0000	0.0000
8	Sitagliptin	Methylene dichloride	462.0000	438.9600	95.0130	0.1065	4.8805	0.0000	0.0000	0.0000
		Acetonitrile	64.0000	60.8000	95.0000	0.5209	4.4791	0.0000	0.0000	0.0000
		Ethyl acetate	86.4000	82.4000	95.3704	0.5215	4.1081	0.0000	0.0000	0.0000
		Toluene	104.00	98.400	94.615	0.0577	5.3269	0.0000	0.0000	0.0000

		ne	00	0	4						
		Isopropyl alcohol	280.8000	267.6000	95.2991	0.0197	4.6812	0.0000	0.0000	0.0000	
		Dimethyl formamide	0.8000	0.0000	0.0000	0.0000	100.0000	0.0000	0.0000	0.0000	
		Methanol	19.2000	0.0000	0.0000	0.0000	100.0000	0.0000	0.0000	0.0000	
9	Vildagliptin and Intermediates	Methylene dichloride	117.5294	111.6471	94.9950	0.4029	2.5000	2.1021	0.0000	0.0000	
		Isopropyl alcohole	25.4706	24.1176	94.6882	0.4642	3.0000	1.8476	0.0000	0.0000	
		Methy tert-butyl ether	27.3529	25.8824	94.6237	0.5161	4.0000	0.8602	0.0000	0.0000	
		Chloroform	203.6118	193.4118	94.9905	0.3871	4.3913	0.2311	0.0000	0.0000	
		Methanol	7.2941	6.8235	93.5484	0.2258	3.0000	3.2258	0.0000	0.0000	
		Dimethyl formamide	11.1059	10.5882	95.3390	0.8475	0.0000	3.8136	0.0000	0.0000	
		Methylene dichloride	155.4118	147.6471	95.0038	0.8743	0.0000	3.9932	0.1287	0.0000	
10	Ticagrelor and Intermediates	Ethyl acetate	153.3432	145.6509	94.9836	0.2960	4.4696	0.2508	0.0000	0.0000	
		n-Hexane	26.1834	24.8669	94.9718	0.5424	3.4689	1.0169	0.0000	0.0000	
		Methanol	2.2692	2.1556	94.9935	0.0000	5.0065	0.0000	0.0000	0.0000	
11	Sofosbuvir	Tetrahydrofuran	153.3432	145.6509	94.9836	0.2960	4.4696	0.2508	0.0000	0.0000	
		Methylene dichloride	26.1834	24.8669	94.9718	0.5424	3.4689	1.0169	0.0000	0.0000	
12	Allopurinol and Intermediates	Isopropyl alcohol	2.2692	2.1556	94.9935	0.0000	5.0065	0.0000	0.0000	0.0000	
		Formamide	153.3432	145.6509	94.9836	0.2960	4.4696	0.2508	0.0000	0.0000	
13	Bilastine and Intermediates	Acetone	26.1834	24.8669	94.9718	0.5424	3.4689	1.0169	0.0000	0.0000	
		Ethyl acetate	2.2692	2.1556	94.9935	0.0000	5.0065	0.0000	0.0000	0.0000	
14	Imeglimin hydrochloride	Methanol	153.3432	145.6509	94.9836	0.2960	4.4696	0.2508	0.0000	0.0000	
		Isobutanol	26.1834	24.8669	94.9718	0.5424	3.4689	1.0169	0.0000	0.0000	
1	Pregabali	Tolue	23.809	22.619	95.000	0.0000	5.0000	0.0000	0.0000	0.0000	

5	n	ne	5	0	0						
		Chloroform	314.2857	298.5714	95.0000	0.0000	2.4747	2.5253	0.0000	0.0000	
		Methanol	3.2698	3.1063	95.0000	0.3000	4.7000	0.0000	0.0000	0.0000	
		Isopropyl alcohol	24.8413	23.5714	94.8882	0.0000	5.1118	0.0000	0.0000	0.0000	
16	Omeprazole Powder and Intermediate	Methanol	76.7663	73.2337	95.3982	0.8850	1.7699	1.9469	0.0000	0.0000	
		Chloroform	157.6087	154.4837	98.0172	0.6034	1.0345	0.3448	0.0000	0.0000	
		Toluene	110.9239	105.9783	95.5414	0.9064	0.9799	2.5723	0.0000	0.0000	
		Acetone	32.2011	30.7065	95.3586	0.8439	0.0000	0.0000	0.0000	3.7975	
		Methylene dichloride	10.1902	9.6467	94.6667	0.3333	0.0000	0.0000	0.0000	5.0000	
17	Clopidogrel Intermediate	Toluene	10.4348	10.1217	97.0000	0.3333	1.0000	0.0000	0.0000	1.6667	
18	Pentaprazole	Toluene	3.1273	3.0000	95.9302	1.1628	0.9070	2.0000	0.0000	0.0000	
		Methylene dichloride	31.4000	18.3818	58.5408	0.5790	0.2872	2.0000	0.0000	38.5929	
		Chloroform	2.2136	2.1000	94.8665	1.0267	0.1068	4.0000	0.0000	0.0000	
		Methanol	0.1436	0.1364	94.9367	5.0633	0.0000	0.0000	0.0000	0.0000	
19	4,7 Dichloroquinoline	Paraffin	117.6471	116.4706	99.0000	0.2500	0.7500	0.0000	0.0000	0.0000	
		Toluene	60.3529	58.3529	96.6862	1.3645	0.4493	1.5000	0.0000	0.0000	
		Methanol	26.1176	24.8235	95.0450	1.3514	0.6036	3.0000	0.0000	0.0000	
20	Dextromethorphan HBr and Intermediates	Toluene	51.2143	49.7143	97.0711	0.4184	0.5105	2.0000	0.0000	0.0000	
		Methanol	3.5000	3.3571	95.9184	4.0816	0.0000	0.0000	0.0000	0.0000	
		R-(-)-Mandelic acid	3.0000	2.4286	80.9524	4.7619	0.2857	14.0000	0.0000	0.0000	
		Isopropyl Alcohol	2.3571	2.2286	94.5455	2.4242	0.0303	3.0000	0.0000	0.0000	
21	4-(2,3-Epoxypropoxy)-9H carbazole	Methanol	13.1343	12.4776	95.0000	0.2727	4.7273	0.0000	0.0000	0.0000	
		Ethyl acetate	11.3433	10.7761	95.0000	0.1053	4.8947	0.0000	0.0000	0.0000	
22	Montelukast	Toluene	57.5732	53.8049	93.4548	0.0379	6.5073	0.0000	0.0000	0.0000	
		Ethyl acetate	22.0000	20.8780	94.9002	0.6652	4.4346	0.0000	0.0000	0.0000	
		Methanol	15.6341	14.8537	98.0078	1.9922	0.0000	0.0000	0.0000	0.0000	

		Heptane	1.1707	1.1341	98.8750	1.1250	0.0000	0.0000	0.0000	0.0000	
23	Hydroxy Noval Di Amine (HNDA)	Cyclohexane	116.7411	110.1786	94.3786	0.0325	5.5889	0.0000	0.0000	0.0000	
		Methylene dichloride	76.7857	72.9464	95.0000	0.4302	4.5698	0.0000	0.0000	0.0000	
24	Hydrocychloroquine sulphate	Isopropyl aclohol	9.8250	9.3750	95.4198	0.3995	41807	0.0000	0.0000	0.0000	
		Ethyl acetate	31.0063	29.4375	94.9405	0.0280	5.0314	0.0000	0.0000	0.0000	
		Chloroform	97.7813	92.8750	94.9824	0.5433	4.4743	0.0000	0.0000	0.0000	
		Methanol	27.1875	25.6250	94.2529	0.1494	0.0000	5.5977	0.0000	0.0000	

G-2 **Brief Note on LDAR proposed:**

- Leak Detection and Repair (LDAR) program is proposed to be implemented to comply with environmental regulations for reducing the fugitive emissions of targeted chemicals into the environment. Leaking equipment, such as valves, pumps, and connectors, are probable source of emissions of volatile organic compounds (VOCs) and volatile hazardous air pollutants (VHAPs).
- Periodic monitoring of work area will be carried out to check the fugitive emission.
- VOC detectors will be installed at various places to detect leak.
- It is proposed that the site shall implement the LDAR and monitoring protocol as per Clause 7.6.2 of CPCB Guideline. The details of the same are as follows:

1.) Source Identification

Leak detection and repair (LDAR) program includes following sources:

a. Block valves;
b. Control valves;
c. Pump seals;
d. Compressor seals;
e. Pressure relief valves;
f. Flanges – Heat Exchangers;
g. Flanges – Piping;
h. Connectors – Piping;
i. Open ended lines; and
j. Sampling connections.

2.) To Prevent Losses in Atmosphere

a. Leak Free Pumps for transfer like Magnetic coupled pumps
b. MSW (Metal Slice Wreath) Gaskets in pipelines to prevent leakage from flanges.
c. Condenser and Reactor with cooling arrangement.

G-3 **VOC emission** sources and its mitigation measures

Following measures will be taken to control the VOC's:

1. Closed handling and charging system will be provided for chemicals.
2. Reflux condenser will be provided over Reactors/ Vessels.
3. Pumps will be provided with mechanical seals to prevent leakages.

Following measures will be taken to control the VOC's:

4. Closed handling and charging system will be provided for chemicals.
5. Reflux condenser will be provided over Reactors/ Vessels.

- Pumps will be provided with mechanical seals to prevent leakages.

H	SAFETY details
H-1	**Details regarding storage of Hazardous chemicals** **(For tank storages only including spent acid and spent solvent tanks))**

➢

Sr. no	Name of Chemical	Capacity of Tank	Number of Tanks	Hazardous Characteristics of Chemical
1	Isopropyl alcohol	15 KL	1	Flammable

Brief note on storage of Hazardous chemicals in Tanks

- 1. Class A/B/C petroleum products will be received through road tanker and stored in underground storage tank as per petroleum rules.
- 2. Tank farm will be constructed as per explosive department requirement and separation distance is maintained.
- 3. Static earthing provision will be made for road tanker as well as storage tank.
- 4. Flame arrestor with breather valve will be provided on vent line.
- 5. Road tanker unloading procedure will be prepared and implemented.
- 6. Fire load calculation will be done and as per fire load Hydrant System is provided as per NFPA std. and Fire extinguishers will be provided as per fire load calculation.
- 7. Spark arrestor will be provided to all vehicles inside premises.

Brief note on storage of Hazardous chemicals other than Tanks i.e. Drum, Barrels, Carboys, Bags etc.

- Some chemicals will be received at plant in drums by road truck and stored in a separate drum storage area.
- FLP type light fittings will be provided.
- Proper ventilation will be provided in godown.
- Proper label and identification board /stickers will be provided in the storage area.
- Conductive drum pallets will be provided.
- Drum handling trolley / stackers/fork lift will be used for drum handling. Separate dispensing room with local exhaust and static earthing provision will be made.
- Materials will be stored as per its compatibility study and separate area will be made for flammable, corrosive and toxic chemical drums storage.
- Smoking and other spark, flame generating item will be banned from the Gate.
- Handling of materials from Drum will be done only through Mechanical Transfer System.

Safety details of Hazardous Chemicals:

Type of Hazardous Chemicals	Safety measures
Ammonia	1. Cylinder storage shade to be provided. 2. Cylinder leakage kit to be provided 3. Flame proof equipment, pumping transfer, close process provided. 4. Cylinder storage area is away from the process plant. 5. Safety Shower and eye wash is provided near storage Area. 6. Two-way regulator valve to be provided on Header. 7. SOP's to be prepared for safe handling of Ammonia Cylinder. 8. Regular Mock-drill conducted for ammonia emergency. 9. SCBA sets is kept ready at Ammonia handling area. 10. Safety valve is provided on vaporizer header and outlet of safety valve connected to scrubber.
Acetonitrile	**1**. Separate stored will be in locked room. 2. Kept ay from water sources. 3. Total body protection suite will be provided to charging operator with Air line respirator. 4. Safe operating (Charging) procedure will be prepared and displayed in process and storage area. 5. Total close process will be available for charging and handling. 6. Antodote kit for cyanide will be ketp ready in OHC. 7. Training will be being provided to handling of Acetonitrile. 8. SCBA sets will be available in handling area.
Hydrogen gas	1. Hydrogen road skid/Bank will be received by road and skid will be stored away from process plant. 2. PRV station provided with shut off valve and safety valve. 3. Flame proof type electrical fitting installed. 4. Static earthing and electric earthing (Double) provided. 5. Jumpers for static earthing on pipeline flanges of flammable chemical will be provided. 6. Non sparking tools will be used for hydrogen line fitting.

	7. Hydrogen detector will be provided for leak test. 8. Pressure gauge will be provided

➢ **Applicability of PESO : Not Applicable**

H-2 **Types of hazardous Processes involved and its safety measures:**
(Hydrogenation process, Nitration process, Chlorination process, Exothermic Reaction etc.)

Type of Process	Safety measures including Automation
Hydrogenation process	• **Provision of Safety Valve & Rupture Disk on reactor**. • PLC (Programmable Logical Control) base process controls and operation of plant will be installed. • All electrical equipment's shall be installed as per Hazardous Area Classification. • **Total enclosed process system.** • Instrument & Plant Air System. • **Nitrogen blanketing in Hydrogenation reactor.** • **Emergency dumping vessel will be provided during unforeseen circumstances.** • Safety valve and Rupture disc provided on reactor. • Cooling, Chilling and alternate power arrangement have been made on reactor. • Process area and Hydrogen cylinder bank shall be far away as per standards practice. • PRV station with shut off valve, safety valve provision will be made for hydrogenation reaction safety. • Standard Operating procedure shall be followed during operation of Hydrogen Gas charging in to reactor and after completion of reaction Nitrogen purging will be done. • Flame arrestor will be provided on vent line of reactor and it will be extended above the roof level. • Safe Catalyst charging method will be adopted. • SOP will be displayed and operators will be trained for the same. • Static earthing and electric earthing (Double) will be provided. • Jumpers for static earthing on pipeline flanges of flammable chemical will be provided. • **Hydrogen gas detector will be installed for early detection of gas leak.** **PREVENTION AND CONTROL MEASURES:** **DETAIL** | **PREVENTION & CONTROL MEASURES** Design and construction requirements | Develop processes and equipment so that the high risks are reduced by engineering to safe design levels, as to allow further risk reduction by means such as: 1) Safety distances

	2) Inerting / venting / vacuum 3) Safety devices 3) Any other solution providing the same level of safeguards, while avoiding ignition sources
Hydrogen Bank unloading area	Construction of hydrogen bank unloading area shall be developed as per guidelines of The Gas Cylinder Rules. Cylinder bank shall be kept under roof in order to avoid the contact with direct sunlight. Top ventilation shall be provided. All electrical equipment's within the premises shall be flameproof type. Unauthorized entry shall be restricted. Lightening arrestor shall be provided. Gas detection shall be provided. Water Sprinkler system shall be provided. Jumper for bonding shall be provided.
The minimum distance from a hydrogen system	Separation distances shall be kept as per the guidelines of The Gas Cylinder Rules.
Hydrogenation Process	The hydrogenation process shall be located in the open or in a building suitable for the purpose. The building shall be a light construction. The buildings not meeting this requirement will be provided with areas of light construction. The zoned areas shall be posted with signs EX (triangular shape yellow with black surround) around the perimeter warning of the possible explosion hazard. The building or structure housing the hydrogenation process shall be of fire-resistive or non-combustible construction with the ground floor at or above grade. A hydrogenation building or open process structure over two stories in height shall be provided with at least two remotely located means of door from each floor, one of which shall be enclosed or separated from the process by a wall that is blank except for doors. The enclosure or separating wall shall be of masonry or other non-combustible construction. SOP shall be followed during operation and maintenance.
Inerting	Whenever required, the hydrogenation installation (piping, equipment and reactor) shall be purged a few times with nitrogen
Venting	The hydrogen gas supply is stopped and excess pressure is vented from the reactor

	after the hydrogenation reaction and is evacuated to a safe location either outside, vertically vented to the atmosphere above roof level, or to a buffer vessel for re-use of hydrogen.
Vacuum	Vacuum is used to purge the installation from hydrogen while pressure is equalized with nitrogen
Safety devices	Rupture disc shall be provided as a part of additional control measure. Excessive temperature in the reactor or loss of cooling water will close the safety shutoff valve for the hydrogen supply. Safety valves shall separate the hydrogenation process from upstream and downstream processes.

Nitration process

- SOP will be displayed for safe charging of Nitric acid for nitration process
- Required PPEs like full body protection PVC apron, Hand gloves, gumboot, Respiratory mask etc. will be provided to operator at time of nitric acid charging.
- Make sure the absorber unit (two stage Alkali scrubber) will be working and capable of handling vented NO2 fumes.
- Neutralizing agent will be kept ready for tackle any emergency spillage.
- Safety Shower and eye wash will be provided near process area.
- Total close process will be adopted (from storage tank to measured vessel & then to reactor) for Nitric Acid charging.
- Caution note and emergency first aid will be displayed and train for the same to all employees.
- First Aid Boxes will be available in process area.
- Prevention measures for runaway reaction of nitration reaction.
- PLC (Programmable Logical Control) base process controls and operation of plant will be installed.
- Rotameter
- Level alarms
- TIC of jacket as well as the reactor
- Emergency control measures:
- Flushing water (chilled water / ice quenching) to control the runaway reaction.
- Provision of Drainage of the contents of the nitrator underneath reactor; the contents will be neutralized (by Alkali) in catch point. It

	will be sent to CF (Co-Processing/CHWIF/TSDF).
Chlorination Process	✓ Precautions for safe handling: Ensure good ventilation of the work station. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Keep the substance free from contamination. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Keep away from naked flames/heat. Observe strict hygiene. Keep container tightly closed. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Avoid contact with skin and eyes. Do not breathe fume, vapors. Wear personal protective equipment. ✓ Hygiene measures: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. ✓ Storage conditions: Store locked up. Store in a well-ventilated place. Keep cool. ✓ Heat-ignition: KEEP SUBSTANCE AWAY FROM: heat sources ✓ Prohibitions on mixed storage: KEEP SUBSTANCE AWAY FROM: reducing agents. (strong) acids. (strong) bases. metals. organic materials. ✓ Storage area: Store in a cool area. Keep out of direct sunlight. Store in a dry area. Store in a dark area. Keep locked up. Provide for a tub to collect spills. Unauthorized persons are not admitted. Keep only in the original container. Meet the legal requirements. ✓ Special rules on packaging: SPECIAL REQUIREMENTS: closing. clean. opaque. correctly labelled. meet the legal requirements. Secure fragile packaging in solid containers. ✓ Packaging materials: SUITABLE MATERIAL: synthetic material. polyethylene. glass. stoneware/ porcelain. MATERIAL TO AVOID: aluminium. Zinc

H-3	**Details of Fire Load Calculation**
-	

Total Plot Area:	21404
Area utilized for plant activity:	8615.74
Area utilized for Hazardous Chemicals Storage:	391.47
Number of Floors:	02
Water requirement for fire fighting in KLD :	72.91 KLD
Water storage tank provided for fire fighting in KLD:	375 KLD
Details of Hydrant Pumps:	1. Electrical pump (1 Nos.) Cap.: 273.0 M3/hr, Pr.:6.5 kg 2. Jokey Pump (1 Nos.) Cap.: 65.0 M3/hr, Pr.:7.0 kg 3. Diesel Pump (1 Nos.) Cap.: 273.0 M3/hr, Pr.:7.0 kg
Nearest Fire Station :	Fire Bridged Station – Vapi GIDC @ 0.16 km Time: 2.0 - 5.0 min
Applicability of Off Site Emergency Plan:	NO

H-4 Details of Fire NOC/Certificate:

Will be applied

H-5 Details of Occupational Health Centre (OHC):

Number of permanent Employee :	225
Number of Contractual	210
Area provided for OHC:	35.5 m^2
Number of First Aid Boxes :	20
Nearest General Hospital :	Hariya Hospital – 2.5 Km
Name of Antidotes to be store in plant :	Sodium Hydro-Carbonate (4% Conc.), Milk, Lime Juice, Milk of Megnesia, 10 mg diazepam injection, Airline respirator, butter milk, Pontocane (0.5% solution) or

- During the meeting dated 06.10.2021, the project was appraised based on the information furnished in Form – 1, Pre-Feasibility Report, Environment Management Plan and details submitted by e-mail.
- During the SEAC Video conference meeting dated 06.10.2021, Project Proponent (PP) and their technical expert and EIA consultant from M/s.: Enviro Technologies and made technical presentation before the Committee.
- This is brown field project proposal for manufacturing of API and its intermediate at GIDC Vapi. Product profile with its end-use is discussed in depth. Committee noted that unit is having EC and

valid CCA of the Board for existing plant. PP presented one show cause notice (SCN) issued by GPCB and submitted SCN reply at GPCB copy presented by PP.

- Looking to layout plan showing floor wise manufacturing and storage area, along with area adequacy covering the safety measures, committee insisted on highlighting the pathway on layout, making it reachable to all the buildings, for which PP is agreed upon and later on PP submitted revised layout plan, through e-mail.
- Committee noted the following:
  - Source of water is GIDC.
  - Unit had proposed total industrial effluent will be segregated and high TDS stream will be treated in MEE and then Condensate water will be reused in to Cooling Tower. High COD stream from process and washings will be treated in ETP and then send to CETP of M/s VEGL for further treatment and disposal as per existing CCA.
  - Natural gas is proposed as fuel in boiler and thermic fluid heater.
  - Scrubber as APCM proposed for each process reactor stack.
  - PP submitted hazardous waste matrix mentioning source of generation, quantity and Mode of disposal and committed to comply the Hazardous and Other Wastes (Management and Trans boundary Movement) Rules 2016.
  - Greenbelt development plan within premises, 7130 Sq m (33.31%) of plot area.
- Committee deliberated on Product profile, Layout plan, area adequacy, Storage details, Process safety, Fire safety, water balance & waste water management, Flue gas and process gas emission & Air Pollution Control System, Hazardous waste matrix, EMP, CER, Green belt, etc.
- Looking to the flue gas emissions, the committee insisted the unit to increase the stack height of Natural gas based Thermic fluid heater to 20 m, for which PP is agreed upon and later on PP submitted revised flue gas emission details, through e-mail.
- Looking to the number of employees proposed by the unit, Committee insisted for appointing a full time medical officer and submitting an undertaking for the same for which PP is agreed upon and later on PP submitted an undertaking for the same, through e-mail.
- Looking to the process operations, committee insisted the unit to install PLC for all its proposed critical operations for which the PP agreed upon and replied through e-mail.
- Committee found documents and presentation submitted by PP was satisfactory.
- **After detailed discussion, it was decided to recommend the project to SEIAA Gujarat for grant of Environmental Clearance with the following specific condition:**

SPECIFIC CONDITIONS:

1. Project Proponent (PP) shall strictly abide by the outcome/decision of Hon'ble Supreme Court of India in Civil Appeal no. 8478/2020 regarding operation of the Hon'ble NGT orders dated 10/07/2019 & 14/11/2019.

2. PP shall comply conditions of any subsequent amendment or expansion or change in product mix, after the 30th September 2020, considered as per the provisions in force at that time as mentioned in the Notification vide S.O. 1223 (E) dated 27/03/2020.
3. PP shall carry out proposed project/activities in respect of Active Pharmaceutical Ingredients (API) as per the amended EIA Notification vide S.O. 1223 (E) dated 27/03/2020 and any subsequent amendments.
4. PP shall submit six monthly compliance report of Environmental Clearance without fail and the same shall be critically assessed by the regulatory authority.
5. Total number of products manufacturing shall not exceeding three (3) at a given point of time as per the plant capacity shown in plant layout.
6. GPCB shall ensure compliance of direction under section 18 (1) (b) of the Water (Prevention and Control of Pollution) act, 1974 issued by CPCB regarding compliance of CETP and also that the pollution load is not increased in the CPA/SPA for the compliance of Hon'ble NGT order.
7. (a)R & D products shall be of similar chemistry in line with the EIA Notification vide S.O. 1223 (E) dated 27/03/2020 and the pollution load shall remain the same as committed. (b) Project proponent shall not take continuous/commercial production of the R & D materials. Necessary approvals shall be obtained from the concern authorities prior to commercial production of R & D materials. (c) Unit shall submit relevant details of R & D products like raw materials, its safety measures to the regulatory authority well before R & D activity. (d) Unit shall submit relevant details of R & D products like different wastes generated (Quantity & Quality) and its management to the regulatory authority within a month of R & D activity.
8. Project proponent shall provide continuous online monitoring system for waste water discharge to Common Facilities (CETP) as per the prevailing guidelines of CPCB/GPCB.
9. Close loop solvent recovery system with adequate condenser system shall be provided to recover solvent vapors in such a manner that recovery shall be maximum and recovered solvent shall be reused in the process within premises.
10. Leak Detection and Repair (LDAR) program shall be prepared and implemented as per the CPCB guidelines. LDAR Logbooks shall be maintained.
11. All measure shall be taken to avoid soil and ground water contamination within premises.

WATER

13. Total water requirement for the project shall not exceed 508 KLD. Unit shall reuse 79.8 KLD, treated waste water and 150 KLD boiler condensate. Hence, Fresh water requirement shall not exceed 278.2 KLD. It shall be met through GIDC water supply only. Prior permission from the concerned authority shall be obtained for withdrawal of water.
14. No ground water shall be tapped for the project requirements.
15. The industrial effluent generation from the project shall not exceed 107.8 KLD after

expansion.

16. The entire industrial effluent shall be segregated and treated as mentioned below:
    a) 55.8 KLD, high TDS effluent from process, Boiler blow down, Cooling tower bleed off, R.O. reject, Softener regeneration, Scrubber effluent and RO reject of ETP shall be treated in in-house MEE. 54.8 KLD, MEE condensate shall be reused back in cooling tower.
    b) 62.5 KLD, high COD effluent from process and washings shall be treated in ETP consisting of primary, secondary and tertiary ETP units and then treated effluent will be passed through RO. RO permeate shall be sent to CETP of M/s VEGL, Vapi for further treatment and disposal and the RO reject will be taken to in-house MEE for its treatment as mentioned above.
17. Unit shall feed wastewater to in-house MEE only after ensuring content of effluent for COD/VOC so as not to get air borne during evaporation in order to achieve no adverse impacts on Environment and Human Health.
18. Treated waste water shall be sent for further treatment to CETP only after complying with the inlet norms of CETP prescribed by GPCB to ensure no adverse impact on Human Health and Environment.
19. Domestic wastewater generation shall not exceed 25 KL/day for proposed project and it shall be treated in STP. It shall not be disposed off into Soak-Pit. Treated sewage shall be utilized for gardening and plantation purpose within premises after achieving on-land discharge norms prescribed by the GPCB.
20. During monsoon season when treated sewage may not be required for the plantation / Gardening / Green belt purpose, it shall be stored within premises. There shall be no discharge of waste water outside the premises in any case.
21. Unit shall provide adequate size buffer storage tank for storage of high TDS effluent for purpose of any shutdown of MEE.
22. The unit shall provide metering facility at the inlet and outlets of ETP, MEE and maintain records for the same.
23. Proper logbooks of ETP; chemical consumption in Effluent treatment; quantity & quality of effluent disposal to CETP, quantity & quality of effluent recycle back in process; power consumption etc. shall be maintained and shall be furnished to the GPCB from time to time.

AIR

24. Unit shall not exceed fuel consumption and provide APCM and Stack height as mentioned in flue gas matrix.
25. Unit shall provide APCM and stack height as mentioned in process gas matrix.

HAZARDOUS & SOLID WASTE

26. All hazardous solid waste shall be managed as mentioned in hazardous waste matrix.
27. The unit shall submit the list of authorized end users of hazardous wastes along with MoU signed with them at least two months in advance prior to the commencement of production. In the absence of potential buyers of these items, the unit shall restrict the production of the respective items.

GREENBELT AREA

28. The PP shall develop green belt within premises (i.e. 7130 Sq. m., 33.31 % of the total plot area). Green belt shall be developed with native plant species that are significant and used for the pollution abatement as per the CPCB guidelines. It shall be implemented within 3 years of operation phase in consultation with GPCB.
29. **Safety & Health:**
    a. PP shall obtain PESO permission for the storage and handling of hazardous chemicals.
    b. PP shall provide Occupational Health Centre (OHC) as per the provisions under the Gujarat Factories Rule 68-U.
    c. PP shall obtain fire safety certificate / Fire No-Objection certificate (NOC) from the concern authority as per the prevailing Rules / Gujarat Fire Prevention and Life Safety Measures Act, 2016.
    d. Unit shall adopt functional operations/process automation system including emergency response to eliminate risk associated with the hazardous processes.
    e. PP shall carry out mock drill within the premises as per the prevailing guidelines of safety and display proper evacuation plan in the manufacturing area in case of any emergency or accident.
    f. PP shall install adequate fire hydrant system with foam trolley attachment within premises and separate storage of water for the same shall be ensured by PP.
    g. PP shall take all the necessary steps for control of storage hazards within premises ensuring incompatibility of storage raw material and ensure the storage keeping safe distance as per the prevailing guidelines of the concerned authority.
    h. PP shall take all the necessary steps for human safety within premises to ensure that no any harm is caused to any worker/employee or labour within premises.
    i. Flame proof electrical fittings shall be provided in the plant premises, wherever applicable.
    j. Unit shall never store drum/barrels/carboys of incompatible material/chemical together.
    k. Unit shall provide effective Isolation for Process area and storage of hazardous chemicals.
    l. Unit shall provide water sprinkler to the Ammonia storage cylinder and Hydrogen gas cylinder.
    m. Unit shall provide effective fire hydrants, water monitors & foam application system at solvent storage tank farm area. Unit shall provide adequate safety system such as water sprinklers, water curtains, foam pouring system etc. to restrict cascade fire emergency in

	solvent tank farm.		
2	**SIA/GJ/IND2/196744/2021**	**M/S. Farmson Pharmaceuticals Pvt. Ltd. (Unit-V)** Plot No. DP-146, Saykha Industrial Estate Saykha, Di: Bharuch.	EC Recosideration

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

Project status: New

- Project proponent (PP) submitted online application vide no. SIA/GJ/IND2/196744/2021on dated 08.02.2021for obtaining Environmental Clearance.
- Project proponent has submitted Form – 1, Pre-Feasibility Report & Environment Management Plan as per Notification issued by MoEF&CC vide S.O. 1223(E) dated 27th March, 2020 regarding consideration of proposals or activities in respect of Active Pharmaceuticals Ingredients (API) as B2 category.
- This is a new project proposed for manufacturing of synthetic organic chemicals [API] as tabulated below.

Sr. No.	Name of the Products	API OR INTERMEDIATE	CAS no.	Quantity MT/Month	*End-use of products
1	Paracetamol	API	103-90-2	3000	API-Bulk Drug (Analgesic)
2	R & D	-	-	0.1	API- Bulk Drug
			Total	-	-

- The project falls under Category B2 of project activity 5(f) as per the schedule of EIA Notification 2006 and amendment dated 27th March, 2020.
- PP submitted an undertaking ensuring proposed product profile is in line with MoEF&CC's Notification vide S.O. 1223 (E) dated 27/03/2020 in respect of Active Pharmaceutical Ingredients (API) as category B2 projects. Undertaking as proposal of said product are eligible to consider under B2 category as per the notification of MoEF&CC dated 27.03.2020
- The proposal was considered in the SEAC video conference meeting dated 19.05.2021.
- Salient features of the project including Water, Air and Hazardous waste management are submitted.
- During the meeting dated 19.05.2021, the project was appraised based on the information furnished in Form – 1, Pre-Feasibility Report, Environment Management Plan and details submitted by e-mail.
- Project proponent (PP) and their Technical Expert from M/s Eco Care Solutions present during video conference meeting.

- Committee noted that this is a Greenfield project proposed for manufacturing of synthetic organic chemicals [API] at GIDC Saykha. Total plot area is 17,700 Sq. m.
- Committee deliberated on product profile with specific end-use of proposed product in which unit has proposed for manufacturing of acetic acid & Glacial acetic acid as by-product and acetic anhydride as active ingredient which is not acceptable.
- **After detailed discussion, Committee unanimously decided to defer the proposal and consider the same in one of the upcoming SEAC meeting only after satisfactory submission of the following:**
  1. Submit revised product profile and proposal with submission of revised PFR, Form-1, EMP and CER in line with MoEF&CC's Notification dated 27/03/2020 and subsequent change in Water, Air and Hazardous waste Management.
- PP submitted the reply of the above said points raised during SEAC meeting dated 19.05.2021 along with other supporting documents.
- This proposal is reconsidered in SEAC meeting dated 27.07.2021. PP along with their technical expert/consultant from M/s Eco Care Solutions remains present in the meeting and made presentation before committee.
- PP presented revised salient features of the project including Water, Air and Hazardous waste management are as follows.

Sr. no.	Particulars	Details
A-1	Total **cost of Proposed** Project (Rs. in Crores):	

Total Project
150 Crores

Break-up of proposed project Cost:

Details	Project Cost (Rs. In Crores)
Land	50
Building	30
achinery	70

A-2	**Details of Environmental Management Plan (EMP)**	As below:

Sr. No	Unit	Detail	Capital Cost (Rs. In Crores)	Operating Cost (Rs. In Crores)	Maintenance Cost (Rs. In Crores)	Total Recurring Cost (Rs. In Crores)

1	Wastewater	ETP + Evaporator	1.5	0.2	0.05	0.25
2	Air	ESP+ Scrubber	1.5	0.1	0.02	0.12
3	Hazardous Management	Storage and Disposal	0.5	0.3	0.1	0.4
4	Fire & Safety	Fire Hydrant & Extinguisher	2	0.05	0.05	0.1
5	AWH Monitoring	Monitoring	0.2	0.2	0	0.2
6.	Green Belt Development	Plantation	0.5	0	0.01	0.01
7.	Occupational Health	OHC, Medical examinations	0.1	0.02	0	0.02
8.	CER Cost	Fund allocation for various activities	2.25	0	0	0
9.	Automation control and its safety measures	Critical process	1	0	0.08	0.08
Total			9.55	0.87	0.31	1.18

Summary

Cost of Project in Crores per Annum:	150 Crores
EMP Capital Cost in Crores per Annum and Percentage:	9.55 Cr, 6.33 %
EMP Recurring Cost in Crores per Annum and Percentage:	1.18 Cr, 0.78 %

A-3 **Details of CER as per OM dated 01/05/2018 (In case of project falls under CPA/SPA,** CER fund allocation to be at least 1.5 times the slabs given in the OM dated 01.05.2018 for SPA and 2 times for CPA in case of Environmental Clearance as per the mechanism published vide MoEF&CC's OM vide 31.10.2019.)

% as per the OM	Rs. in Crores
1.5 %	2.25 Cr.

Brief note on proposed activities:

- Entire fund will be used for near by villages.

  Sanitation Facility, Education, Healthcare, Plantations, Awareness

B **Land / Plot ownership details:**

B-1 **Plot area**

Total Plot area
26543.85 Sq. m.

B-2 Brief note on **Area adequacy** in line to proposed project activities:

- Total Land Area Available is 26543.85 Sq. meter which is adequate enough for proposed plant for manufacturing of 3000 MT/Month of Paracetamol. Layout showing the area distribution is enclosed.

SR. NO.	DESCRIPTION AREA	AREA(SQ.Mtr.) TOTAL
1.	SECURITY CABIN, VISITOR ROOM, OHC	200 SQ.Mtr.
2.	FIRE HYDRANT ROOM	39.22 SQ.Mtr.
3.	U/G RAW WATER STORAGE TANK & PARKING	207.26 SQ.Mtr.
4.	RAW MATERIAL STORE, QA, QC, AREA	570.0 SQ.Mtr.
5.	PAP SECTION	588.2 SQ.Mtr.
5.1.	SYNTHESIS SECTION	1500 SQ.Mtr.
6.	PACKING AREA	1260.80 SQ.Mtr.
7.	FINISH GOODS STORE	1800 SQ.Mtr.
8.	COOLING TOWER	500 SQ.Mtr.
9.	DISTILLATION PLANT	400 SQ.Mtr.
10.	GAA PLANT	680 SQ.Mtr.
11.	MEE + RO PLANT	497.76 SQ.Mtr.
12.	PROPOSED PLANT	161.47 SQ.Mtr.
13.	BOILER AREA	990.5 SQ.Mtr.
14.	RECOVERY PLANT	800 SQ.Mtr.
15.	ETP PLANT	768.21 SQ.Mtr.
16.	BIOLOGICAL AND STP PLANT	297.46 SQ.Mtr.
17.	CHEMICAL TANK FARM	600 SQ.Mtr.

Sr No.	Description of Area	Area (Sq. m.)
1	Building & Plant Area	11860
2	Green Belt	8759.47
3	Open Area	5924.38
Total Plot Area		**26543.85**

B-3 **Green belt area**

	Total (Sq. meter)
Area in Sq. meter	8759.47
% of total area	33 %

C **Employment generation**

Total
250

D **WATER**

D-1 **Source of Water Supply**

	(GIDC, Bore well, Surface water, Tanker supply etc...) GIDC- Saykha
	Status of permission from the concern authority. ➢ Permission for the supply of water will be obtained from GIDC-Saykha.
D-2	**Water consumption (KLD)**

Category	Quantity KLD	Remarks
(A) Domestic	12.0	Fresh Water
(B) Gardening	30.0	Fresh Water/Recycled
(C) Industrial		
Process	163.0	Fresh Water
Washing	0	-
Boiler	213.0	RO/Recycled
Cooling	400.0	RO/Recycled
Others (RO)	263.0	-
Others (APCM)	36.0	
Industrial Total	1075.0	
Total (A + B + C)	1117.0	

Brief Note on worst case scenario for water consumption:

- Total Fresh Water Requirement of the proposed project will be 875 KLD, out of which Water Consumption for Process will be 163 KLD. Rest of the Water will be utilized in Boiler , Cooling and Other Utilities.
- Process Water consumptions has been considered based on water balance considering Worst Case Scenario.

D-3 **Wastewater generation (KLD)**

Category	Wastewater KLD	Remarks
(C) Domestic	9.0	Treated Sewage for Gardening
(D) Industrial		
Process	850.0	-
Washing	0.0	-
Boiler	15.0	-
Cooling	14.0	-
Others	263.0	RO Reject
Others	36.0	APCM
Total Industrial wastewater	1178.0	-
Total [A + B]	1187.0	-

Brief Note on worst case scenario for wastewater generation (Qualitative and Quantitative):

Total Wastewater generation is 1178.0 KLD,

Industrial wastewater generated from process and air pollution control equipment will be treated in ETP consisting of Primary Treatment and Tertiary Treatment and finally treated wastewater of **886 KLD** will be sent to CETP-Sayakha.

Industrial wastewater generated from Boiler, Cooling tower and RO Reject of **292 KLD** will be passed through 2 stage RO plant and further feed to MEE for evaporation. Sewage will be treated in Sewage Treatment Plant and Treated Sewage will be used for gardening and plantation.

Sr.	Parameters	Analysis Results of Composite Effluent from Process and washing
1	pH	10-12
2	COD mg/L.	5000
3	BOD mg/L	1500

Quality of Treated Wastewater:

Sr.	Parameters	Analysis Results of Utility Wastewater
1	pH	6.5-8.5
2	COD mg/L.	<1500
3	BOD mg/L	<400

Brief justification in case of no process effluent generation or no industrial effluent generation or no high concentration effluent generation from proposed project (Whichever is applicable).

- Not Applicable. Details of wastewater generation is provided in Water Balance.

D-4	Mode of Disposal & Final meeting point

-

Domestic:	Sewage Treatment Plant
Industrial:	For wastewater generated from process and APCM - CETP-Saykha. For wastewater generated from Boiler, Cooling tower & RO plant – Evaporation in MEE.

-

Clearly mention about final disposal

D-5	Treatment facilities

For Domestic wastewater:

Capacity of STP: 10 KLD

For Industrial wastewater: Treatment facility within premises with **capacity**

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

Treatment scheme including segregation at source. **(Give Characteristics of each stream i.e. COD, BOD, TDS etc.) In case of stream segregation, Separate ETP (ETP-1, ETP-2….) for each stream shall be proposed.**

- Effluent Treatment Plant (Primary & Tertiary): Capacity :1500 KLD

Sr. No	Name of Unit	No.	Capacity (KL)	Adequacy
1	Equalisation Tanks	2	1500 KLD	Adequate
2	Flash Mixer Tank	1		Adequate
3	Flocculator Tank	1		Adequate
4	Primary Settling Tank with Tube Settlers	1		Adequate
5	Intermediate Collection Tank	1		Adequate
6	Secondary Treatment Tank	1		Adequate
7	Secondary Settler	1		Adequate
8	Final Collection tank	1		Adequate
9	Sludge Sump	2		Adequate
10	Sand filter	1		Adequate

Note: (In case of CETP discharge) :

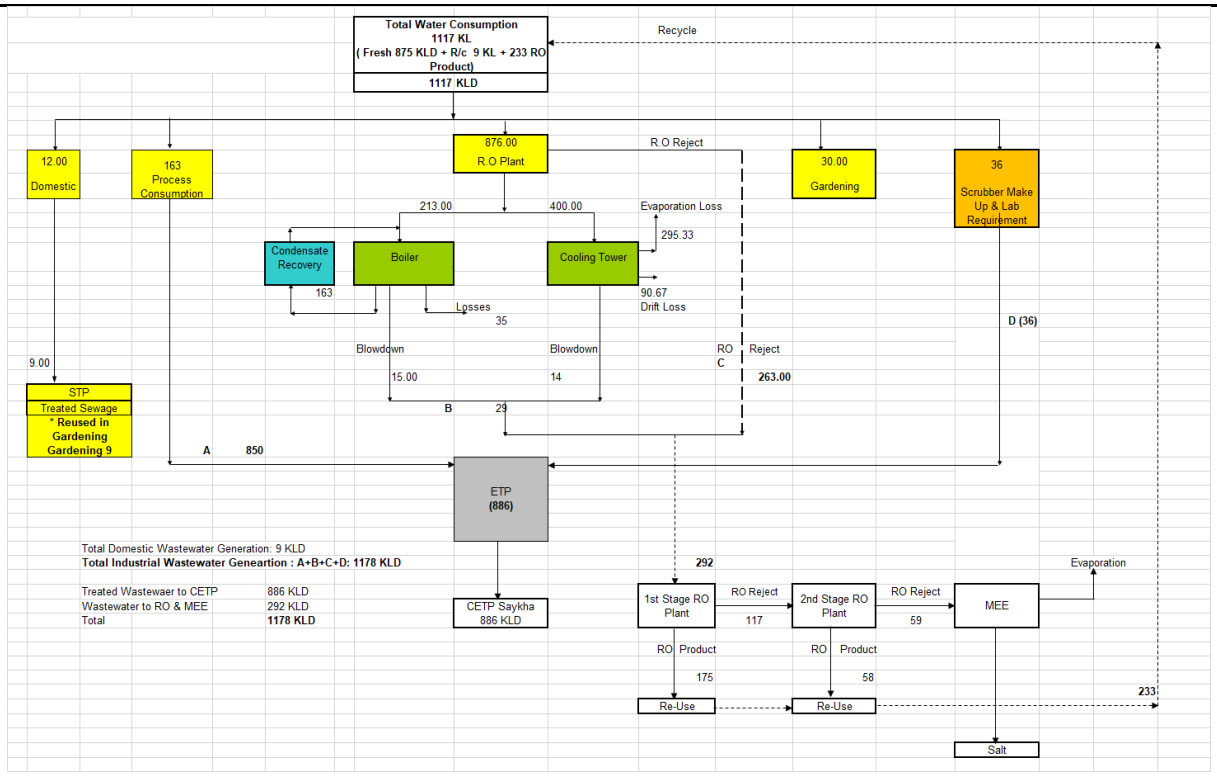
Management of waste water keeping in view direction under section 18 (1) (b) of the Water (Prevention and Control of Pollution) act, 1974 issued by CPCB regarding compliance of CETP.

- **The unit shall take membership for the CETP-Saykha. Direction under section 18(1)(b) issued by CPCB Not Applicable.**

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

- Not applicable

D-6	In case of Common facility (CF) i.e. **CETP, Common Spray dryer, Common MEE, CHWIF etc.** **Name of Common facility (CF) (For waste water treatment)**
	- CETP – Saykha
	Membership of Common facility (CF) 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.
	- Unit lies in GIDC Saykha. Provisional CETP Membership has been taken.
D-7	**Simplified water balance diagram with reuse / recycle of waste water**



E	**AIR**
E-1	**Brief Note on fuel based Heat energy requirement and worst case scenario thereof:**

➢ **Fuel Used in Boiler & Furnace**

Sr. No.	Fuel	Calorific Value
1	Coal (Boiler)	6500 Kcal/Kg
2	Natural Gas (Furnace)	8500 Kcal/Kg

E-2 **Flue gas emission details**

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

(In case of Project located within CPA/SPA , APCM shall be in line to the mechanism published in the MOEFCC's OM vide dated 31.10.2019)

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-40T	31	Imported Coal	115 MT	PM<150 mg/nm3 SO2<100 ppm NO2<50 ppm	ESP+ Scrubber
2	Furnace (cracker)	20	Natural Gas	300 nm3/hr	PM<150 mg/nm3 SO2<100 ppm NO2<50 ppm	-

3	DG Set (1010KVA)-1	15	HSD	200 Lit/Hr	PM<150 mg/nm3 SO2<100 ppm NO2<50 ppm	-
4	DG Set (1010KVA)-2	15	HSD	200 Lit/Hr	PM<150 mg/nm3 SO2<100 ppm NO2<50 ppm	-

E-3	**Process gas** 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	Stack attached to Acetylation	Acetic Acid Fumes	15	Alkali Scrubber
2	HCL Storage Tank	HCl	15	Water Scrubber

Note:

- **Details of gaseous raw materials used in proposed project**
- **Estimation of process gas emission (Product wise and Total)**
- **Requirement of the scrubbing media (KL per Day) considering solubility (Product wise and Total)**
- **Yearly generation of all bleed liquors (MT/KL per Annum) as mentioned above and its sound management in HW matrix.**

E-4	**Fugitive emission** details with its mitigation measures.

Sr. No.	Source	Probable Emission	Control Measure
1	Handling Solid Raw Material in storage area (Carbon, Sodium Hydrosulfite, Coal	PM	No Manual work for handling. Adequate Ventilation Use of PPE.
2	Handling of Liquid Raw Material, (Causti Lye, HCl, Acetic Anhydride, PAP Slulrry)	HCl, Alkali, VOC	Dosing through Day Tank. Pumps having mechanical seal to prevent leakages. Loading/Unloading in Closed System. Use of PPE. Regular Preventive Maintenance Work Zone Monitoring

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

Note:

- **Priorities for HW Management:** Pre-processing, Co-Processing, Reuse/Recycle within premises, Sell out to actual users having Rule-9 permission, TSDF/CHWIH.
- **Quantification of hazardous waste shall be based on mass balance and calculations shall be incorporated in EMP details separately.**
- **Disposal to scrap vendors/vendors/traders is not allowed**

F-1 **Hazardous waste management matrix**

-

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	35.4	12500	Collection, Storage, Transportation and To Approved TSDF Facility
2	Waste Carbon	Process	21.6	1093	Collection, Storage, Transportation and Disposal to Approved TSDF Facility / Co - processing
3	Resin Waste	Process	21.6	35	Collection, Storage, Transportation and Disposal to Approved TSDF Facility
4	Distillation Residue	Process	28.1	2500	Collection, Storage, Transportation and Disposal to Approved CHWIF Facility/Co-processing
5	Used Oil	Utility	5.1	5	Collection, Storage, Transportation and Disposal To Approved

					Recyclers/ Re-processors
6	Empty Bags/Container/Drums	Raw Material	33.1	350	Collection, Storage, Transportation and Disposal to Approved Recyclers / Re-processors.
7	Acetic Acid (20% – 99.5%)	By Product	26.3	85367	Collection, Storage, Reuse and part for sale to Actual users. • Acetic acid thus generated is used in-house in conversion to acetic anhydride for captive consumption and part for sale to actual user.
8	MEE Salt	Treatment	37.3	10	Collection, Storage, Transportation, Disposal to TSDF site.

F-2	Membership details of **TSDF, CHWIF** etc. **(For HW management)**	
Details of Membership letter no. & Date with spare capacity of the Common Facility. ➢ BEIL- Ankleshwar/Dahej.		
F-3	Details of Non-Hazardous waste & its disposal **(MSW and others)**	None

Sr. no.	**Type/Name of Other wastes**	**Specific Source of generation (Name of the Activity, Product etc.)**	**Quantity (MT/Annum)**	**Management of Wastes**
1	Fly Ash	Boiler	4197	Collection, Storage, Transportation, send to Brick Manufacturing unit

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

G-1	Brief Note on types of solvents, Details of Solvent recovery, % recovery, reuse of recovered Solvents etc.

Sr. No	Name of Solvent	Storage	Qty. of Usage (MT/ Month) (With Existing & proposed)	% Recovery
1	Ethyl Acetate	5.0	13.62	97 %

G-2	**Brief Note on LDAR proposed:**

Brief Note on LDAR proposed:

- Leak Free Pumps & Valve for transfer of solvents and chemicals.
- MSW Gaskets in solvent pipelines to prevent leakage from flanges
- Minimum number of flanges, joints and valves in pipelines.
- To eliminate chances of leakages from glands of pumps, double mechanical seal will be provided at all solvent pumps.
- All the rotating equipments like pumps will be installed with double Mechanical Seals to arrest any sort of emissions.
- Condenser post Reactor with cooling arrangement and chilling Arrangement.
- Flanges will be sealed so less losses will be there.
- Down the Temperature of Chilling tower to -15°C.
- Closed loop system.
- Regular workplace monitoring for exposure of VOC's.
- Records of the LDAR Programme.

G-3	**VOC emission** sources and its mitigation measures

Mitigations:

- Manufacturing activities is being carried out in totally closed system and by auto only thereby preventing the VOC Emission.
- Pumps with mechanical seal is provided
- Minimal provision of flanges, joints and valves.
- Maintenance of the pipeline and valves & fittings will be carried out regularly to avoid any leakages.
- The condenser will be provided with sufficient residence time to achieve more than 95% recovery up to 97%.
- Provision of PPE's.

H	**SAFETY details**
H-1	**Details regarding storage of Hazardous chemicals** **(For tank storages only including spent acid and spent solvent tanks)**

-

Sr. no	Name of Chemical	Capacity of Tank	Number of Tanks	Hazardous Characteristics of Chemical
1	PAP Slurry	50 KL	2	Reactive
2	Acetic anhydride	100 KL	2	Reactive

3	Caustic Lye	50 KL	2	Corrosive
4	Acetic Acid	650 KL	1	Corrosive, Reactive
5	HCl	50 KL	2	Corrosive

Brief note on storage of Hazardous chemicals in Tanks

Hydrochloric Acid Storage details:

- Appropriate HDPE storage tank will be provided.
- Dyke wall is provided to storage tank.
- Fire extinguishers provided
- FLP type pump with tripping on dry run is provided.
- Double static earthing is provided to storage tank
- Jumper clips on flanges will be provided

Acetic Anhydride / Acetic Acid:

- Appropriate SS storage tank will be provided.
- Dyke wall will provided to storage tank.
- Fire extinguishers provided
- FLP type pump with tripping on dry run is provide.
- Double static earthing is provided to storage tank
- Jumper clips on flanges will be provided

Caustic Lye:

- Appropriate MS storage tank will be provided.
- Dyke wall will provided to storage tank.
- Fire extinguishers provided
- FLP type pump with triping on dry run is provide.
- Double static earthing is provided to storage tank
- Jumper clips on flanges will be provided

Para Amino Phenol Slurry:

- Appropriate PP/FRP storage tank will be provided.
- Dyke wall will provided to storage tank.
- Fire extinguishers provided
- FLP type pump with tripping on dry run is provide.
- Double static earthing is provided to storage tank
- Jumper clips on flanges will be provided

Brief note on storage of Hazardous chemicals other than Tanks i.e. Drum, Barrels, Carboys, Bags etc.

- FLP type light fittings will be provided.
- Proper ventilation will be provided in godown. Labelling will be done for proper identification.
- Drum Handling trolley/fork lift will be used.

Safety details of Hazardous Chemicals:

Type of Hazardous Chemicals	Safety measures
PAP Slurry	• Dyke wall is provided to storage tank. • Fire extinguishers will be provided • FLP type pump with tripping on dry run is provide. • Double static earthing is provided to storage tank • Jumper clips on flanges will be provided
Acetic anhydride	• Dyke wall is provided to storage tank. • Fire extinguishers will be provided • FLP type pump with tripping on dry run is provide. • Double static earthing is provided to storage tank • Jumper clips on flanges will be provided
Caustic Lye	• Dyke wall is provided to storage tank. • Fire extinguishers will be provided • FLP type pump with tripping on dry run is provide. • Double static earthing is provided to storage tank • Jumper clips on flanges will be provided
Acetic Acid	• Dyke wall is provided to storage tank. • Fire extinguishers will be provided • FLP type pump with tripping on dry run is provide. • Double static earthing is provided to storage tank • Jumper clips on flanges will be provided
HCl	• Dyke wall is provided to storage tank. • Fire extinguishers will be provided • FLP type pump with tripping on dry run is provided. • Double static earthing is provided to storage tank • Jumper clips on flanges will be provided

- **Applicability of PESO: Not Applicable**

H-2	**Types of hazardous Processes involved and its safety measures:** **(Hydrogenation process, Nitration process, Chlorination process, Exothermic Reaction etc.)**

Type of Process	Safety measures including Automation
Acetylation	Auto Cooling System, Automated addition of Acetic Anhydride. PLC & DCS Based Control System.
Distillation	PLC & DCS Based Control System.

H-3	**Details of Fire Load Calculation**

-

Total Plot Area:	26543.85 Sq. Mtr.

Area utilized for plant activity:	11860
Area utilized for Hazardous Chemicals Storage:	570
Number of Floors:	G+1
Water requirement for firefighting in KLD:	24
Water storage tank provided for firefighting in KLD:	1800
Details of Hydrant Pumps:	Yes, Jocky Pump - 10.8 M^3/H, Main Pump - 182 M^3/ H, Disel Pump -132 M^3/ H
Nearest Fire Station :	GIDC-Jhagadia
Applicability of Off Site Emergency Plan:	Yes

-

H-4	**Details of Fire NOC/Certificate:** To be applied during establishment stage**.**
H-5	**Details of Occupational Health Centre (OHC):**

-

Number of permanent Employee :	250
Number of Contractual person/Labour :	50
Area provided for OHC:	1500 Sq. feet
Number of First Aid Boxes :	20
Nearest General Hospital :	Bharuch General Hospital
Name of Antidotes to be store in plant :	-

- Committee noted that PP submitted revised rent product profile and removing by product acetic acid and acetic anhydride as by product from product list. This is Greenfield project in GIDC Saykha.
- Committee noted the following:
  - Product profile with specific End-use of each product.
  - Source of water supply is GIDC.
  - Unit had proposed total industrial effluent will be treated in ETP and treated effluent will be sent to CETP of GIDC Saykha for further treatment and disposal.
  - Imported coal is proposed as fuel in boiler and APCM like ESP and water scrubber proposed for boiler and natural gas as fuel proposed for furnace.
  - Single stage scrubber proposed for process stack.
  - PP submitted hazardous waste matrix mentioning source of generation, quantity and Mode

of disposal and committed to comply the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016.

- Greenbelt development plan with 8759 Sq m (33 %) of plot area.

- Committee deliberated on Product profile, Layout plan, Storage details, Process safety, Fire safety, water balance & waste water management, Flue gas and process gas emission & Air Pollution Control System, Hazardous waste matrix, EMP, CER, Green belt, etc.
- Looking to proposal submitted by PP, Committee asked for following details during meeting,
  - ✓ Submit membership certificate of CETP of GIDC Saykha in-line with the direction given by GPCB vide Letter No. GPCB/P-1/8-G (5)/550706 dated 08/01/2020, looking to quantity of 1223 KLD waste water disposal to CETP.
  - ✓ Submit revised proposal of waste water with mentioning reuse of waste water and proposal of MEE and RO instead of total waste water disposal to CETP.
  - ✓ Revised area break up and layout plan with mentioning separate tank farm area considering safety point of view in place of in Green belt development area, separate entry and exit with adequate size peripheral road, utility area etc.
  - ✓ Revised Hazardous waste matrix with mentioning category and schedule of acetic acid and adequacy report for manufacturing of acetic anhudride from spent acetic acid with authenticated technical documents and also mentioned Hazardous waste like off specification products, spent solvent generation and its disposal details.
  - ✓ Status of Narcotic department permission for manufacturing of acetic anhydride within plant and also for usage as raw material.
  - ✓ Revised EMP with mentioning cost of automation control and its safety measures for critical process like acetylation and distillation process, adequate size fire hydrant pipeline network of minimum 6 Inch diameter and fire extinguisher cost, CER cost in EMP.
  - ✓ Submit SOP for handling of acetic anhydride with mentioning storage tank number and capacity of storage tank.
  - ✓ GIDC plot allotment letter in name of proposed project.
  - ✓ Revised concrete and need based CER activity for surrounding villages in place of mentioning only Sanitation Facility, Education, Healthcare
- **After detailed discussion, Committee unanimously decided to consider the project in one of upcoming meeting after submission of following documents:**
  1. Submit membership certificate of CETP of GIDC Saykha in-line with the direction given by GPCB vide Letter No. GPCB/P-1/8-G (5)/550706 dated 08/01/2020, looking to quantity of 1223 KLD waste water disposal to CETP.
  2. Submit revised proposal of waste water with mentioning reuse of waste water and proposal of MEE and RO instead of total waste water disposal to CETP.

3. Revised area break up and layout plan with mentioning separate tank farm area considering safety point of view in place of in Green belt development area, separate entry and exit with adequate size peripheral road, utility area etc.
4. Revised Hazardous waste matrix with mentioning category and schedule of acetic acid and adequacy report for manufacturing of acetic anhudride from spent acetic acid with authenticated technical documents and also mentioned Hazardous waste like off specification products, spent solvent generation and its disposal details.
5. Status of Narcotic department permission for manufacturing of acetic anhydride within plant and also for usage as raw material.
6. Revised EMP with mentioning cost of automation control and its safety measures for critical process like acetylation and distillation process, adequate size fire hydrant pipeline network of minimum 6 Inch diameter and fire extinguisher cost, CER cost in EMP.
7. Submit SOP for handling of acetic anhydride with mentioning storage tank number and capacity of storage tank.
8. GIDC plot allotment letter in name of proposed project.
9. Revised concrete and need based CER activity for surrounding villages in place of mentioning only Sanitation Facility, Education, Healthcare.

- The proposal was reconsidererd in the SEAC VC dated 06.10.2021 based on the above mentioned queries.
- During the presentation , PP presented as below:
  - ✓ Project proponent has submitted compliance of query raised during the SEAC Meeting held on 27.07.2021 and subsequently presented the compliance during SEAC meeting on 06.10.2021. Project proponent has submitted Membership of CETP-Saykha for disposal of treated effluent, Plot Allotment Letters from GIDC, Submitted revised water balance which includes water recovery by installation of RO Plant & MEE Plant, Revised layout plan with mentioning separate tank farm area considering safety point of view in place of in Green belt development area, Revised CER cost including Automation & Fire and Safety cost in the EMP and SOP for handling of Acetic Anhydride. During the meeting committee has asked fire layout and CER activities & SOP for handling Acetic Anhdydride, which was submitted by project proponent through the email on 06.10.2021.
- Committee found that additional submission and presentation made before the SEAC satisfactory.
- **After detailed discussion, Committee unanimously decided to recommend the project to SEIAA, Gujarat for grant of Environment Clearance with the following specific condition:**

SPECIFIC CONDITIONS:

1. Project Proponent (PP) shall comply conditions of any subsequent amendment or expansion or change in product mix, after the 30th September 2020, considered as per the provisions in

force at that time as mentioned in the Notification vide S.O. 1223 (E) dated 27/03/2020.

2. PP shall carry out proposed project/activities in respect of Active Pharmaceutical Ingredients (API) as per the amended EIA Notification vide S.O. 1223 (E) dated 27/03/2020 and any subsequent amendments.
3. PP shall submit six monthly compliance report of Environmental Clearance without fail and the same shall be critically assessed by the regulatory authority.
4. Project proponent shall apply for Consent to Operate (CTO) to GPCB only after ensuring that CETP-Saykha have obtained Consent to Operate (CTO) from GPCB.
5. Unit shall install CEMS **[Continuous Emission Monitoring System]** in line to CPCB directions to all SPCB vide letter no. B-29016/04/06PCI-1/5401 dated 05/02/2014 for effluent discharge and air emission as per pollutants discharge/emission from respective project and an arrangement shall also be done for reflecting the online monitoring results on the company's server, which can be assessable by the GPCB/CPCB on real time basis. **[For Small/Large/Medium (Red Category) & Whichever (Air emission & Effluent discharge) is applicable].**
6. Total number of products manufacturing shall not exceeding three at a given point of time as per the plant capacity shown in plant layout.
7. Close loop solvent recovery system with adequate condenser system shall be provided to recover solvent vapours in such a manner that recovery shall be maximum and recovered solvent shall be reused in the process within premises.
8. Leak Detection and Repair (LDAR) program shall be prepared and implemented as per the CPCB guidelines. LDAR Logbooks shall be maintained.

WATER

9. Total water requirement for the project shall not exceed 1117 KLD. Treated Water of 886 KLD shall go to CETP-Saykha, Unit shall reuse 242 KLD of recovered shall be reused back in utility within premises. Hence, fresh water requirement shall not exceed 875 KLD and it shall be met through GIDC water supply only. Prior permission from concerned authority shall be obtained for withdrawal of water.
10. The industrial effluent generation from the project shall not exceed 1178 KLD.
11. 886KLD, total industrial effluent generated from process, washing & APCM shall be treated in ETP consists of primary, secondary & tertiary treatment units and sent to CETP-Saykha for further treatment & disposal. 292 KLD wastewater from utility shall be passed through RO Plant and RO Rejected shall be evaporated in MEE Plant.
12. Treated waste water shall be sent to CETP-Saykha only after complying with the inlet norms of common facilities prescribed by GPCB to ensure no adverse impact on Human Health and Environment.

13. Domestic wastewater generation shall not exceed 9 KL/day for proposed project and it shall be treated in STP. Treated sewage shall be utilized for gardening and plantation purpose within premises after achieving on-land discharge norms prescribed by the GPCB.
14. During monsoon season when treated sewage may not be required for the plantation / Gardening / Green belt purpose, it shall be stored within premises. There shall be no discharge of waste water outside the premises in any case.
15. Unit shall provide buffer water storage tank of adequate capacity for storage of treated waste water during rainy days.

AIR

16. Unit shall not exceed fuel consumption and provide APCM and Stack height as mentioned in flue gas matrix.
17. Unit shall provide APCM and stack height as mentioned in process gas matrix.

HAZARDOUS & SOLID WASTE

18. All hazardous solid waste shall be managed as mentioned in hazardous waste matrix.
19. The unit shall submit the list of authorized end users of hazardous wastes along with MoU signed with them at least two months in advance prior to the commencement of production. In the absence of potential buyers of these items, the unit shall restrict the production of the respective items.

GREENBELT AREA

20. The PP shall develop green belt within premises 8759.47 Sq m i.e Approx 33% of total plot area as committed before SEAC. Green belt shall be developed with native plant species that are significant and used for the pollution abatement as per the CPCB guidelines. It shall be implemented within 3 years of operation phase in consultation with GPCB.
21. **Safety & Health:**
    a) PP shall obtain PESO permission for the storage and handling of hazardous chemicals.
    b) PP shall provide Occupational Health Centre (OHC) as per the provisions under the Gujarat Factories Rule 68-U.
    c) PP shall obtain fire safety certificate / Fire No-Objection certificate (NOC) from the concern authority as per the prevailing Rules / Gujarat Fire Prevention and Life Safety Measures Act, 2016.
    d) Unit shall adopt functional operations/process automation system including emergency response to eliminate risk associated with the hazardous processes.
    e) PP shall carry out mock drill within the premises as per the prevailing guidelines of safety and display proper evacuation plan in the manufacturing area in case of any emergency or accident.

f) PP shall install adequate fire hydrant system with foam trolley attachment within premises and separate storage of water for the same shall be ensured by PP.

g) PP shall take all the necessary steps for control of storage hazards within premises ensuring incompatibility of storage raw material and ensure the storage keeping safe distance as per the prevailing guidelines of the concerned authority.

h) PP shall take all the necessary steps for human safety within premises to ensure that no any harm is caused to any worker/employee or labour within premises.

i) Flame proof electrical fittings shall be provided in the plant premises, wherever applicable.

j) Unit shall never store drum/barrels/carboys of incompatible material/chemical together.

k) Unit shall provide effective Isolation for Process area and storage of hazardous chemicals.

l) Unit shall Store Bromine Bottle in cool dry separate area, out of direct sunlight.

3	**SIA/GJ/IND2/205235/2021**	**M/s. Swarna Chemicals (API & Bulk Drug Intermediates)** Plot No. 621-P/17, Panoli GIDC, Panoli, Bharuch	EC REconsideration

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

Project status: New

- Project proponent (PP) submitted online application vide no. SIA/GJ/IND2/205257/2021 on dated 26/03/2021 for obtaining Environmental Clearance.
- Project proponent has submitted Form – 1, Pre-Feasibility Report & Environment Management Plan as per Notification issued by MoEF&CC vide S.O. 1223(E) dated 27th March, 2020 regarding consideration of proposals or activities in respect of Active Pharmaceuticals Ingredients (API) as B2 category.
- Earlier, PP remained absent in the SEAC meeting dated 24.06.2021.
- This is a new unit and proposes for manufacturing of synthetic organic chemicals [API and API Intermediates] as tabulated below,

TABLE

Sr. No.	Name of the Products	API OR INTERMEDIATE	CAS no.	Quantity MT/Month	*End-use of products
1	Bisoprolol Fumarate & its intermediates	API	104344-23-2	**30 TPM (Sr No. 1 to 33)**	It is used to treat high blood pressure (hypertension) and heart failure.
2	Eflornithine Hydrochloride & its intermediates	API	66640-93-5		It is used as an anticancer agent and as a chemoprevention agent.
3	Finofibrate & its	API	49562-28-9		It is used along with a proper diet to help

		intermediates				lower "bad" cholesterol and fats (such as LDL, triglycerides) and raise "good" cholesterol (HDL) in the blood.
	4	2-n-propyl-4-methyl-6-(1-methyl benzimidazole-2-yl) benzimidazole	Intermediate	152628-02-9		It is used to lower high blood pressure.
	5	4'-Bromomethyl-biphenyl-2-carboxylic acid methyl esters	Intermediate	114772-38-2		It is used to lower high blood pressure.
	6	4,7-Dichloroquinoline(4,7-DCQ)	Intermediate	86-98-6		It is used to lower high blood pressure.
	7	Ethyl 2-(3-cyano-4-isobutoxyphenyl)-4-methyl-5-thiazolecarboxylate	Intermediate	160844-75-7		It is used to treat hyperuricemia (constantly high levels of uric acid) in adults who have gout. It helps decrease your symptoms of gout. Symptoms of gout include pain, swelling, redness, heat, soreness, and stiffness in certain joints.
	8	6 chloro-4-hydroxy- 2-methyl- 2H thieno [2,3-e] [1,2] thiazine-3- carboxylate-1,1- dioxide	Intermediate	70415-50-8	**30 TPM (Sr No. 1 to 33)**	Used for the treatment of various types of pain, especially resulting from inflammatory diseases of the joints, osteoarthritis, surgery, sciatica, and other inflammations.
	9	Cis Bromo Benzoate	Intermediate	61397-56-6		It is used to treat skin infections such as athlete's foot, jock itch, ringworm, and certain kinds of dandruff.
	10	4-(4-Aminophenyl) morpholin-3-one	Intermediate	438056-69-0		It is used to prevent or treat a type of blood clot called deep vein thrombosis (DVT), which can lead to blood clots in the lungs (pulmonary embolism

	11	(S)-Glycidyl phthalimide	Intermediate	161596-47-0		It is used to prevent or treat a type of blood clot called deep vein thrombosis (DVT), which can lead to blood clots in the lungs (pulmonary embolism
	12	(S)-4-(4-(5-(Aminomethyl)-2-oxooxazolidin-3-yl)phenyl)morpholin-3-one	Intermediate	446292-10-0		
	13	6-Fluoro-3,4-dihydro-2H-1-benzopyran-2-carboxylic acid	Intermediate	129050-20-0		It is used to treat high blood pressure. Nebivolol is in a class of medications called beta blockers.
	14	Trityl Olmesartan medoximil	Intermediate	144690-92-6		It is used to treat high blood pressure. Lowering high blood pressure helps prevent strokes, heart attacks, and kidney problems.
	15	2-butyl-4-chloro-5-formyl imidazole	Intermediate	83857-96-9	**30 TPM (Sr. No. 1 to 33)**	It is used to treat high blood pressure (hypertension) and to help protect the kidneys from damage due to diabetes. It is also used to lower the risk of strokes in patients with high blood pressure and an enlarged heart. Lowering high blood pressure helps prevent strokes, heart attacks, and kidney problems.
	16	4'-[[2-butyl-4-chloro-5-(hydroxymethyl)-1H-imidazol-1-yl] methyl]-[1,1'-biphenyl]-2-carbonitrile	Intermediate	114772-55-3		It is a medicine widely used to treat high blood pressure and heart failure, and to protect your kidneys if you have both kidney disease and diabetes.
	17	1,2,3,9-Tetrahydro-9-methyl-4H-carbazol-4-one	Intermediate	27387-31-1		Is used alone or with other medications to prevent nausea and vomiting caused by cancer drug treatment (chemotherapy) and radiation therapy. It is also used to prevent and treat nausea and vomiting after surgery.
	18	N-T-Butylglycine	Intermediate	6939-23-7		an antibiotic-Treatment of Bacterial

	hydrochloride				infection
19	9-Aminomino cycline sulfate	Intermediate	149934-21-4		an antibiotic-Treatment of Bacterial infection
20	4-(2-methoxyethyl) phenol	Intermediate	56718-71-9		It is a beta-blocker used to treat chest pain (angina), heart failure, and high blood pressure. Lowering high blood pressure helps prevent strokes, heart attacks, and kidney problems.
21	1-(isopropylamino)3-[4-(2methoxyethyl) phenoxy] propane-2-ol	Intermediate	56392-17-7		It is a beta-blocker used to treat chest pain (angina), heart failure, and high blood pressure. Lowering high blood pressure helps prevent strokes, heart attacks, and kidney problems.
22	4-Hydroxycarbazole	Intermediate	52602-39-8	**30 TPM (Sr No. 1 to 33)**	It is used to treat high blood pressure (Hypertension). High blood pressure adds to the workload of the heart and arteries.
23	4-(2,3-epoxypropoxy) carbazole	Intermediate	51997-51-4		It is used to treat high blood pressure (hypertension). High blood pressure adds to the workload of the heart and arteries.
24	2-(2-methoxyphenoxy) ethylamine	Intermediate	1836-62-0		It is used to treat high blood pressure (hypertension). High blood pressure adds to the workload of the heart and arteries.
25	2-Amino-5-methyl thiazole	Intermediate	7305-71-7		Anti-inflammatory- used to treat pain and inflammation in rheumatic diseases and osteoarthritis.
26	7-(4-Chlorobutoxy)-3,4-dihydro-2(1H) quinolinone	Intermediate	129722-34-5		An antipsychotic- used in the treatment of schizophrenia and bipolar disorder and other uses include as an add-on treatment in major depressive

					disorder
27	1-(2,3-Dichlorophenyl) piperazine hydrochloride	Intermediate	119532-26-2		An antipsychotic- used in the treatment of schizophrenia and bipolar disorder and other uses include as an add-on treatment in major depressive disorder
28	Ethyl chloro[(4-methoxyphenyl) hydrazono] acetate	Intermediate	27143-07-3		It is used to prevent serious blood clots from forming due to a certain irregular heartbeat (atrial fibrillation) or after hip/knee replacement surgery. With atrial fibrillation, part of the heart does not beat the way it should.
29	3-chloro-5,6-dihydro-1-(4-nitrophenyl)-2(1H)-pyridinone	Intermediate	536760-29-9	**30 TPM (Sr No. 1 to 33)**	It is used to prevent serious blood clots from forming due to a certain irregular heartbeat (atrial fibrillation) or after hip/knee replacement surgery. With atrial fibrillation, part of the heart does not beat the way it should.
30	Phthalimido amlodipine	Intermediate	88150-62-3		It is used to treat high blood pressure. Lowering high blood pressure helps prevent strokes, heart attacks, and kidney problems.
31	2-(dibutylamino)-1-(2,7-dichloro-9H-fluoren-4-yl)ethanol	Intermediate	69759-61-1		It is used to treat non-severe malaria. Artemether and lumefantrine is for use in adults and children at least 2 months old or who weigh at least 11 pounds (5 kilograms).
32	Methyl-4-methoxy acetoacetate	Intermediate	41051-15-4		it is an antiviral medicine that is used with other medications to treat HIV, the virus that can cause the acquired immunodeficiency syndrome (AIDS).
33	3-(1-hydroxy-	Intermediat	1477-63-0		It is used for the

	2-(methylamino) ethyl) phenol	e			temporary relief of stuffy nose, sinus, and ear symptoms caused by the common cold, flu, allergies, or other breathing illnesses
34	R & D	---	---	0.1	---
	Total Production Quantity			**30.1 TPM**	

Brief Note of Product Profile:

- **No of Manufacturing Plants: 1 Nos**
- **Brief Note regarding number of Products to be manufactured considering plant capacity: Unit will manufacture any Two products from above mention product [i.e. 1 to 33] as per quantity mentioned hence at a time unit will manufacture 2 Products and total production capacity will not exceed 30.0 MT/ Month.**

ENDUSE OF PRODUCT

Sr. No.	Name of the Product	CAS No. (Product)	Type/ Category of Product (API/ Intermediate)	In case of Intermediate stage of API			Said API is used for/End Use of said API
				Stage i.e. n-1, n-2, etc.	Name of API in which Intermediate Used/ End use of said Intermediate	CAS no. (API)	
1	Bisoprolol Fumarate & its intermediates	104344-23-2	API	---	---	104344-23-2	It is used to treat high blood pressure (hypertension) and heart failure.
2	Eflornithine Hydrochloride & its intermediates	66640-93-5	API	---	---	66640-93-5	It is used as an anticancer agent and as a chemoprevention agent.
3	Finofibrate & its intermediates	49562-28-9	API	---	---	49562-28-9	It is used along with a proper diet to help lower "bad" cholesterol and fats (such as LDL, triglycerides) and raise "good" cholesterol (HDL) in the blood.
4	2-n-propyl-4-methyl-6-(1-methyl benzimidazole-2-yl) benzimidazole	152628-02-9	Intermediate	n-1	Telmisartan	144701-48-4	It is used to lower high blood pressure.
5	4'-Bromomethyl-biphenyl-2-	114772-38-	Intermediate	n-2	Telmisartan	144701-48-4	It is used to lower high blood pressure.

	carboxylic acid methyl esters	2					
6	4,7-Dichloroquinoline(4,7-DCQ)	86-98-6	Intermediate	n-3	Telmisartan	144701-48-4	It is used to lower high blood pressure.
7	Ethyl 2-(3-cyano-4-isobutoxyphenyl)-4-methyl-5-thiazolecarboxylate	160844-75-7	Intermediate	n-1	Febuxostat	144060-53-7	It is used to treat hyperuricemia (constantly high levels of uric acid) in adults who have gout. It helps decrease your symptoms of gout. Symptoms of gout include pain, swelling, redness, heat, soreness, and stiffness in certain joints.
8	6 chloro-4-hydroxy- 2-methyl- 2H thieno [2,3-e] [1,2] thiazine- 3-carboxylate- 1,1-dioxide	70415-50-8	Intermediate	n-1	Lornoxicam	70374-39-9	Used for the treatment of various types of pain, especially resulting from inflammatory diseases of the joints, osteoarthritis, surgery, sciatica, and other inflammations.
9	Cis Bromo Benzoate	61397-56-6	Intermediate	n-2	Ketoconazole	65277-42-1	It is used to treat skin infections such as athlete's foot, jock itch, ringworm, and certain kinds of dandruff.
10	4-(4-Aminophenyl) morpholin-3-one	438056-69-0	Intermediate	n-1	Rivaroxaban	366789-02-8	It is used to prevent or treat a type of blood clot called deep vein thrombosis (DVT), which can lead to blood clots in the lungs (pulmonary embolism
11	(S)-Glycidyl phthalimide	161596-47-0	Intermediate	n-2	Rivaroxaban	366789-02-8	It is used to prevent or treat a type of blood clot called deep vein thrombosis (DVT), which can lead to blood clots in the lungs (pulmonary embolism
12	(S)-4-(4-(5-(Aminomethyl)-2-oxooxazolidin-3-yl)phenyl)morpholin-3-one	446292-10-0	Intermediate	n-3	Rivaroxaban	366789-02-8	It is used to prevent or treat a type of blood clot called deep vein thrombosis (DVT), which can lead to blood clots in the lungs (pulmonary embolism
13	6-Fluoro-3,4-dihydro-2H-1-	129050-	Intermediate	n-3	Nebivolol	99200-09-6	It is used to treat high blood pressure.

	benzopyran-2-carboxylic acid	20-0					Nebivolol is in a class of medications called beta blockers.
14	Trityl Olmesartan medoximil	144690-92-6	Intermediate	n-1	Olmesartan	144689-63-4	It is used to treat high blood pressure. Lowering high blood pressure helps prevent strokes, heart attacks, and kidney problems.
15	2-butyl-4-chloro-5-formyl imidazole	83857-96-9	Intermediate	n-1	Losartan	114798-26-4	It is used to treat high blood pressure (hypertension) and to help protect the kidneys from damage due to diabetes. It is also used to lower the risk of strokes in patients with high blood pressure and an enlarged heart. Lowering high blood pressure helps prevent strokes, heart attacks, and kidney problems.
16	4'-[[2-butyl-4-chloro-5-(hydroxymethyl)-1H-imidazol-1-yl] methyl]-[1,1'-biphenyl]-2-carbonitrile	114772-55-3	Intermediate	n-1	Losartan	114798-26-4	It is a medicine widely used to treat high blood pressure and heart failure, and to protect your kidneys if you have both kidney disease and diabetes.
17	1,2,3,9-Tetrahydro-9-methyl-4H-carbazol-4-one	27387-31-1	Intermediate	n-1	Ondansetron HCl	103639-04-9	Is used alone or with other medications to prevent nausea and vomiting caused by cancer drug treatment (chemotherapy) and radiation therapy. It is also used to prevent and treat nausea and vomiting after surgery.
18	N-T-Butylglycine hydrochloride	6939-23-7	Intermediate	n-3	Tigecycline	220620-09-7	an antibiotic- Treatment of Bacterial infection
19	9-Aminominocycline sulfate	149934-21-4	Intermediate	n-1	Tigecycline	220620-09-7	an antibiotic- Treatment of Bacterial infection
20	4-(2-methoxyethyl) phenol	56718-71-9	Intermediate	n-1	Metoprolol	37350-58-6	It is a beta-blocker used to treat chest pain (angina), heart failure, and high blood pressure.

							Lowering high blood pressure helps prevent strokes, heart attacks, and kidney problems.
21	1-(isopropylamino)3-[4-(2methoxyethyl) phenoxy] propane-2-ol	56392-17-7	Intermediate	n-2	Metoprolol	37350-58-6	It is a beta-blocker used to treat chest pain (angina), heart failure, and high blood pressure. Lowering high blood pressure helps prevent strokes, heart attacks, and kidney problems.
22	4-Hydroxycarbazole	52602-39-8	Intermediate	n-3	Carvedilol	72956-09-3	It is used to treat high blood pressure (hypertension). High blood pressure adds to the workload of the heart and arteries.
23	4-(2,3-epoxypropoxy) carbazole	51997-51-4	Intermediate	n-1	Carvedilol	72956-09-3	It is used to treat high blood pressure (hypertension). High blood pressure adds to the workload of the heart and arteries.
24	2-(2-methoxyphenoxy) ethylamine	1836-62-0	Intermediate	n-2	Carvedilol	72956-09-3	It is used to treat high blood pressure (hypertension). High blood pressure adds to the workload of the heart and arteries.
25	2-Amino-5-methyl thiazole	7305-71-7	Intermediate	n-1	Meloxicam	71125-38-7	Anti-inflammatory- used to treat pain and inflammation in rheumatic diseases and osteoarthritis.
26	7-(4-Chlorobutoxy)-3,4-dihydro-2(1H) quinolinone	129722-34-5	Intermediate	n-3	Aripiprazole	129722-12-9	An antipsychotic- used in the treatment of schizophrenia and bipolar disorder and other uses include as an add-on treatment in major depressive disorder
27	1-(2,3-Dichlorophenyl) piperazine hydrochloride	119532-26-2	Intermediate	n-1	Aripiprazole	129722-12-9	An antipsychotic- used in the treatment of schizophrenia and bipolar disorder and other uses include as an add-on treatment in major depressive

							disorder
28	Ethyl chloro[(4-methoxyphenyl) hydrazono] acetate	27143-07-3	Intermediate	n-3	Apixaban	503612-47-3	It is used to prevent serious blood clots from forming due to a certain irregular heartbeat (atrial fibrillation) or after hip/knee replacement surgery.
29	3-chloro-5,6-dihydro-1-(4-nitrophenyl)-2(1H)-pyridinone	536760-29-9	Intermediate	n-2	Apixaban	503612-47-3	It is used to prevent serious blood clots from forming due to a certain irregular heartbeat (atrial fibrillation) or after hip/knee replacement surgery. With atrial fibrillation, part of the heart does not beat the way it should.
30	Phthalimido amlodipine	88150-62-3	Intermediate	n-3	Amlodipine	111470-99-6	It is used to treat high blood pressure. Lowering high blood pressure helps prevent strokes, heart attacks, and kidney problems.
31	2-(dibutylamino)-1-(2,7-dichloro-9H-fluoren-4-yl)ethanol	69759-61-1	Intermediate	n-1	Lumefantrine		It is used to treat non-severe malaria. Artemether and lumefantrine is for use in adults and children at least 2 months old or who weigh at least 11 pounds (5 kilograms).
32	Methyl-4-methoxy acetoacetate	41051-15-4	Intermediate	n-1	Dolutegravir	1051375-16-6	it is an antiviral medicine that is used with other medications to treat HIV, the virus that can cause the acquired immunodeficiency syndrome (AIDS).
33	3-(1-hydroxy-2-(methylamino)ethyl) phenol	103439-04-9	Intermediate	n-1	Phenylepherine	61-76-7	It is used for the temporary relief of stuffy nose, sinus, and ear symptoms caused by the common cold, flu, allergies, or other breathing illnesses

- The project falls under Category B2 of project activity 5(f) as per the schedule of EIA Notification 2006 and amendment dated 27th March, 2020.

- The proposal was considered in the SEAC video conference meeting dated 24.06.2021.
- Salient features of Water, Air and Hazardous waste management are as under,

Sr. No.	Particulars	Details
A-1	Total **cost of Proposed** Project (Rs. in Crores):	

Total Project
6.50 Crores

Break-up of proposed project Cost:

Details	**Project Cost (Rs. In Crores)**
Land	**1.0**
Building	**1.16**
Plant & Machinery	**2.00**
EMP	**2.34**

A-2 **Details of Environmental Management Plan (EMP)** As below:

Sr. No	**Unit**	**Detail**	**Capital Cost (Rs. In Crores)**	**Operating Cost (Rs. In Crores)**	**Maintenance Cost (Rs. In Crores)**	**Total Recurring Cost (Rs. In Crores)**
1	Waste Water	40 KLD	0.6	0.1626	0.08	0.2427
2	Air	--	0.3	--	0.005	0.0058
3	Hazardous Management	--	0.25	0.02023	0.0035	0.0552
4.	Risk and Safety Audit and Safety Equipment (PPE, Safety Shower, Ventilation, etc.)	--	0.5	--	0.0083	0.0125
5.	Cost of Fire Extinguisher, Fire hydrant line	--	0.32	--	0.0083	0.0093
5	Green Belt Development	--	0.01	--	0.0004	0.0006
6.	AWH Monitoring	--	0.3	0.006	0.004	0.0100
7.	Occupatio	--	0.06	0.0042	--	0.0083

nal Health					
Total	**2.34**			**0.3445**	

Summary

Cost of Project in Crores per Annum:	6.50
EMP Capital Cost in Crores:	2.34 (36.0 %)
EMP Recurring Cost in Crores Per Annum	4.13 (63.60 %)

A-3 **Details of CER as per OM dated 01/05/2018 (In case of project falls under CPA/SPA,** CER fund allocation to be at least 2 times the slabs given in the OM dated 01.05.2018 for SPA and 2 times for CPA in case of Environmental Clearance as per the mechanism published vide MoEF&CC's OM vide 31.10.2019.)

% as per the OM	Rs. in Lakhs
2%	13.0

Brief note on proposed activities:

Activities (On basis of Needs Assessment)	**Phase Wise Budget**		
	1st Year	**2nd Year**	**TOTAL**
Drinking Water Facility [RO-System]in PHC with facility of Toilet and – Village Dadhal Installation of Solar Street Light near Gam Panchayat Area	13.0	-	13.0
Total Cost	**Approx. INR**		**13 Lakhs**

B **Land / Plot ownership details:**

Plot Allotment letter no. GIDC/RM/ANK/TRF/FTO/PAN1/331 is allotted for chemical and chemical products in favour of Swarna chemicals. The same plot allotment letter is attached as annexure I.

B-1 **Plot area**

Total Plot area	1417.37 Sq. m.

B-2 Brief note on **Area adequacy** in line to proposed project activities:

- Production capacity: 30 MT/Month.
- Company will store its raw material in Tanks (We procure Raw Materials from the local market. 90% of these raw materials are easily available from this market. Hence, no excess quantity of raw materials will be stored).
- List of Hazardous chemicals stored in tanks shown below.

S. N.	**Name of chemical**	**Quantity (Nos.)**	**Total (Nos.)**	**Total Qty. to be store (KL)**
Non PESO solution				
1	Sulphuric Acid	250 Lit	5 Nos.	1.40 KL
2	Nitric Acid	250 Lit	2 Nos.	0.53 KL
3	Hydrochloric Acid	250 Lit	16 Nos.	4.07 KL
PESO Solution				
1	Acetic acid	250 Lit	8 Nos.	2 Kl
2	Acetone	250 Lit	11 Nos.	2.98 Kl
3	Chloroform	250 Lit	8 Nos.	2 Kl
4	DMF	250 Lit	9 Nos.	2.46 Kl
5	EDC	250 Lit	9 Nos.	2.33 Kl
6	Ethanol	250 Lit	7 Nos.	1.87 Kl
7	Ethyl acetate	250 Lit	8 Nos.	2.026 Kl
8	Hexane	250 Lit	4 Nos.	1.2 Kl
9	IPA	250 Lit	8 Nos.	2.082 Kl

10	MDC	250 Lit	4 Nos.	1 Kl
11	Methanol	250 Lit	4 Nos.	1 Kl
12	Toluene	250 Lit	8 Nos.	2.2 Kl
Bank-(Set Of Cylinder)				
1	Hydrogen	2.2 kg X 60 Nos.	1	140 K.g

- Area required for ETP 60.0 m^2.
- 40.0 m^2 area provided for the Utilities.
- 170. M^2 (F+S) area will be provided for the manufacturing of the proposed products.

Sr. No	**Particulars**	**Criteria for Storage**	**Inventory Required (MT)(KL)**	**Area Required m^2**	**Area Proposed m^2**
1	Finished product storage area (1 week inventory)	Bags: 280 Nos. (1 Bag=0.6 m^2)	7	56	70
2	Raw Material Storage area (1 week inventory) (G)	Drums: 75 Nos. (1 Drum = 0.5 m^2)	15	37.5	60
3	Raw Material Storage area (1 week inventory) (G)	Drums: 100 Nos. (1 Bag=0.6 m^2)	5	20	40
4	Solvent Storage Area (PESO) (Storage at a time)	Drums: 96 Nos. (1 Drum = 0.5 m^2)	24	48	80
5	Hydrogen Bank (H2 Bank)	-	0.14	-	10
			51 MT	**161.5 m^2**	**260 m^2**

- **Hence, adequate area is available for proposed in Bulk drug intermediate mfg. Facility.**

B-3 **Green belt area**

	Total Green Belt Inside Premises(Sq. meter)	**Total Green Belt Outside Premises(Sq. meter)**
Area in Sq. meter	354	113.73
% of total area	25%	8%

C **Employment generation**

Total
10-15 Employees

D **Water**

D-1 **Source of Water Supply**
(GIDC, Bore well, Surface water, Tanker supply etc...)

- **GIDC Water Supply No: NAO/PNK/1779 dated: 28/09/2021 for 17.5 KLPD in the favor of Swarna chemicals is attached as Annexure-II.**

Status of permission from the concern authority.
No: **NAO/PNK/1779 dated: 28/09/2021**

D-2 **Water consumption (KLD)**

Category	Quantity KLD	Remarks
(D) Domestic	1.0	
(E) Gardening	1.5	
(F) Industrial		
Process	8.0	
Washing	2.0	
Boiler	8.1	
Cooling	4.5	
Others[Scrubber]	0.9	
Industrial Total	**23.5**	
Total (A + B + C)	**26.0**	

Brief Note on worst case scenario for water consumption:

- We have calculated all the details based on stoichiometric calculation and based on that considering worst case scenario Total Industrial Water consumption from production quantity will be 8.0 KLD and waste water generation will be 11.4 KLD. Details of Product wise water consumption and waste water generation is attached as **Annexure III.**
- Worst Case Scenario for water consumption;

S. N	Product	Water Consumption (in KL) for 1 MT production	Total Production (MT/Month)	Total water req. (KLD)
1	Bisoprolol Fumarate	8.0 KLD	30	8.0 KLD
			Hence Worst Case Considered is	**8.0 KLD**

-

Summary of water requirement	**Quantity** KLD	Remarks
Total water requirement for the project **(A)**	26.0	GIDC Water Supply Authority
Quantity to be **recycled (B)**	8.5	
Total **fresh water** requirement **(C)**	17.5	
Ensure **Total water requirement = Fresh water + Recycled water i.e., A = B + C**		

Reuse/Recycle details (KLD) with feasibility.
[Source of reuse & application area]

Source of waste water for reuse in KLD (From where it is	Application area with quantity in KLD (Where it	Characteristics of waste water to be reused (COD, BOD, TDS etc.)	Remarks regarding feasibility to reuse

	coming)	**is used)**		
	Boiler Condensate & Cooling Waste Water (8.5 KLD)	Boiler (8.5 KLD)	TDS<100 mg/l BOD< BDL COD< BDL	Yes, it is feasible.

In case of no reuse/recycle of wastewater, Give brief note on justification as why no reuse/recycle.

- Boiler & Cooling Blowdown = 8.5 KLD will be reuse after neutralization.

D-3 **Waste water generation (KLD)**

Category	Waste water KLD	Remarks
(E) Domestic	0.5	
(F) Industrial		
Process	11.4	
Washing	2.0	
Boiler	1.4	
Cooling	1.2	
Others[Scrubber]	0.0	
Total Industrial waste water	**16.0**	
Total [A + B]	**16.5**	

Brief Note on worst case scenario for waste water generation(Qualitative and Quantitative):

- We have calculated all the details based on stoichiometric calculation and based on that considering worst case scenario Total Industrial Water consumption from production quantity will be 8.0 KLD and waste water generation will be 11.4 KLD. Details of Product wise water consumption and waste water generation is attached as **Annexure III.**
- Worst Case Scenario for waste water generation;

S. N	Product	Waste Water Gen. (in KL) for 1 MT production	Total Production (MT/Month)	Total Waste water Gen. (KLD)
1.	2-n-Propyl-4-methyl-6-(1-methyl benzimidazole-2yl) Benzimidazole-WW generation	11.4 KLD	30	**11.4 KLD**

Brief justification in case of no process effluent generation or no industrial effluent generation or no high concentration effluent generation from proposed project (Whichever is applicable).

- Not Applicable.

D-4 Mode of Disposal & Final meeting point

	Domestic:	Domestic waste water will be collected and will be treated into ETP. Domestic waste water will be used in aeration tank for adequate treatment.
	Industrial:	Effluent generated from Process, Utilities and Washing section will be mixed with effluent generated from Domestic and treated into ETP [Primary] treatment plant and after adequate treatment effluent send to CMEE-BEIL for further disposal.
		Scrubbing water will be goes along with by product which will be sell to authorized end users registered under rule-9.

-
Clearly mention about final disposal

D-5 Treatment facilities

For Domestic waste water: Allow into ETP
Capacity of STP: Not Applicable

For Industrial waste water: Treatment facility within premises with **capacity**
[In-house ETP (Primary, Secondary, Tertiary), MEE, Stripper, Spray Dryer, STP etc.
Treatment scheme including segregation at source. **(Give Characteristics of each stream i.e. COD, BOD, TDS etc.) In case of stream segregation, Separate ETP (ETP-1, ETP-2….) for each stream shall be proposed.**
Treatment facility within premises with **capacity**
[In-house ETP (Primary, Secondary, Tertiary), MEE, Stripper, Spray Dryer, STP etc.

ETP	**:**	Effluent generated from Process, Utilities and Washing section will be mixed with effluent generated from Domestic and treated into ETP [Primary] treatment plant and after adequate treatment effluent send to CMEE-BEIL for further disposal.
	:	Scrubbing water will be goes along with by product which will be sell to authorized end users registered under rule-9.
Domestic Waste Water		Domestic waste water will be collected and will be treated into ETP. Domestic waste water will be used in aeration tank for adequate treatment.

QUALITATIVE AND QUANTITATIVE ANALYSIS OF EACH WASTE STREAM

Sr. No.	Source of Waste Water Generation	Quantity in KL/Day	Parameter	Quality	Final load at ETP in Kg/day
1.	Boiler blow down	1.4	pH	6.5-8.0	--
			TSS	500-600 mg/L	0.84
			COD	200-300 mg/L	0.42
			TDS	2500-3000 mg/L	4.2
2.	Cooling Tower blow down	1.2	pH	6.0-8.5	--
			TSS	600-700 mg/L	0.84
			COD	500-800 mg/L	0.96
			TDS	3500-4000 mg/L	4.8
3.	Washing	2.0	pH	5.0-6.5	--
			TSS	1000-1500 mg/L	3.0
			COD	1000-1200 mg/L	2.4
			TDS	3000-4000 mg/L	8.0
4.	Process	11.4	pH	3.0-6.5	--
			TSS	800-1000 mg/L	11.4
			COD	20000-25000 mg/L	285
			TDS	35000-40000 mg/L	456

Total Industrial Effluent	**16.0**		-	-

CHARACTERISTICS OF WASTEWATER BEFORE & AFTER TREATMENT:- [PRIMARY +CMEE-BEIL]

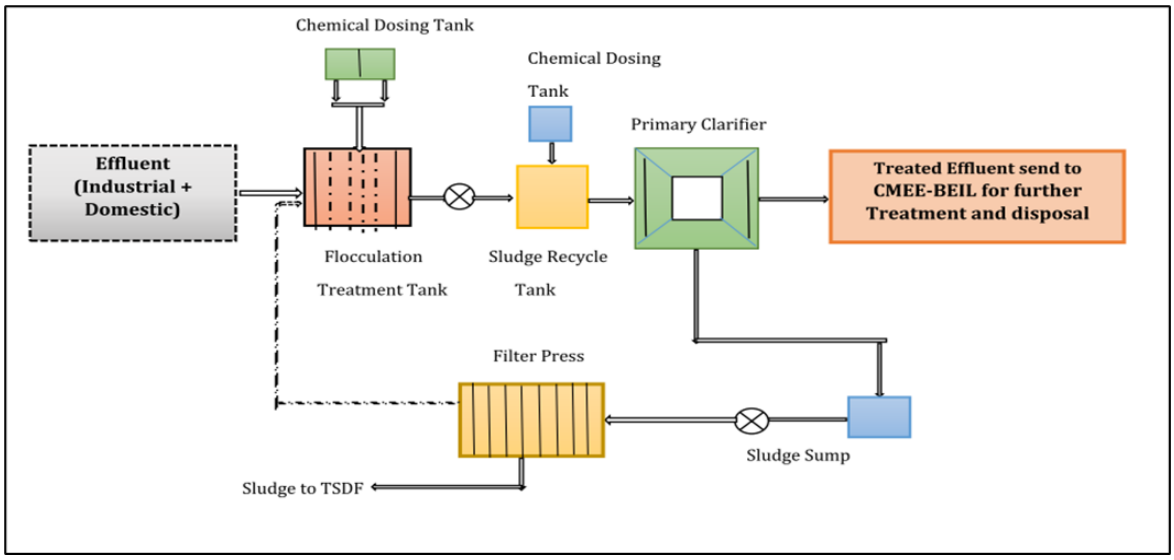
Sr. No.	Parameters	Unit	Before Treatment	After Primary Treatment effluent send to CMEE_BEIL
1.	pH	--	3.5-5.5	6.5-8.5
2.	T.S.S.	mg/l	1000-1500	250-370
3.	C.O.D.	mg/l	20000-25000	17000-21500
4.	T.D.S.	mg/l	35000-40000	36500-41500

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 – Treated Effluent from Primary ETP 16.0 KLD will be sent to Common Evaporation Facility for further treatment and disposal.

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

Treated Effluent from Primary ETP 16.0 KLD will be sent to Common Evaporation Facility for further treatment and disposal.



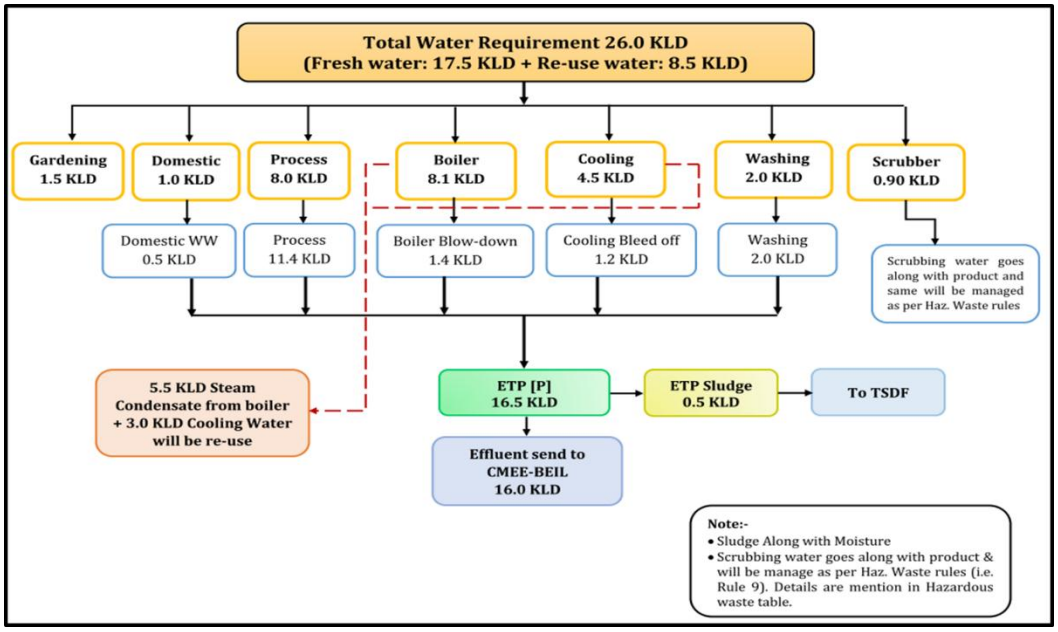
D-6 In case of Common facility (CF) i.e. **CETP, Common Spray dryer, Common MEE, CHWIF etc.**

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

- Common Evaporation Facility

Membership of Common facility (CF) 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.

	➢ **Membership Certificate for CMEE for 20 KL/Day at BEIL Ankleshwar Ref. BEIL/ANK/2021 dated: 10/04/2021 is attached as Annexure-II**
D-7	**Simplified water balance diagram with reuse / recycle of waste water**



E	**AIR**
E-1	**Brief Note on fuel based Heat energy requirement and worst case scenario thereof:**

SN	Fuel Based Heat Energy	Proposed Fuel	Calorific Value (kcal/kg)	Working Hours (Worst Case)	Fuel Consumption in worst case
1	Boiler (1.5 TPH)	Natural Gas	10000-12000 kcal/kg	18 Hrs	1300 SCM/Day
		OR			
		Briquettes /Agro Waste	3800-4500 kcal/kg	18 Hrs	3 MT/Day

E-2 Flue gas emission details

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

(In case of Project located within CPA/SPA , APCM shall be in line to the mechanism published in the MOEFCC's OM vide dated 31.10.2019)

Sr. no.	Source of emission With Capacity	Stack Height (meter)	Type of Fuel	Quantity of Fuel MT/Day	Air Pollution Control Measures (APCM)	Type of emissions i.e. Air Pollutants
1	Boiler [Cap. 1.5 TPH]	30	Natural Gas OR Briquettes /Agro Waste	1300 SCM/Day OR 3.0 MT/Day	Multi Cyclone Separator + Water scrubber + Bag filter	PM<150 mg/Nm^3 SO_2<100 ppm NO_x<50 ppm

	2	Thermic Fluid Heater [Cap. 3 lakh Kcal/Hr.]	30	Natural Gas OR Briquettes /Agro Waste	1300 SCM/Day OR 3.0 MT/Day	Multi Cyclone Separator + Water scrubber + Bag filter		
	3	D.G. Set [Cap. 100 KVA]	15	Diesel	60 Lit/Day	Adequate Stack Height		

E-3 **Process gas** 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)	Stack/Vent Height (meter)	Type of emission	Air Pollution Control Measures (APCM)
1.	**Reaction Vessel-1** [Product no. 3,9,10,13, 15,18,19,27,31]	20	HCl	Two Stage Scrubber [Water Scrubber followed by Alkali Scrubber]
2.	**Reaction Vessel-2** [SO_2: - Product no. 3] [HBr: - Product No. 9]	20	SO_2, HBr	Two Stage Alkali Scrubber

Note:

- **Details of gaseous raw materials used in proposed project**
- **Estimation of process gas emission (Product wise and Total)**
- **Requirement of the scrubbing media (KL per Day) considering solubility (Product wise and Total)**
- **Yearly generation of all bleed liquors (MT/KL per Annum) as mentioned above and its sound management in HW matrix.**
- Details of Product wise process gas emission is attached as **Annexure-III.**

E-4 **Fugitive emission** details with its mitigation measures.

- 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 waste**

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

Note:

- **Priorities for HW Management:** Pre-processing, Co-Processing, Reuse/Recycle within premises, Sell out to actual users having Rule-9 permission, TSDF/CHWIH.
- **Quantification of hazardous waste shall be based on mass balance and calculations shall be incorporated in EMP details separately.**
- **Disposal to scrap vendors/vendors/traders is not allowed**

F-1 **Hazardous waste management matrix**

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	Raw Material and Packaging	33.1	60	Collection, Storage, Transportation, reuse or send back to supplier or sell to authorize end users registered under rule-9.
2.	Used or Spent Oil	From Machinery	5.1	1.0	Collection, Storage, Transportation and sold to authorized Recyclers.
3.	ETP Sludge	ETP	35.3	180	Collection, Storage, Transportation and sent to Common TSDF site (Through GPS mounted vehicle)
4.	Process waste	From Product No. 4'-Bromomethyl-biphenyl-2-carboxylic acid methyl esters	28.1	78	
5.	Distillation Residue	From Product No. 2-(dibutylamino)-1-(2,7- dichloro - 9H-fluoren-4-yl)ethanol	20.3	52	Collection, Storage, transportation and sent for co-processing in cement industries disposal at CHWIF. (Through GPS mounted vehicle)
6.	Spent Carbon	From Product No. 6-Fluoro-3,4-Dihydro 2h-1-Benzopyran-Benzoyl 2-Carboxylic Acid	28.3	27	
7.	Spent Catalyst	From Product No. 4-(2-Methoxyethyl)Phenol	28.2	18	

	8.	HCl Sol. [28-33%]	Scrubber & From Product No. Finofibrate	SCH-II-/ B(15)	302	Collection, Storage, Transportation and sell to authorized end users registered under rule-9.
	9.	Sodium Bromide Solution [15-20%]	Scrubber & From Product No. Cis-bromo benzoate	--	330	Collection, Storage, Transportation and sell to authorized end users registered under rule-9.
	10.	Sodium bisulfite Sol. [30-40%]	Scrubber & From Product No. Finofibrate	--	230	Collection, Storage, Transportation and sell to authorized end users registered under rule-9.
	11.	Spent Solvent	From Product No. 9-Aminominocycline sulfate	28.6	715	Collection, Storage, Recovery and Recycle for manufacturing of product.
	12.	Off-Specification Products	Process	28.4	10.0	Collection, Storage, transportation and sent for co-processing/Incineration in cement industries disposal at CHWIF. (Through GPS mounted vehicle)
	13.	Sodium hypo Chlorite	From Scrubber	0.0	15	Collection, storage and sent to ETP for further Treatment.

F-2	Membership details of **TSDF, CHWIF** etc. **(For HW management)**	
	Details of Membership letter no. & Date with spare capacity of the Common Facility. **Membership Certificate of TSDF for 125 MT/Year and Incineration/Co-process waste for 270 MT/Year at BEIL Ankleshwar Ref. BEIL/ANK/2021 dated: 10/04/2021 is attached as Annexure-II.**	
F-3	Details of Non-Hazardous waste & its disposal **(MSW and others)**	Fly Ash

G	**Solvent management**, VOC emissions etc. • 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 firefighting 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 Absorber for removing traces of solvent from vent gases. • Residue generated from the distillation will be incinerated in-house or sent to BEIL incinerator site. • Two condenser will install with cooling water and chilled brine to recover the solvent. • Primary Condenser HE-01: Cooling Tower water or Chilled water at 10 ^{0}C -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.
G-1	Brief Note on types of solvents, Details of Solvent recovery, % recovery, reuse of recovered Solvents etc.

Sr. No.	Name of Product	Name of Solvent	Solvent Quantity (MT/M)	Solvent Recovered (MT/M)	Percentage Recovery %
1	Bisoprolol Fumarate	2 Isopropoxy Ethanol	12.000	11.400	95.0
		Toluene	7.500	7.125	95.0
		Epichlorohydrin	7.500	7.125	95.0
		Methanol	7.500	7.125	95.0
		Isopropyl amine	7.500	7.125	95.0
		Acetone	6.000	5.700	95.0
2	Eflornithine	Methanol	16.500	15.675	95.0
		P-Diethyl Benzene	6.000	5.700	95.0
		Toluene	9.000	8.550	95.0
		Isopropyl alcohol	18.000	17.100	95.0
		Tetrahydrofuran (THF)	7.500	7.125	95.0
3	Finofibrate	Chlorolorm	24.590	23.361	95.0
		Acetone	14.754	14.016	95.0
4	2-n-Propyl-4-methyl-6-(1-methyl benzimidazole-2yl) Benzimidazole	Chlorobenzene	9.868	9.375	95.0
		Ethyl acetate	15.789	15.000	95.0
		Glacial acetic acid	8.882	8.438	95.0

			Ethanol	6.908	6.563	95.0
			Methanol	8.882	8.438	95.0
5	4'-Bromomethyl-biphenyl-2-carboxylic acid methyl esters	MDC	9.000	8.550	95.0
		Acetone	7.500	7.125	95.0
		Cyclohexane	28.500	27.075	95.0
6	4, 7-DICHLOROQUINOLINE	Skellysolve	33.582	31.903	95.0
		Dowtherm	29.104	27.649	95.0
7	Ethyl-2-(3-Cyano-4-isobutoxyphenyl)-4-methyl-1,3-thiazole-5-carboxylate	DMF	30.000	28.500	95.0
		Methanol	7.500	7.125	95.0
8	6 Chloro-4-Hydroxy-2-Methyl-2H-Thieno[2,3-e] [1,2] thiazine-3-Carboxylate-1,1-dioxide	Methanol	13.500	12.960	96.0
		Toluene	16.500	15.840	96.0
9	Cis- bromo benzoate	Toluene	31.579	30.000	95.0
		Methanol	19.737	18.947	96.0
10	4-(4-aminophenyl) morpholin-3-one	Toluene	6.000	5.760	96.0
11	(S)-Glycidyl phthalimide	Methanol	9.091	8.636	95.0
		IPA	45.455	43.182	95.0
12	(S)-4-(4-(5-(Aminomethyl)-2-oxooxazolidin-3-yl)phenyl)morpholin-3-one	THF	10.500	9.975	95.0
		Ethanol	15.000	14.250	95.0
13	6-Fluoro-3,4-Dihydro 2h-1- Benzopyran-Benzoyl 2-Carboxylic Acid	Ethylene dichloride (EDC)	15.000	14.250	95.0
		Ethyl acetate	11.250	10.688	95.0
		Acetic acid	15.000	14.250	95.0
14	Trityl Olmesartan medoximil	Ethyl acetate	11.379	10.924	96.0
15	2-Butyl-4-Chloro-1H-imidazole-5-carbaldehyde	Methanol	6.000	5.760	96.0
16	4-(2-butyl-4-chloro 5-hydroxymethyl)imidazoly methyl-biphenyl – carbonitrile	Toluene	26.250	24.938	95.0
		Methanol	10.500	9.975	95.0
17	1,2,3,9-Tetrahydro-9-methyl-4H-carbazol-4-one	methylene dichloride	45.000	42.750	95.0
18	N-T-Butylglycine hydrochloride	Isopropyl alcohol	27.000	25.650	95.0
		Hexane	9.000	8.550	95.0
		Methanol	12.000	11.400	95.0
19	9-Aminominocycline sulfate	Isopropyl alcohol	18.000	17.100	95.0
		Hexane	9.000	8.550	95.0
		Methanol	12.000	11.400	95.0
		Toluene	9.000	8.550	95.0
20	4-(2-METHOXYETHYL) PHENOL	Ethylene dichloride	22.500	21.375	95.0
		Methanol	20.000	19.000	95.0
21	1-(isopropylamino)3-[4-(2methoxyethyl) phenoxy] propane-2-ol	Isopropyl alcohol	33.000	31.350	95.0
23	4-(2,3-epoxypropoxy)-carbazole	IPA	31.500	29.925	95.0
24	2-(2-Methoxy-phenoxy)-ethylamine	MDC	13.500	12.825	95.0
		EDC	25.500	24.225	95.0
25	2-Amino 5-Methyl Thiazole	Toluene	15.000	14.400	96.0
26	7-(4-Chlorobutoxy)-3,4-dihydro-2(1H) quinolinone	Dimethyl acetamide	30.395	28.875	95.0
27	1-(2,3 Di Chloro Phenyl) Piperazine Hydrochloride	Methanol	51.000	48.960	96.0
28	Ethyl chloro[(4-	Ethyl Acetate	17.964	17.066	95.0

	methoxyphenyl) hydrazono] acetate	IPA	26.946	25.599	95.0
29	3-chloro-5,6-dihydro-1-(4-nitrophenyl)-2(1H)-pyridinone	Isopropyl alcohol	21.000	19.950	95.0
		Acetone	16.500	15.675	95.0
		Methylene Dichloride	21.000	19.950	95.0
30	Phthaloyl amlodipine	Methanol	50.000	47.500	95.0
31	2-(dibutylamino)-1-(2,7-dichloro - 9H-fluoren-4-yl)ethanol	Methanol	45.000	42.750	95.0
32	methyl-4-methoxy acetoacetate	Toluene	35.385	33.615	95.0
33	3-(1-hydroxy-2-(methylamino)ethyl) phenol	Methanol	35.714	34.286	96.0

G-2	**Brief Note on LDAR proposed:**
ii	The Following methodology to be adopted during LDAR study: ➢ Identify the Chemical streams that must be monitored. ➢ Types of components (pumps, valves, connectors, etc.) to be monitored ➢ Frequency of monitoring. ➢ Actions to be taken if a leak is detected. ➢ Length of time in which an attempt to repair the leak must be performed. ➢ Actions that must be taken if a leak cannot be repaired within guidelines. Record-keeping and reporting requirements.
G-3	**VOC emission** sources and its mitigation measures
	➢ Leak Free Pumps for transfer of solvents. ➢ MSW Gaskets in solvent pipelines to prevent leakage from flanges. ➢ Minimum number of flanges, joints and valves in pipelines. ➢ To eliminate chances of leakages from glands of pumps, mechanical seal will be provided at all solvent pumps. ➢ All the rotating equipments like pumps will be installed with Mechanical Seals to arrest any sort of emissions. ➢ Condenser and scrubber post Reactor with cooling arrangement. ➢ Enclosures to chemical storage area, collection of emission from loading of raw materials in particular solvents through hoods and ducts by induced draft, and control by condenser to be ensured. ➢ In case the small spillage or leakage observed, first pour the china clay (vermiculate) on material and collect the contaminated china clay (vermiculate) and send to ETP. ➢ If the spillage is of inflammable liquid, switch off all the power supply in the area to prevent Electric Spark. ➢ Two condensers will install with cooling water and chilled brine to recover the solvent. ➢ Primary Condenser HE-01: Cooling Tower water or Chilled water at 5 °C will be used to condense the solvents depend on the vapor pressure at its operating conditions and the non-condensed vapors will be condensed in a Secondary Condenser. ➢ VOC Trap Condenser HE-02: Chilled Brine at -15 °C will be used to trap any traces of Solvent which is slipped from Secondary condenser. ➢ Emission of VOCs can be trapped from breathing and loading losses from storage tanks, venting of process vessels, leak from piping and equipment by means of hood connected with blower and send to condenser as shown in

following diagram.

- Condensed VOCs will be send to spent solvent recovery plant.

H **SAFETY details**

H-1 **Details regarding storage of Hazardous chemicals (For tank storages only including spent acid and spent solvent tanks**

S. N.	Name of chemical	Quantity (Nos.)	Total (Nos.)	Total Qty. to be store (KL)
Acid Drums				
1	Sulphuric Acid	250 Lit	5 Nos.	1.40 KL
2	Nitric Acid	250 Lit	2 Nos.	0.53 KL
3	Hydrochloric Acid	250 Lit	16 Nos.	4.07 KL
PESO Drum				
1	Acetic acid	250 Lit	8 Nos.	2 Kl
2	Acetone	250 Lit	11 Nos.	2.98 Kl
3	Chloroform	250 Lit	8 Nos.	2 Kl
4	DMF	250 Lit	9 Nos.	2.46 Kl
5	EDC	250 Lit	9 Nos.	2.33 Kl
6	Ethanol	250 Lit	7 Nos.	1.87 Kl
7	Ethyl acetate	250 Lit	8 Nos.	2.026 Kl
8	Hexane	250 Lit	4 Nos.	1.2 Kl
9	IPA	250 Lit	8 Nos.	2.082 Kl
10	MDC	250 Lit	4 Nos.	1 Kl
11	Methanol	250 Lit	4 Nos.	1 Kl
12	Toluene	250 Lit	8 Nos.	2.2 Kl
Bank-(Set Of Cylinder)				
1	Hydrogen	2.2 kg X 60 Nos.	1	140 K.g

Brief note on storage of Hazardous chemicals in Tanks
Brief note on storage of Hazardous chemicals other than Tanks i.e. Drum, Barrels, Carboys, Bags etc.

Safety Measures for Drum Storage area:

- Some chemicals will be received at plant in drums by road truck and stored in a separate drum storage area.
- FLP type light fittings will be provided.
- Proper ventilation will be provided in go down.
- Proper label and identification board /stickers will be provided in the storage area.
- Conductive drum pallets will be provided.
- Drum handling trolley / stackers/fork lift will be used for drum handling. Separate dispensing room with local exhaust and static earthing provision will be made.
- Materials will be stored as per its compatibility study and separate area will be made for flammable, corrosive and toxic chemical drums storage.
- Smoking and other spark, flame generating item will be banned from the Gate.

Safety details of Hazardous Chemicals:

Type of Hazardous Chemicals	Safety measures
HYDROGEN	• CCE approved premises with door having locking arrangement provided.

			• Protect cylinders against physical damage. • Store in cool, dry, well-ventilated area, away from sources of heat, ignition and direct sunlight. • Do not allow area where cylinders are stored to exceed 52°C (125°F). • Isolate from oxidizers such as oxygen, chlorine, or fluorine. • Use a check valve or trap in the discharge line to prevent hazardous backflow. • Post “No Smoking or Open Flame” signs in storage and use areas. • Cylinders should be stored upright and be firmly secured to prevent falling or being knocked over. • Cylinders can be stored in the open, but in such cases, should be protected against extremes of weather and from the dampness of the ground to prevent rusting. • Never tamper with pressure relief devices in valves and cylinders. Electrical equipment should be non-sparking or explosion proof. • Flammable high-pressure gas. • Use only in a closed system. • Use piping and equipment adequately designed to withstand pressures and temperatures to be encountered. • Gas can cause rapid suffocation due to oxygen deficiency. • Never work on a pressurized system. • If there is a leak, close the cylinder valve. Blow the system down in a safe and environmentally sound manner in compliance with all federal, state, and local laws; then repair the leak. • Never place a compressed gas cylinder where it may become part of an electrical circuit. • Apron, Hand gloves, gumboot, goggles & helmet provided • ISI Portable fire extinguisher & Hydrant line is provided as per TAC norms. • Flame proof fitting provided. • Sufficient Nos. of SBA sets & 2 No. of Air line mask.	
		Hydrogen cylinders	• Hydrogen cylinders will be stored in cylinder storage area. Cylinder storage license will be obtained from PESO as per Gas cylinder rules. • Hydrogen cylinder storage area will be made well ventilated and safe distance will be maintained as per gas cylinder rule. • Sprinkler system provision will be made in cylinder storage area. • Gas detectors will be provided in Hydrogen cylinder storage area. • Copper tube will be used for Hydrogen cylinder connection with header. PRV station will be provided for Hydrogen and nitrogen cylinder header. • Non sparking tools will be used for cylinder connection with header. • FLP type area will be provided. • Total enclosed process system. • Instrument & Plant Air System. DCS operational plant. • Nitrogen blanketing in Hydrogenation reactor. • Safety valve and Rupture disc provided on reactor. • Cooling Chilling and power alternative arrangement have been made on reactor. • Hydrogen and Nitrogen Cylinder bank away from the autoclave reactor.	

			• PRV station with shut off valve, safety valve provision will be made for hydrogenation reaction safety. • Before Hydrogen Gas charging into reactor and after completion of reaction Nitrogen flushing will be done. • Flame arrestor will be provided on vent line of reactor and it will be extended up to roof level. • Open well ventilated and fragile roof will be provided to on reactor. • Safe Catalyst charging method will be adopted. • SOP will be prepared and operators will be trained for the same. • Static earthing and electric earthing (Double) provided. • Rector vent extended out side the process area and flame arrestor provided on vent line. • Dumping vessel arrangement will be made. • Jumpers for static earthing on pipeline flanges of flammable chemical will be provided.	
		Ethyl Acetate	• Valve, pipeline are checked and maintain, in good condition. • Apron, Hand gloves, gumboot, goggles and helmet will be provided. • ISI Portable fire extinguisher & Hydrant line is provided as per TAC norms. • Sufficient amount of sand/soil are kept to control any spillage. • Eye washer cum shower is provided near storage area. • Level indicator provided. • SBA set, Canister mask and airline mask is provided. • Vent line dipped in dilute caustic will be provided.	
		HCl	• Dyke wall provided. • Dyke wall with sufficient size is provided. • Tank, valve, pipeline are checked and maintain, in good condition. • Apron, Hand gloves, gumboot, goggles and helmet will be provided. • ISI Portable fire extinguisher & Hydrant line is provided as per TAC norms. • Sufficient amount of sand/soil are kept to control any spillage. • Eye washer cum shower is provided near tank-farm area. • Level indicator provided. • Vent line dipped in water will be provided. • RCC foundation will be provided. • Transfer material to another empty tank/ Vessel.	
		DMF/ EDC	• Dyke wall with sufficient size is provided. • Tank, valve, pipeline are checked and maintain, in good condition. • All Gaskets are checked periodically & if new one replaces found defective. • Joints are checked regularly to found any Leakage. • Apron, Hand gloves, gumboot, goggles and helmet provided. • ISI Portable fire extinguisher & Hydrant line is provided as per TAC norms. • Sufficient amount of sand/soil are kept to control any spillage. • Flame proof fitting provided. • Eye washer cum shower is provided near tank-farm area. • Level indicator provided. • Spark arrester are installed on all vehicles in side the premises. • SBA set, Canister mask and airline mask is provided.	

			• Earthing& bonding on tanks is provided. • Vent line provided at sufficient height above roof building. • Level indicator provided.	
		Methanol / Toluene/ Acetone/ Butanol	• Tank, valve, pipeline are checked and maintain, in good condition through preventive maintenance. • Joints are checked regularly to detect any Leakage. • ISI Portable fire extinguisher & Fire Hydrant line is provided as per TAC norms. • Flame proof electrical fittings / installation provided. • Proper Earthing, Bonding & flange-to-flange jump ring is provided. • Flame arrester provided on vent line. • CCE approved Separate Storage area with door having locking arrangement. • Auto & manual sprinkler provided. • Spark arrester are installed on all vehicles inside the premises. • Apron, Hand gloves, gumboot, goggles and helmet provided. • Train operator employed. • Eye washer & shower provided. • Tank's thickness measured on regular interval. • Good ventilation in the area. • Flame arrester with breather valve. • Perforated dip pipe in dyke wall will be provided to monitor & detect any leakage from tank. • Sump will be made under dyke to recover leakage material from dyke. • Tanks will be kept under RCC dyke. • Tanks will be kept under shed. • All tanks will be connected to ETP.	
		Iso Propyl Alcohol	• Dyke wall will be provided. • Dyke wall calculated with sufficient size is provided. • Tank, valve, pipeline are checked and maintain, in good condition. • Apron, Hand gloves, gumboot, goggles and helmet will be provided. • ISI Portable fire extinguisher & Hydrant line is provided as per TAC norms. • Flameproof electrical connection will be provided. • Separate storage area will be provided. • Sufficient amount of sand/soil are kept to control any spillage. • Eye washer cum shower is provided near tank-farm area. • Level indicator provided. • RCC foundation will be provided.	
		Caustic Soda Lye	• Valve, pipeline are checked and maintain, in good condition. • Apron, Hand gloves, gumboot, goggles and helmet provided. • ISI Portable fire extinguisher & Hydrant line is provided as per TAC norms. • Sufficient amount of sand/soil are kept to control any spillage. • Eye washer cum shower is provided near tank-farm area. • Level indicator provided.	
		AMMONIA (NH3)	• Valve, pipeline are checked and maintain, in good condition. • All Gaskets are checked periodically & if new one replaces found defective. • Joints are checked regularly to found any Leakage. • ADEQUATE PPE is kept to handle the Hazard. • ISI Portable fire extinguisher & Hydrant line is provided as per	

			TAC norms. • Sufficient amount of sand/soil are kept to control any spillage. • Flame proof fitting provided. • Eye washer cum shower is provided near tank-farm area. • Level indicator provided. • Spark arrester are installed on all vehicles inside the premises. • SBA set, Canister mask and airline mask is provided. • Earthing& bonding on tanks is provided. • Vent line dipped in water will be provided. • RCC foundation will be provided. • Transfer material to another empty tank/ Vessel.	

Applicability of PESO: Will be obtained.

H-2 **Types of hazardous Processes involved and its safety measures: (Hydrogenation process, Sulphonation, Chlorination process, Bromination Reaction etc.)**

Type of Process	Safety measures including Automation
Hydrogenation process:-A	For hydrogenation process, hydrogen gas will be used. Unit will allot separate storage area for hydrogen gas cylinder. Hydrogen is a colorless, odorless, tasteless, flammable nontoxic gas which is flammable over a wide range of concentrations. ✓ Standard Operating procedure shall be made for before Hydrogen Gas charging into reactor and after completion of reaction Nitrogen flushing will be done. ✓ SOP will be prepared and operators will be trained for the same. ✓ Nitrogen blanketing will be done in Hydrogenation reactor. Safety valve and Rupture disc will be provided on reactor. ✓ Safe Catalyst charging method will be adopted. ✓ Flame arrestor will be provided on vent line of reactor and it will be extended above the roof level. ✓ Static earthing and electric earthing (Double) will be provided. ✓ Hydrogen gas detector will be installed for early detection of gas leak. One RCC wall having thickness 20 cm will be provided on all side of hydrogenation reactor to protect surrounding and other infrastructure during worst case scenario.
Bromination	**Bromine bottle Storage & Handling Safety** The amount of bromine in storage kept to a minimum. • Floors of impervious construction, preferably concrete. • Bromine bottle wooden carriage stored on collection pallets • Area where bromine used or stored enclosed so that unauthorized persons are prevented from entering the area. • Personnel escape routes clearly marked and it maintained without any obstructions including adequately sized doors and windows. • Facilities like offices, eating, showering and changing rooms, located in up wind direction and remote from the area where bromine will be handled or stored. Provide an adequate supply of clean water for washing and showers. • Emergency siren, telephone provided in storage area for the reporting of accidents or emergency situations. The emergency

telephone numbers displayed at prominent locations and it include the fire department, ambulance service, emergency response team, hospital and police.

- A wind sock provided which will clearly visible from all points on the site and replaced as required. This will be required for indicating wind strength and direction.
- Emergency respirator equipment cabinets (Cupboard) installed not more than 30 meters or 10 seconds walking distance from any location in the storage area.
- Showers and eyewash fountains provided, clearly marked, well lit and with unobstructed access.
- Signs posted prominently at the site entrance and throughout the installation with area maps showing access ways, hydrant locations, emergency showers, location of emergency equipment and emergency telephone numbers.
- All management and operating personnel involved in the use or handling of bromine will undergo safety training, in addition to specific task training.
- Only experienced well-trained operators allowed to handle Bromine.
- Bromine glass bottle capacity 1 litters and six bottles stored in one packing box.
- Bromine stored in dry and cool place and well ventilated area.
- The driver and assistant driver of any vehicle transporting bromine should be comply with the following requirements:
- Open space separated from public highway and public dwellings, where public does not normally pass. No passengers will be allowed.
- The driver or driver's assistant may not open a package containing bromine.
- Parking brakes will be to be applied whenever parked.
- If the vehicle will be parked on a road at night or with poor visibility, warning signs are to be placed 10 meters ahead of and behind the vehicle.
- TREM CARD will be provided to all transporters and trained for transportation Emergency of Hazardous chemicals.
- American National Standards Institute (ANSI) approved chemical safety goggles will be there at all times when handling Br2.
- Full face shield over eyewear provided..
- Full body protection PVC suite provided.
- Eyewash fountains should be located in areas where bromine will be handled, used or stored.
- When in danger of contact with liquid bromine, wear an approved chemical resistant suit.
- Leather or other non-woven ANSI approved steel-toed shoes or Gum boot provided.
- Protective rubber boots should be worn over shoes for extra protection.

Have NIOSH approved respirators and self-contained breathing apparatus available.

H-3 Details of Fire Load Calculation

Total Plot Area:	1417.37 M^2
Area utilized for plant activity:	340.0 M^2
Area utilized for Hazardous Chemicals	220.0 M^2

		Storage:	
		Number of Floors:	G+2
		Water requirement for firefighting in KLD :	25.0 KL
		Water storage tank provided for firefighting in KLD:	150 KL
		Details of Hydrant Pumps:	25
		Nearest Fire Station :	3 km
		Applicability of Off Site Emergency Plan:	Yes
H-4	**Details of Fire NOC/Certificate:**		
	Will be applied		
H-5	**Details of Occupational Health Centre (OHC):**		
		Number of permanent Employee :	15
		Number of Contractual person/Labour :	10
		Area provided for OHC:	30 sq. meter.
		Number of First Aid Boxes :	10
		Nearest General Hospital :	5 km
		Name of Antidotes to be store in plant :	

- During the meeting dated 24.06.2021, the project was appraised based on the information furnished in Form – 1, Pre-Feasibility Report, Environment Management Plan and details submitted by e-mail.
- Project proponent (PP) and Technical expert of PP, M/s. Envycraft Environmental Services remains present during video conference meeting.
- This is a Greenfield project proposed for manufacturing of API and its intermediate at GIDC Panoli. Product profile with its end-use is discussed in depth. Source of water supply is GIDC.
- Committee noted the following:
- Product profile with specific End-use of each product. At a time 3-4 products can be manufactured.
- Site Plan/ layout with fire plan & floor plans with provision of separate entry & exit, peripheral road for emergency exit and internal roads, production plants, finished goods storage, raw material storage area, tank farm, utility area, ETP area, solvent storage area, hazardous waste storage area, greenbelt within premises and outside premises, OHC (15 Sq m) etc.
- Total industrial effluent will be segregated. High COD stream from process will be treated in ETP-1 followed by solvent stripper and then treated effluent along with low COD stream will be sent to CMEE.
- Industrial effluent from utility section will be treated in primary ETP and then will be used for washing.
- Fire load calculation mentioning fire water storage, foam type extinguishers, foam trolley extinguishers and Nos of fire pumps.
- Natural gas or Briquettes of bio coal is proposed as fuel in boiler and thermo pack.MCS, bag filter

and water scrubber as APCM proposed for it.

- Two stage scrubbing system is proposed for control of process gas emission.
- Scrubbing liquor will be reused within premises or sold as per Hazardous waste Rules.
- PP submitted hazardous waste matrix mentioning source of generation, quantity and Mode of disposal and committed to comply the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016.
- Committee found submission of project proponent satisfactory.
- After detailed discussion, Committee unanimously decided to recommend the project to SEIAA, Gujarat for grant of Environment Clearance with the following specific condition:

SPECIFIC CONDITIONS:

- Project Proponent (PP) shall strictly abide by the outcome/decision of Hon'ble Supreme Court of India in Civil Appeal no. 8478/2020 regarding operation of the Hon'ble NGT orders dated 10/07/2019 & 14/11/2019.
- Project Proponent (PP) shall comply conditions of any subsequent amendment or expansion or change in product mix, after the 30th September 2020, considered as per the provisions in force at that time as mentioned in the Notification vide S.O. 1223 (E) dated 27/03/2020 and its subsequent amendment.
- PP shall carry out proposed project/activities in respect of Active Pharmaceutical Ingredients (API) as per the amended EIA Notification vide S.O. 1223 (E) dated 27/03/2020 and any subsequent amendments.
- PP shall submit six monthly compliance report of Environmental Clearance without fail and the same shall be critically assessed by the regulatory authority.
- Total number of products manufacturing shall not exceeding three-four (3-4) products at a given point of time as per the plant capacity shown in plant layout.
- R & D products shall be of similar chemistry in line with the EIA Notification vide S.O. 1223 (E) dated 27/03/2020 and the pollution load shall remain the same as committed. (b) Project proponent shall not take continuous/commercial production of the R & D materials. Necessary approvals shall be obtained from the concern authorities prior to commercial production of R & D materials. (c) Unit shall submit relevant details of R & D products like raw materials, its safety measures to the regulatory authority well before R & D activity. (d) Unit shall submit relevant details of R & D products like different wastes generated (Quantity & Quality) and its management to the regulatory authority within a month of R & D activity.
- Unit shall install CEMS [Continuous Emission Monitoring System] in line to CPCB directions to all SPCB vide letter no. B-29016/04/06PCI-1/5401 dated 05/02/2014 for effluent discharge and air emission as per pollutants discharge/emission from respective project and an arrangement shall

also be done for reflecting the online monitoring results on the company's server, which can be assessable by the GPCB/CPCB on real time basis. [For Small/Large/Medium (Red Category) & Whichever (Air emission & Effluent discharge) is applicable].

- Close loop solvent recovery system with adequate condenser system shall be provided to recover solvent vapours in such a manner that recovery shall be maximum and recovered solvent shall be reused in the process within premises.
- Leak Detection and Repair (LDAR) program shall be prepared and implemented as per the CPCB guidelines. LDAR Logbooks shall be maintained.

WATER

- Total water requirement for the project shall not exceed 26.0 KLD. Unit shall reuse 8.5 KLD of treated industrial effluent within premises. Hence, fresh water requirement shall not exceed 17.5 KLD and it shall be met through GIDC water supply only. Prior permission from concerned authority shall be obtained for withdrawal of water.
- The industrial effluent generation from the project shall not exceed 16.5 KLD.
- The entire industrial effluent from Process, Utilities and Washing section will be mixed with effluent generated from Domestic and treated into ETP [Primary] treatment plant and after adequate treatment effluent send to CMEE-BEIL for further disposal.
- Unit shall send wastewater to CMEE only after ensuring content of effluent for COD/VOC so as not to get air borne during evaporation in order to achieve no adverse impacts on Environment and Human Health.
- Domestic wastewater generation shall not exceed 0.5 KL/day for proposed project and it shall be treated in ETP. It shall not be disposed of in soak pit and septic tank.
- Unit shall provide buffer water storage tank of adequate capacity for storage of treated waste water during any shutdown of CMEE facility.

AIR

- Unit shall not exceed fuel consumption and provide APCM and Stack height as mentioned in flue gas matrix.
- Unit shall provide APCM and stack height as mentioned in process gas matrix.

HAZARDOUS & SOLID WASTE

- All hazardous solid waste shall be managed as mentioned in hazardous waste matrix.
- The unit shall submit the list of authorized end users of hazardous wastes along with MoU signed with them at least two months in advance prior to the commencement of production. In the absence of potential buyers of these items, the unit shall restrict the production of the respective items.

GREENBELT AREA

- The PP shall develop green belt within premises 1015 SQ.METER i.e. 33 % of the total plot area as per the undertaking submitted before SEAC. Green belt shall be developed with native plant species that are significant and used for the pollution abatement as per the CPCB guidelines. It shall be implemented within 3 years of operation phase in consultation with GPCB.
- **Safety & Health:**
- Unit shall obtain all required permissions from the Narcotics Control Bureau for storage and handling of Acetic Anhydride & any such chemicals.
- PP shall obtain PESO permission for the storage and handling of hazardous chemicals.
- PP shall provide Occupational Health Centre (OHC) as per the provisions under the Gujarat Factories Rule 68-U.
- PP shall obtain fire safety certificate / Fire No-Objection certificate (NOC) from the concern authority as per the prevailing Rules / Gujarat Fire Prevention and Life Safety Measures Act, 2016.
- Unit shall adopt functional operations/process automation system including emergency response to eliminate risk associated with the hazardous processes.
- PP shall carry out mock drill within the premises as per the prevailing guidelines of safety and display proper evacuation plan in the manufacturing area in case of any emergency or accident.
- PP shall install adequate fire hydrant system with foam trolley attachment within premises and separate storage of water for the same shall be ensured by PP.
- PP shall take all the necessary steps for control of storage hazards within premises ensuring incompatibility of storage raw material and ensure the storage keeping safe distance as per the prevailing guidelines of the concerned authority.
- PP shall take all the necessary steps for human safety within premises to ensure that no any harm is caused to any worker/employee or labor within premises.
- Flame proof electrical fittings shall be provided in the plant premises, wherever applicable.
- Unit shall never store drum/barrels/carboys of incompatible material/chemical together.
- Unit shall provide effective Isolation for Process area and storage of hazardous chemicals.
- Unit shall provide water sprinkler to the ammonia storage cylinder.
- Unit shall provide safety valve & rupture disc to the Hydrogenation vessel.
- Unit shall provide safety valve and rapture disc, as well as auto dump or auto quench/, suppress system for nitration vessel safety.
- Unit shall provide effective fire hydrants, water monitors & foam application system at solvent storage tank farm area. Unit shall provide adequate safety system such as water sprinklers, water curtains, foam pouring system etc. to restrict cascade fire emergency in solvent tank farm.
- Unit shall provide chlorine leakage control emergency kit and FRP hood with scrubber system for

chlorine safety.

- Unit shall Store Bromine Bottle in cool dry separate area, out of direct sunlight.

4	**SIA/GJ/IND2/206576/2021**	**M/s. Bahubali Chemical Industries** Plot No. 94/A, GIDC - Nandesari,,Vadodara	EC REconsideration

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

Project status: **Expansion**

- Project proponent (PP) submitted online application vide no. SIA/GJ/IND2/206576/2021 on dated 27/03/2021 for obtaining Environmental Clearance.
- Project proponent has submitted Form – 1, Pre-Feasibility Report & Environment Management Plan as per Notification issued by MoEF&CC vide S.O. 1223(E) dated 27th March, 2020 regarding consideration of proposals or activities in respect of Active Pharmaceuticals Ingredients (API) as B2 category.
- Earlier, PP remained absent in the SEAC meeting dated 30.07.2021.
- This is an existing unit and now proposes for expansion in manufacturing of Synthetic Organic Chemicals plant(**API and its intermediate)** as below,

Sr. no.	**Name of the Products**	**API OR INTERMEDIATE**	**CAS no.**	**Quantity MT/Month**			**Quantity MT/Month**
				Existing	**Proposed**	**Total**	
EXISTING PRODUCT							
	Trichloro Ethelene	--	79-01-6	95	--	95	Industrial use
	Ethylene Dichloride	--	107-06-2	49.5	--	49.5	Industrial use
PROPOSED PROUCT							
	Aspirin Either/Or	API	50-78-2	--	20	20	Cyclo-oxygenase inhibitor; analgesic; anti-inflammatory.
	Diclofenac Sodium Either/Or		15307-86-5				Cyclo-oxygenase inhibitor; analgesic; anti-inflammatory.
	Acyclovir Either/Or	API	59277-89-3				Purine nucleoside analogue; antiviral (herpesviruses).
	Valacyclovir Either/Or	API	124832-27-5				Purine nucleoside analogue; antiviral (herpesviruses).
	Tenofovir Either/Or	API	147127-20-6				to treat HIV/AIDS (Antivirus)

		Levetiracetam Either/Or	API	102767-28-2			Antiepileptic
		Lamivudine Either/Or	API	134678-17-4			to treat HIV/AIDS (Antivirus)
		Guifenesin Either/Or	API	93-14-1			Expectorant
		Gabapentin Either/Or	API	60142-96-3			Antiepileptic
		Chlorpheniramine Maleate Either/Or	API	113-92-8			Anti-histamine (anti-allergic) drug
		Metronidazole Either/Or	API	443-48-1			An antibiotic andantiprotozoal medication
		Naproxen sodium Either/Or	API	26159-34-2			Cyclo-oxygenase inhibitor; analgesic; anti-inflammatory.
		Tranexamic Acid Either/Or	API	65-49-6			as antibiotic primarily used to treat tuberculosis
		Lidocaine hydrochloride Either/Or	API	6108-05-0			Local anaesthetic; Class I antiarrhythmic
		Tranexamic Acid Either/Or	API	1197-18-8			Antifibrinolytic agent
		Phenyramidolhydrochloride Either/Or	API	326-43-2			Muscle relaxant
		Ibuprofen Lysinate Either/Or	API	57469-77-9			Cyclo-oxygenaseinhibitor; analgesic; anti-inflammatory.
		Aceclofenac Either/Or	API	89796-99-6			Cyclo-oxygenase inhibitor; analgesic; anti-inflammatory.
		Albendazole Either/Or	API	54965-21-8			used for the treatment of parasitic worm infestations
		Pregabalin Either/Or	API	148553-50-8			Antiepileptic
		Omeprazole Either/Or	API	73590-58-6			Proton pump inhibitor; treatment of peptic ulcer disease.
		Esomeprazole Either/Or	API	119141-88-7			Proton pump inhibitor; treatment of peptic ulcer disease.
		Pantoprazole sodium Either/Or	API	138786-67-1			Proton pump inhibitor;treatment of peptic ulcer disease.
		Rabeprazole Either/Or	API	117976-90-6			Proton pump inhibitor; treatment of peptic ulcerdisease.

	Lansoprazole Either/Or	API	103577-45-3				Proton pump inhibitor; treatment of peptic ulcer disease.
	Fluconazole Either/Or	API	86386-73-4				Antifungal
	Telmisartan Either/Or	API	144701-48-4				Angiotensin II (AT1) receptor antagonist; treatment of Hypertension
	Losartan Either/Or	API	114798-26-4				Angiotensin II (AT1) receptor antagonist; treatment of Hypertension
	Valsartan Either/Or	API	137862-53-4				Angiotensin II (AT1) receptor
	Olmisartan Either/Or	API	144689-63-4				Angiotensin II (AT1) receptor antagonist; treatment of Hypertension
	Candesartan cilexetil Either/Or	API	145040-37-5				Angiotensin II (AT1) receptor antagonist; treatment of Hypertension
	Irbesartan Either/Or	API	138402-11-6				Angiotensin II (AT1) receptor antagonist; treatment of Hypertension
	Verapamil hydrochloride Either/Or	API	152-11-4				Calcium channel blocker;treatment of Hypertension
	Lisinopril Either/Or	API	83915-83-7				Angiotensin converting enzyme inhibitor; treatment of Hypertension
	Ramipril Either/Or	API	87333-19-5				Angiotensin convertingenzyme inhibitor; treatment of Hypertension
	Atorvastatin calcium Either/Or	API	134523-03-8				HMG Co-A reductase inhibitor; lipid-regulatingdrug
	Phenylephrin hydrochloride Either/Or	API	61-76-7				Alpha-adrenoceptor agonist; nasal decongestant
	Minoxidil Either/Or	API	38304-91-5				Vasodilator; treatment of hypertension; male pattern baldness.
	Lidocaine base Either/Or	API	137-58-6				Local anaesthetic; Class Iantiarrhythmic
	Benzocaine Either/Or	API	94-09-7				Local anaesthetic
	Prilocaine hydrochloride Either/Or	API	1786-81-8				Local anaesthetic

	Tetracaine hydrochloride Either/Or	API	136-47-0				Local anaesthetic
	Piroxicam Betacyclodextrin Either/Or	API	96684-39-8				Cyclo-oxygenase inhibitor; analgesic; anti-inflammatory
	2- choloro Acetaldehyde	Intermediate	107-20-0				Intermediate for Mirabagron-Antibacterial
	Indolinone	Intermediate	15362-40-0				Intermediate for Diclofenac Sodium-nonsteroidal anti-inflammatory drug (NSAID)
	Pivaloyl Chloride	Intermediate	3282-30-2				Intermediate for Cefazolin -Antibiotic
	Total		**--**	**144.5**	**20**	**164.5**	**--**

Brief Note of Product Profile:

1. **No of Manufacturing Plants: 01 nos**
2. **Brief Note regarding number of Products to be manufactured considering plant capacity: At time 3 products manufacturing**

Specific End-uses of the products

Sr. No.	Name of the Product	CAS No. (Product)	Type/ Category of Product (API/ Intermediate)	In case of Intermediate stage of API			Said API is used for/End Use of said API
				Stage i.e. n-1, n-2, etc.	Name of API in which Intermediate Used/ End use of said Intermediate	CAS no. (API)	
PROPOSED PROUCT							
1.	Aspirin Either/Or	50-78-2	API	**--**	**--**	**--**	Cyclo-oxygenase inhibitor; analgesic; anti-inflammatory.
2.	Diclofenac Sodium Either/Or	15307-86-5	API	**--**	**--**	**--**	Cyclo-oxygenase inhibitor; analgesic; anti-inflammatory.

3.	Acyclovir Either/Or	59277-89-3	API	--	--	--	Purine nucleoside analogue; antiviral (herpesviruses).
4.	Valacyclovir Either/Or	124832-27-5	API	--	--	--	Purine nucleoside analogue; antiviral (herpesviruses).
5.	Tenofovir Either/Or	147127-20-6	API	--	--	--	to treat HIV/AIDS (Antivirus)
6.	Levetiracetam Either/Or	102767-28-2	API	--	--	--	Antiepileptic
7.	Lamivudine Either/Or	134678-17-4	API	--	--	--	to treat HIV/AIDS (Antivirus)
8.	Guifenesin Either/Or	93-14-1	API	--	--	--	Expectorant
9.	Gabapentin Either/Or	60142-96-3	API	--	--	--	Antiepileptic
10.	Chlorpheniramine Maleate Either/Or	113-92-8	API	--	--	--	Anti histamine(anti allergic) drug
11.	Metronidazole Either/Or	443-48-1	API	--	--	--	An antibiotic andantiprotozoal medication
12.	Naproxen sodium Either/Or	26159-34-2	API	--	--	--	Cyclo-oxygenase inhibitor; analgesic; anti-inflammatory.
13.	Tranexamic Acid Either/Or	65-49-6	API	--	--	--	as antibiotic primarily used to treat tuberculosis
14.	Lidocaine hydrochloride Either/Or	6108-05-0	API	--	--	--	Local anaesthetic; Class I antiarrhythmic
15.	Tranexamic Acid Either/Or	1197-18-8	API	--	--	--	Antifibrinolytic agent
16.	Phenyramidol hydrochloride Either/Or	326-43-2	API	--	--	--	Muscle relaxant
17.	Ibuprofen Lysinate Either/Or	57469-77-9	API	--	--	--	Cyclo-oxygenase inhibitor; analgesic; anti-inflammatory.
18.	Aceclofenac Either/Or	89796-99-6	API	--	--	--	Cyclo-oxygenase inhibitor; analgesic; anti-inflammatory.
19.	Albendazole Either/Or	54965-21-8	API	--	--	--	used for the treatment of parasitic worm infestations
20.	Pregabalin Either/Or	148553-50-8	API	--	--	--	Antiepileptic
21.	Omeprazole		API	--	--	--	Proton pump

	Either/Or	73590-58-6					inhibitor; treatment of peptic ulcer disease.
22.	Esomeprazole Either/Or	119141-88-7	API	--	--	--	Proton pump inhibitor; treatment of peptic ulcer disease.
23.	Pantoprazole sodium Either/Or	138786-67-1	API	--	--	--	Proton pump inhibitor;treatment of peptic ulcer disease.
24.	Rabeprazole Either/Or	117976-90-6	API	--	--	--	Proton pump inhibitor; treatment of peptic ulcerdisease.
25.	Lansoprazole Either/Or	103577-45-3	API	--	--	--	Proton pump inhibitor; treatment of peptic ulcer disease.
26.	Fluconazole Either/Or	86386-73-4	API	--	--	--	Antifungal
27.	Telmisartan Either/Or	144701-48-4	API	--	--	--	Angiotensin II (AT1) receptor antagonist; treatment of Hypertension
28.	Losartan Either/Or	114798-26-4	API	--	--	--	Angiotensin II (AT1) receptor antagonist; treatment of Hypertension
29.	Valsartan Either/Or	137862-53-4	API	--	--	--	Angiotensin II (AT1) receptor
30.	Olmisartan Either/Or	144689-63-4	API	--	--	--	Angiotensin II (AT1) receptor antagonist; treatment of Hypertension
31.	Candesartan cilexetil Either/Or	145040-37-5	API	--	--	--	Angiotensin II (AT1) receptor antagonist; treatment ofHypertension
32.	Irbesartan Either/Or	138402-11-6	API	--	--	--	Angiotensin II (AT1) receptor antagonist; treatment ofHypertension
33.	Verapamil hydrochloride Either/Or	152-11-4	API	--	--	--	Calcium channel blocker;treatment of Hypertension
34.	Lisinopril Either/Or	83915-83-7	API	--	--	--	Angiotensin converting enzyme inhibitor; treatment

							of Hypertension
35.	Ramipril Either/Or	87333-19-5	API	--	--	--	Angiotensin converting enzyme inhibitor; treatment of Hypertension
36.	Atorvastatin calcium Either/Or	134523-03-8	API	--	--	--	HMG Co-A reductase inhibitor; lipid-regulatingdrug
37.	Phenylephrin hydrochloride Either/Or	61-76-7	API	--	--	--	Alpha-adrenoceptor agonist; nasal decongestant
38.	Minoxidil Either/Or	38304-91-5	API	--	--	--	Vasodilator; treatment of hypertension; male pattern baldness.
39.	Lidocaine base Either/Or	137-58-6	API	--	--	--	Local anaesthetic; Class I antiarrhythmic
40.	Benzocaine Either/Or	94-09-7	API	--	--	--	Local anaesthetic
41.	Prilocaine hydrochloride Either/Or	1786-81-8	API	--	--	--	Local anaesthetic
42.	Tetracaine hydrochloride Either/Or	136-47-0	API	--	--	--	Local anaesthetic
43.	Piroxicam Betacyclodextrin Either/Or	96684-39-8	API	--	--	--	Cyclo-oxygenase inhibitor; analgesic; anti-inflammatory.
44.	2- choloro Acetaldehyde	107-20-0	Intermediate	n-1	Mirabagron	223673-61-8	Intermediate for Mirabagron-Antibacterial
45.	Indolinone	15362-40-0	Intermediate	n-1	Diclofenac Sodium	15307-79-6	Intermediate for Diclofenac Sodium-nonsteroidal anti-inflammatory drug (NSAID)
46.	Pivaloyl Chloride	3282-30-2	Intermediate	n-1	Cefazolin	25953-19-9	Intermediate for Cefazolin - Antibiotic

- The project falls under Category B2 of project activity 5(f) as per the schedule of EIA Notification 2006 and amendment dated 27th March, 2020.
- The proposal was considered in the SEAC video conference meeting dated 06.10.2021
- Salient features of Water, Air and Hazardous Waste management are as under,

Sr. No.	Particulars	Details
A-1	Total **cost of Proposed** Project (Rs. in Crores):	

Existing	Proposed	Total
0.619 Crores	2.54 Crores	3.16 Crores

Break-up of proposed project Cost:

Details	Existing (Rs. In Crores)	Proposed (Rs. In Crores)	Total (Rs. In Crores)
Land	0.3	0	0.3
Building	0.119	0.5	0.68
Machinery	0.1	0.7	0.9
EMS	0.1	1.35	1.45

A-2	**Details of Environmental Management Plan (EMP)**	As below:

Sr. No	Unit	Detail	Capital Cost (Rs. In Crore)	Total Recurring Cost (Rs. In Crore)
1	Water	ETP & Send to CMEE	0.35	0.50
2	Air	Scrubbers	0.2	0.10
3	Hazardous Management	HWSA, Membership Of TSDF and Co processing of Hazardous Waste & Disposal	0.05	0.25
4	Fire & Safety	Fire Extinguisher, Aid Kit, Smoke detector, Fire Hydrant Line	0.31	0.05
5	AWH Monitoring	Air, Water, Noise monitoring equipment, Third party monitoring	---	0.05
6.	Green Belt Development	Plants, Tree Guard, Manure	0.01	0.01
7.	Occupational Health	---	0.05	0.03
8.	Automation System DCS	For Chlorination, Nitration, Hydrogenation,	0.35	0.10

		Solvent Distillation , Scrubber		
9.	CER	CER Activity	0.03	0.005
Total			**1.35**	**1.095**

Summary

Cost of Project in Crores per Annum:	3.16
EMP Capital Cost in Crores per Annum and Percentage:	1.35 (43%)
EMP Recurring Cost in Crores per Annum and Percentage:	1.095 (35%)

A-3 **Details of CER as per OM dated 01/05/2018 (In case of project falls under CPA/SPA,** CER fund allocation to be at least 1.5 times the slabs given in the OM dated 01.05.2018 for SPA and 2 times for CPA in case of Environmental Clearance as per the mechanism published vide MoEF&CC's OM vide 31.10.2019.)

% as per the OM	Rs. in Cr.
1%	0.03

Brief note on proposed activities:

Sr. No.	Description	Capital Cost Lac.	Maintenance cost 2nd year Lac.	Maintenance cost 3rd year Lac.	Total Lac.
1	Installation of Solar panel at Nandesari Vidhyalaya	2	0.5	0.5	3
Total		**2**	**0.5**	**0.5**	**3**

B **Land / Plot ownership details:**
Unit is existing. Plot allotment No.: GIDC/DEE/NDSR/615, Dated: 25.04.1989

B-1 **Plot area**

Existing	Proposed	Total
1960.46 Sq. m.	0.0 Sq. m.	1960.46 Sq. m.

B-2 Brief note on **Area adequacy** in line to proposed project activities:

- Total plot area of the unit is 1960.46 Sq.mt.
- At a time, the unit will manufacture 5 nos of products.

- Total manufacturing block is 2. After proposed expansion 1 Block will be utilize for existing production. And 2nd will be use for proposed 20 MT/month pharma products.
- Unit will provide Separated Raw material storage area- 100 Sq.m for existing products.
- For porposed pharma products unit will allocate 100 Sq.m area afor raw material storage and 50 Sq.m for Finish good.
  Production process and quantity of raw material storage will be campaign bases as per market demand. At a time unit will manufacture 3 Nos. of Products only.

- Unit will manufacture only 20 MT/month Pharma products. For that unit will occupy
- **Hence, adequate area is available for proposed in Bulk drug intermediate mfg. Facility.**

B-3 **Green belt area**

	Existing	Proposed (Sq. meter)	Total (Sq. meter)
Area in Sq. meter	200 (inside side)	232.26 (inside side) 250 Sq. m (Out Side)	682.26 Sq. m
% of total area	10.2 %	24.6	35%

C **Employment generation**

Existing	Proposed	Total
09	6	15

D **Water**

D-1 **Source of Water Supply**
(GIDC, Bore well, Surface water, Tanker supply etc...)

- GIDC Water Supply

Status of permission from the concern authority.
No: Letter issued from Nandesari Water & utilities Ltd. , Dated: 24th August 2021

D-2 **Water consumption (KLD)**

Sr. No.	Particulars	Existing as per CCA AWH-97052 in KLD	Proposed (Additional) KLD	Total after Expansion KLD	Remarks
1.	**Domestic**	0.6	0.4	1	Fresh Water from GIDC
2.	**Gardening**	0	1	1	Fresh Water from GIDC
3.	**Industrial**				
	Process	0	11	11	Fresh Water from

					GIDC
	Washing	3	1	4	Fresh Water from GIDC
	Boiler	0	3	3	Fresh:- 3 KLD
	Cooling	3	3	6	Fresh 6 KLD
	Process Scrubber	0	0.1	0.1	Fresh Water from GIDC
	BoilerScrubber	0	2	2	From Boiler Blow down
	Industrial Total	**6**	**20.1**	**26.1**	--
	Grand Total (1+2+3)	**6.6**	**21.5**	**28.1**	**--**

Brief Note on worst case scenario for water consumption:

- Worst Case Scenario for water consumption;

S. N	**Product**	**Waste Water Gen. (in KL) for 1 MT production**	**Total Production (MT/Month)**	**Total water req. (KLD)**
1	Tranexamic Acid	0.45 KL	20 MT	10.67 KL
Hence Worst Case Considered for proposed product is				**11 KLD**

-Summary of water requirement	**Existing KLD**	**Proposed (Additional) KLD**	**Total after Expansion KLD**	**Remarks**
Total water requirement for the project **(A)**	6.6	21.5	28.1	Fresh water from GIDC
Quantity to be **recycled (B)**	--	02	02	From Boiler Blow

				down
Total **fresh water** requirement **(C)**	6.6	19.5	26.1	Fresh water from GIDC
Ensure **Total water requirement = Fresh water + Recycled water** **i.e. A = B + C**				

Reuse/Recycle details (KLD) with feasibility.
[Source of reuse & application area]

Source of waste water for reuse 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**
Boiler Blowdown 2 KLD	Scrubber for boiler- 2 KLD	pH: 7.5-8.0 TDS: <300 mg/l BOD: <Nil COD: <30 mg/l	Reusable

In case of no reuse/recycle of wastewater, Give brief note on justification as why no reuse/recycle.

- In Boiler 45 KL condensate recovery considered in the recycle, hence makeup reduced to 3 KL
- Boiler Blowdown = 2 KLD will be reuse after in scrubber of boiler.

D-3 Waste water generation (KLD)

Sr. No.	**Particulars**	**Existing Waste Water Generation KL/Day**	**Proposed Waste water Generation KL/Day**	**Total Waste Water Generation after expansion KL/Day**	**Remarks**
1.	**Domestic**	0.6	0.4	1.0	Subjected to ETP
2.	**Industrial**				
	Process	0	5.0	5.0	4.9 KLD subjected to ETP & 0.1 KLD strip solvent
	Washing	3.0	1.0	4.0	Subjected to ETP
	Boiler	0	2	2	Reuse in Boiler

					Scrubber
	Cooling	1	1	2	Subjected to ETP
	Other Scrubber	0	0.1	0.1	Subjected to ETP
	Total Industrial	**4**	**9.1**	**13.1**	--
	TOTAL (Domestic + Industrial)	**4.6**	**9.5**	**14.1**	--

Brief Note on worst case scenario for waste water generation(Qualitative and Quantitative):

- Worst Case Scenario for waste water generation;

S. N	Product	Waste Water Gen. (in KL) for 1 MT production	Total Production (MT/Month)	Total Waste water Gen. (KLD)	Characteristics
1.	Telmisartan / Olmisartan /Irbesartan	0.25 KL	20 MT	4.4 KL	pH-7-9 mg/l COD-15000 mg/l TDS- 5500 mg/l
Hence Worst Case Considered is				5	

Brief justification in case of no process effluent generation or no industrial effluent generation or no high concentration effluent generation from proposed project (Whichever is applicable).

- Not Applicable.
- There will be effluent generation. The detail has been furnished in water Balance.

D-4 Mode of Disposal & Final meeting point

Domestic:	Domestic wastewater@ 1 KLD will be Subjected to ETP
Industrial:	After treatment of 12 KLD effluent. 4 KLD send to CETP NECL. And remaing will be ZLD by Spray dryer.

-
Clearly mention about final disposal

D-5 Treatment facilities

For Domestic waste water: Allow into ETP
Capacity of STP: Not Applicable

For Industrial waste water: Treatment facility within premises with **capacity**
[In-house ETP (Primary, Secondary, Tertiary), MEE, Stripper, Spray Dryer, STP etc. Treatment scheme including segregation at source. **(Give Characteristics of each stream i.e. COD, BOD, TDS etc.) In case of stream segregation, Separate ETP (ETP-1, ETP-2….) for each stream shall be proposed.**
Treatment facility within premises with **capacity**

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

- Hydraulic Load
  - ETP (Primary): 12 KLD
  - Stripper: 5 KLD
  - Spray Dryer: 8 KLD
- Capacity
  - ETP (Primary): 15 KLD
  - Stripper: 6 KLD
  - Spray Dryer: 10 KLD

Stream 1 –

- 5 KLD Effluent from process will pass through striper. Strip solvent 0.1 KLD send to Coprocessing unit. And remaining 4.9 KLD striped effluent treated in ETP along with low concentrated effluent.

Sr. No.	Parameter	Before Solvent Stripper (5 KLD)	After Solvent Stripper (4.9 KLD)
1	pH	5-9	5-9
2	TDS (mg/l)	8000-10000	8000-10000
3	TSS (mg/l)	200-250	200-250
4	COD (mg/l)	10,000-1,00,000	8,000-35,000
5	BOD (mg/l)	3,000-30,000	2500-10,000
6	Ammonical Nitrogen (mg/l)	<100	<100

Stream 2-

- Low concentrated effluent 12 KLD treated in to ETP. 4 KLD send to CETP and remaining ZLD will be through

Sr. No.	Category of Waste Water	Before Treatment	Final Treated Effluent	CETP Inlet Norms
1.	pH	7.0-9.0	6.5 to 7.5	6.5 to 8.0
2.	COD (mg/l)	<15,000	500-1000	<1500
3.	BOD (mg/l)	<5,000	150-500	<500
4.	TDS (mg/l)	<5,500	12000-15000	No TDS Limit
5.	Ammonical Nitrogen (mg/l)	<50	<50	<50
6.	TSS (mg/l)	150-200	<100	<100

-

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 – Treated Effluent from Primary ETP 4 KLD will be sent to Common Evaporation Facility for further treatment and disposal as per Existing CCA. Remaining will be ZLD through in house spray dryer. Thus section 18(1) (b) is complied.

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

Treated Effluent 8 KLD will be ZLD through spray dryer.

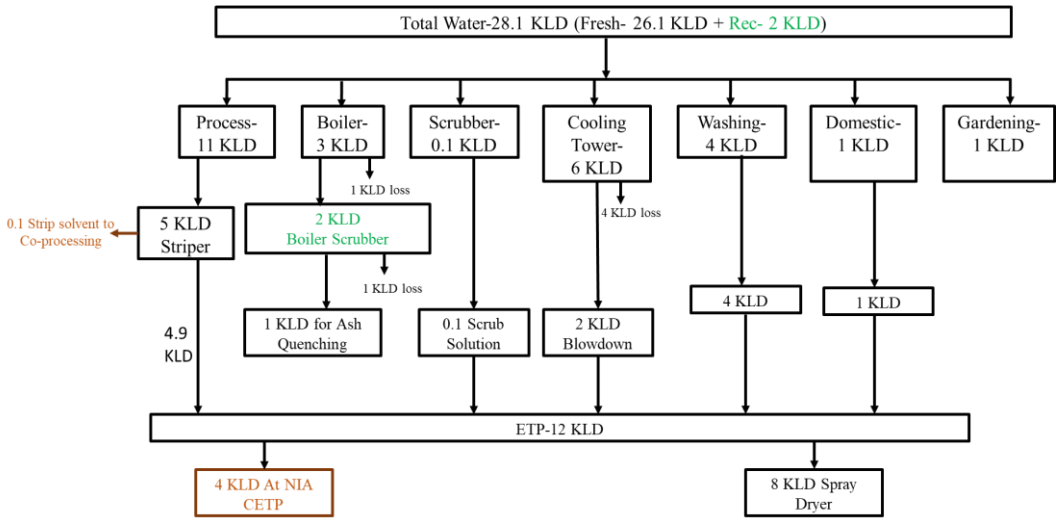
D-6 In case of Common facility (CF) i.e. **CETP, Common Spray dryer, Common MEE, CHWIF etc.**

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

- CETP

Membership of Common facility (CF) 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.

	➢ **NIA/CETP/BCP/112/2020,**
D-7	**Simplified water balance diagram with reuse / recycle of waste water**



E	**AIR**
E-1	**Brief Note on fuel based Heat energy requirement and worst case scenario thereof:**

SN	Fuel Based Heat Energy	Proposed Fuel	Calorific Value (kcal/kg)	Working Hours (Worst Case)	Fuel Consumption in worst case
1	Boiler- 2 TPH	Briquette 9 MT/Day	4380 Cal./kg.	20	Briquette 7 MT/Day
2	Thermic Fluid Heater (2 Lakh K.Cal/Hr)				

E-2	**Flue gas emission details** No. of Boilers/TFH/Furnaces/DG sets etc. with capacities viz. TPH, Kcal/hr, MT/hr, KVA etc. (In case of Project located within CPA/SPA , APCM shall be in line to the mechanism published in the MOEFCC's OM vide dated 31.10.2019)

Sr. No.	Stack Attached To	Stack Height (m)	Fuel & its Quantity	APCM	Type of Emission	Permissible Limit
1	Boiler- 2 TPH	30	Briquette 9 MT/Day	Multicyclone Separator + Bag filter +	PM SO_2 NO_X	150 mg/Nm^3 100 ppm 50 ppm
2	Thermic Fluid Heater					

	(2 Lakh K.Cal/Hr)			Water scrubber		
4	Hot Air Generator (2 Lakh K.Cal/Hr)	30	Briquette 1 MT/Day	Multicyclone Separator + Bag filter + Water scrubber	PM SO_2 NO_X	150 mg/Nm^3 100 ppm 50 ppm

- There is no flue gas emission in existing condition

E-3 **Process gas** i.e. Type of pollutant gases (SO_2, HCl, NH_3, Cl_2, NO_x etc.)

Sr. No.	Stack Attached To	Stack Height(m)	Air Pollution Control System	Parameter	Permissible Limit
1	Reactor Vessel-I	20	2 stage Alkali scrubber	HCl Cl2 SO2 HBr Br2	20 mg/Nm3 9 mg/Nm3 40 mg/Nm3 20 mg/Nm3 9 mg/Nm3
2	Reactor Vessel-II	20	2 stage Alkali scrubber	NO2	25 mg/Nm3
3	Reactor Vessel-III	20	Water Scrubber followed by acid Scrubber	NH3	175 mg/Nm3
4	SFD	30	Bag Filter	PM	150 mg/Nm3

There is no process gas emission in existing condition

Note:

- **Details of gaseous raw materials used in proposed project**
- **Estimation of process gas emission (Product wise and Total)**
- **Requirement of the scrubbing media (KL per Day) considering solubility (Product wise and Total)**
- **Yearly generation of all bleed liquors (MT/KL per Annum) as mentioned above and its sound management in HW matrix.**

E-4 **Fugitive emission** details with its mitigation measures.

- 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 waste**

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

Note:

- **Priorities for HW Management:** Pre-processing, Co-Processing, Reuse/Recycle within premises, Sell out to actual users having Rule-9

permission, TSDF/CHWIH.

- **Quantification of hazardous waste shall be based on mass balance and calculations shall be incorporated in EMP details separately.**
- **Disposal to scrap vendors/vendors/traders is not allowed**

F-1 Hazardous waste management matrix

Sr. no.	Type/Name of Hazardous waste	Specific Source of generation (Name of the Activity, Product etc.)	Category and Schedule as per HW Rules.	Existing (MT /Annum) as per CCA	Proposed (MT /Annum)	Total Quantity (MT /Annum)	Management of HW
1	ETP Sludge	From ETP	35.3	2	363	365	Collection, Storage, Transportation & Send to TSDF of NECL.
2	Empty barrels/containers/liners contaminated with hazardous chemicals /wastes	From Raw material Packing	33.1	0.12	2.88	3	Collection, Storage, decontamination, Sold to GPCB, approved Vendors
3	Used Oil	From Lubrication	5.1	0	0.5	0.5	Collection, Storage nd reused within the premises.
4	Process Residue and wastes/ Distillation Residue	From Distillation unit	28.1	0	73	73	Collection, Storage, Transportation Send for Co-processing

		5	Recovered Solvent **(**Handling in premises for an year**)**	Generated from solvent recovery process	28.6	0	3650	3650	Collection, Storage and Reuse in Process	
			Strip Solvent	From Striper		0	36	36	Collection, Storage, Transportation Send for Co-processing	
		6	Spent Carbon	Manufacturing process & Carbon tower	28.3	0	12	12	Collection, Storage, Transportation Send for Co-processing	
		7	Scrub solution	Scrubber	B 15	0	36.5	36.5	Collection, Storage, Treatment into inhouse ETP	
		8	Spent Catalyst	Manufacturing Process	28.2	0	8	8	Collection, Storage and sell to regenerator unit.	
		9	Off Specification Product	Manufacturing Process	28.4	0	3	3	Collection, Storage, Transportation Send for Co-processing	
		10	Date Expired Drugs	Manufacturing Proces	28.5	0	3	3	Collection, Storage, Transpor	

			s					tation Send for Co-processing

F-2	Membership details of **TSDF, CHWIF** etc. **(For HW management)**	
	Details of Membership letter no. & Date with spare capacity of the Common Facility. **NECL/BCP/2021-22**	
F-3	Details of Non-Hazardous waste & its disposal **(MSW and others)**	Fly Ash

Sr. no.	**Type/Name of Other wastes**	**Specific Source of generation (Name of the Activity, Product etc.)**	**Quantity (MT/Annum)**	**Management of Wastes**
1	Glass Waste	Glass Material	0.1 MT/Annum	To TSDF
2	Paper Waste	Stationary	0.1 MT/Annum	At notified area facility
3	Fly Ash	From Boiler	10 MT/Annum	Brick Manufacturer

G	**Solvent management**, VOC emissions etc. • 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 firefighting 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 Absorber for removing traces of solvent from vent gases. • Residue generated from the distillation will be incinerated in-house or sent to BEIL incinerator site. • Two condenser will install with cooling water and chilled brine to recover the solvent.

- Primary Condenser HE-01: Cooling Tower water or Chilled water at 10 ^{0}C - 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

G-1 Brief Note on types of solvents, Details of Solvent recovery, % recovery, reuse of recovered Solvents etc.

Name of Product	Name of Solvent used	B.P °C	V.P.	Solvent Quantity MT/ Month	Solvent Recovered quantity MT/ Month	Percentage Recovery	Percentage of Losses in Air	Percentage of Losses in Effluent (%)	Distillation Residue (%)
Aspirin	Acetic Acid	118 °C	20,79 hPa at 25 °C	37.76	36.2	96	0.08	3.8	0.12
Acyclovir	Acetone	56 °C	25 kPa (20 °C)	146.36	144	98	0.01	1.9	0.09
	Toluene	111 °C	2.8 kPa (20 °C)	110.48	108	98	0.01	1.9	0.09
Valacyclovir	Toluene	111 °C	2.8 kPa (20 °C)	50	48.26	97	0.02	2.8	0.18
	DCM	**39.6 °C**	57.3 kPa (25 °C)	66.66	65.68	97	0.01	2.8	0.19
	IPA	82.6 °C	44 hPa(20 °C)	44.44	42.88	96	0.08	3.8	0.12
	DMF	152	51	38.88	37.54	97	0.0	2.9	0.09

				to 154 °C	6 Pa				1			
			Methanol	54 °C	13.02 kPa (at 20 °C)	100	97.8	98	0.02	1.9	0.08	
			Ethanol	78 °C	59.3 mm Hg (at 20 °C)	100	98.2	98	0.01	1.9	0.09	
		Tenofovir	DMF	152 to 154 °C	516 Pa	33.64	32.46	96	0.08	3.8	0.12	
			Toluene	111 °C	2.8 kPa (20 °C)	91.22	89	97	0.01	2.9	0.09	
			Acetone	56 °C	25 kPa (20 °C)	24.54	24	98	0.01	1.9	0.09	
			MDC	39 °C	350 mbar @ 20° C	110	108	98	0.01	1.9	0.09	
			Methanol	54 °C	13.02 kPa (at 20 °C)	11.52	11.2	97	0.01	2.8	0.19	
		Levetiracetam	Methylene Dichloride	39 °C	350 mbar @ 20°	35.3	34.26	97	0.02	2.8	0.18	

				C						
		Ethyl Acetate	77.1 °C	73 mmHg (9.7 kPa) at 20 °C	67.06	66	98	0.01	1.9	0.09
	Lamivudine	Toluene	111 °C	2.8 kPa (20 °C)	409	400	97	0.01	2.8	0.19
		n-Hexane	68.5 to 69.1 °C	17.60 kPa (at 20.0 °C)	184	179.2	97	0.02	2.8	0.18
		Ethyl acetate	77.1 °C	73 mmHg (9.7 kPa) at 20 °C	190	186	97	0.01	2.8	0.19
	Guifenesin	Toluene	111 °C	2.8 kPa (20 °C)	40	39	98	0.02	1.9	0.08
		EDC	81-85 °C	65 mmHg @ 29 °C	15	14.4	96	0.09	3.8	0.11
	Gabapentin	MDC	39 °C	350 mbar @ 20°	29.26	28.3	96	0.08	3.8	0.12

					C							
			Methanol	54 °C	13.02 kPa (at 20 °C)	34.14	33	96	0.09	3.8	0.11	
		Naproxen sodium	Methanol	54 °C	13.02 kPa (at 20 °C)	73.8	71.6	97	0.01	2.9	0.09	
			EDC	81 - 85 °C	65 m mHg @ 29 °C	118.82	115.6	97	0.01	2.8	0.19	
			Acetone	56 °C	25 kPa (20 °C)	4.86	4.8	99	0.02	0.9	0.08	
			Toluene	111 °C	2.8 kPa (20 °C)	383.56	374.96	98	0.02	1.9	0.08	
		Lidocaine hydrochloride	Acetone	56 °C	25 kPa (20 °C)	38.6	37.8	97	0.01	2.8	0.19	
		Tranexamic Acid	Toluene	111 °C	2.8 kPa (20 °C)	51.7	50.84	98	0.02	1.9	0.08	
		Phenyramidol hydrochloride	DMF	153 °C	516 Pa	19.2	18.72	98	0.01	1.9	0.09	
			Toluene	111 °C	2.8 kPa (20 °C	9.6	9.32	97	0.01	2.8	0.19	

					)							
			Methanol	54 °C	13.02 kPa (at 20 °C)	21.2	20.4	96	0.08	3.8	0.12	
		Ibuprofen Lysinate	Haxane	68.5 to 69.1 °C	17.60 kPa (at 20.0 °C)	24.4	24	98	0.01	1.9	0.09	
		Aceclofenac	Toluene	111 °C	2.8 kPa (20 °C)	100	98	98	0.01	1.9	0.09	
			DMF	153 °C	516 Pa	20	19.4	97	0.01	2.9	0.09	
		Albendazole	Methanol	54 °C	13.02 kPa (at 20 °C)	46.16	44.4	96	0.9	3.8	0.11	
		Pregabalin	Iso Propyl Alcohol	82.6 °C	44 hPa(20 °C)	125	122	98	0.01	1.9	0.09	
		Omeprazole	Methanol	54 °C	13.02 kPa (at 20 °C)	150	146	97	0.02	2.8	0.19	
			Toluene	111 °C	2.8 kPa (20 °C)	200	196	98	0.01	1.9	0.09	
			Acetone	56 °C	25 kPa	50	48	96	0.8	3.8	0.12	

					(20 °C)							
		Esomeprazole Magnesium trihydrate	Toluene	111 °C	2.8 kPa (20 °C)	64	62	97	0.02	2.8	0.19	
			Methanol	54 °C	13.02 kPa (at 20 °C)	20	19.6	98	0.02	1.9	0.08	
		Pantoprazole sodium	Acetone	56 °C	25 kPa (20 °C)	200	196	98	0.02	1.9	0.08	
			Toluene	111 °C	2.8 kPa (20 °C)	160	154	97	0.01	2.9	0.09	
			MDC	39 °C	350 mbar @ 20° C	570	562	98	0.02	1.9	0.08	
			Methanol	54 °C	13.02 kPa (at 20 °C)	175	170	97	0.02	2.8	0.19	
		Rabeprazole Sodium	Toluene	111 °C	2.8 kPa (20 °C)	196	195	99	0.01	1.9	0.09	
			DMSO	189 °C	0.55 mbar @ 20°	40	39.4	98	0.01	1.9	0.09	

					C							
			MDC	39 °C	350 mbar @ 20° C	270	264	98	0.11	1.8	0.09	
			Acetone	56 °C	25 kPa (20 °C)	30	29.2	97	0.02	2.8	0.19	
			IPA	82.6 °C	44 hPa(20 °C)	60	59	98	0.11	1.8	0.09	
		Lansoprazole	MIBK	116 °C	16 mmHg (20 °C)	27.2	26.4	97	0.01	2.9	0.09	
			Toluene	111 °C	2.8 kPa (20 °C)	120	116	96	0.9	3.8	0.11	
			MDC	39 °C	350 mbar @ 20° C	20	19.6	98	0.12	1.8	0.08	
			IPA	82.6 °C	44 hPa(20 °C)	44	43	98	0.9	3.8	0.11	
			Acetone	56 °C	25 kPa (20 °C)	32	31.6	99	0.02	0.8	0.18	
		Fluconazole	MDC	39 °C	350 mbar @	160	156.4	98	0.01	1.9	0.09	

					20° C							
			Ethyl Acetate	77.1 °C	73 mmHg (9.7 kPa) at 20 °C	140	136	97	0.01	2.9	0.09	
			Toluene	111 °C	2.8 kPa (20 °C)	160	156	97	0.02	2.8	0.19	
			DMF	153 °C	516 Pa	130	128	98	0.12	1.8	0.08	
			IPA	82.6 °C	44 hPa(20 °C)	90	88	98	0.01	1.9	0.09	
		Telmisartan	Methanol	54 °C	13.02 kPa (at 20 °C)	539	530	98	0.12	1.8	0.08	
			n-Hexane	68.5 to 69.1 °C	17.60 kPa (at 20.0 °C)	20	19.6	98	0.11	1.8	0.09	
			Acetone	56 °C	25 kPa (20 °C)	90	88	98	0.11	1.8	0.09	
			MDC	39 °C	350 mbar @ 20° C	240	232	97	0.01	2.9	0.09	

		Losartan	Toluene	111 °C	2.8 kPa (20 °C)	70	68	97	0.02	2.9	0.08	
			MDC	39 °C	350 mbar @ 20° C	144	142	98	0.01	1.9	0.09	
			Methanol	54 °C	13.02 kPa (at 20 °C)	250	248	99	0.01	1.9	0.09	
			IPA	82.6 °C	44 hPa(20 °C)	60	58	97	0.02	2.9	0.08	
			Ethyl Acetate	77.1 °C	73 mmHg (9.7 kPa) at 20 °C	40	39.2	98	0.01	1.9	0.09	
		Valsartan	Methanol	54 °C	13.02 kPa (at 20 °C)	160	156	97	0.01	2.9	0.09	
			Toluene	111 °C	2.8 kPa (20 °C)	500	490	98	0.11	1.8	0.09	
			MDC	39 °C	350 mbar @ 20°	100	96	96	0.9	3.8	0.11	

					C							
			N-Hexane	68.5 to 69.1 °C	17.60 kPa (at 20.0 °C)	40	38.8	97	0.01	2.9	0.09	
		Olmisartan	Toluene	111 °C	2.8 kPa (20 °C)	65.12	64	98	0.12	1.8	0.08	
			Ethyl acetate	77.1 °C	73 mmHg (9.7 kPa) at 20 °C	9.1	8.8	97	0.01	2.9	0.09	
			Acetone	56 °C	25 kPa (20 °C)	14.34	13.8	96	0.8	3.8	0.12	
			Toluene	111 °C	2.8 kPa (20 °C)	65.12	64	98	0.12	1.8	0.08	
		Candesartan cilexetil	Ethyl Acetate	77.1 °C	73 mmHg (9.7 kPa) at 20 °C	84	81.9	97	0.02	2.9	0.08	
			MDC	39 °C	350 mbar @ 20° C	24	22.97	97	0.01	2.9	0.09	

			IPA	82.6 °C	44 hPa(20 °C)	28.6	27.46	96	0.01	3.9	0.09	
			Methanol	54 °C	13.02 kPa (at 20 °C)	20.8	20.01	96	0.9	3.8	0.11	
		Irbesartan	DMF	153 °C	516 Pa	60	58	97	0.02	2.8	0.19	
			Toluene	111 °C	2.8 kPa (20 °C)	70	68	98	0.01	1.9	0.09	
			IPA	82.6 °C	44 hPa(20 °C)	60	58.4	97	0.02	2.8	0.19	
			Ethyl acetate	77.1 °C	73 mmHg (9.7 kPa) at 20 °C	60	59	98	0.01	1.9	0.09	
		Verapamil hydrochloride	IPA	82.6 °C	44 hPa(20 °C)	40	39	97	0.02	2.8	0.19	
			Toluene	111 °C	2.8 kPa (20 °C)	60	58.6	98	0.01	1.9	0.09	
			Methanol	54 °C	13.02 kPa (at 20 °C)	30	29.6	99	0.02	0.8	0.18	

			Acetone	56 °C	25 kPa (20 °C)	60	58.4	97	0.01	2.9	0.09	
		Lisinopril	Methanol Recovery	54 °C	13.02 kPa (at 20 °C)	100	98	98	0.02	1.9	0.08	
		Ramipril	Ethyl acetate	77.1 °C	73 mmHg (9.7 kPa) at 20 °C	24	23.6	98	0.02	1.9	0.08	
			Ethanol	78 °C	59.3 mmHg (at 20 °C)	26	25.4	98	0.11	1.8	0.09	
		Atorvastatin calcium	Methanol	54 °C	13.02 kPa (at 20 °C)	203.2	198	97	0.01	2.9	0.09	
			Acetone	56 °C	25 kPa (20 °C)	28	27.6	98	0.11	1.8	0.09	
			Toluene	111 °C	2.8 kPa (20 °C)	148	144	97	0.01	2.9	0.09	
			IPA	82.6 °C	44 hPa(20	144	142	98	0.12	1.8	0.08	

				°C)								
		Phenylephrin hydrochloride	Methanol	54 °C	13.02 kPa (at 20 °C)	252	248	98	0.02	1.9	0.08	
			IPA	82.6 °C	44 hPa(20 °C)	400	390	97	0.01	2.9	0.09	
			Acetone	56 °C	25 kPa (20 °C)	80	78	97	0.01	2.8	0.19	
		Minoxidil	Methanol	54 °C	13.02 kPa (at 20 °C)	200	196	98	0.02	1.9	0.08	
			Acetic Acid	118 °C	20,79 hPa at 25 °C	80	78	97	0.02	2.8	0.18	
			Toluene	111 °C	2.8 kPa (20 °C)	120	118	98	0.01	1.9	0.09	
		Lidocaine base	Toluene	111 °C	2.8 kPa (20 °C)	30	29.16	97	0.02	1.9	0.08	
		Benzocaine	Toluene	111 °C	2.8 kPa (20 °C)	20	19.4	97	0.01	2.9	0.09	
			Methanol	54 °C	13.02 kP	23.2	22.8	98	0.01	1.9	0.09	

			a (at 20 °C)						
Prilocaine hydrochloride	MDC	39 °C	350 mbar @ 20° C	20.64	20.2	98	0.01	1.9	0.09
	Acetone	56 °C	25 kPa (20 °C)	19.8	19.4	98	0.02	1.9	0.08
Tetracaine hydrochloride	Toluene	111 °C	2.8 kPa (20 °C)	15.6	15	96	0.02	3.8	0.18
	MDC	39 °C	350 mbar @ 20° C	28	27.2	97	0.02	1.9	0.08

G-2	**Brief Note on LDAR proposed:**
ii	The Following methodology to be adopted during LDAR study: ➢ Identify the Chemical streams that must be monitored. ➢ Types of components (pumps, valves, connectors, etc.) to be monitored ➢ Frequency of monitoring. ➢ Actions to be taken if a leak is detected. ➢ Length of time in which an attempt to repair the leak must be performed. ➢ Actions that must be taken if a leak cannot be repaired within guidelines. Record-keeping and reporting requirements.
G-3	**VOC emission** sources and its mitigation measures
	➢ Leak Free Pumps for transfer of solvents. ➢ MSW Gaskets in solvent pipelines to prevent leakage from flanges. ➢ Minimum number of flanges, joints and valves in pipelines. ➢ To eliminate chances of leakages from glands of pumps, mechanical seal will be provided at all solvent pumps. ➢ All the rotating equipments like pumps will be installed with Mechanical Seals to arrest any sort of emissions. ➢ Condenser and scrubber post Reactor with cooling arrangement. ➢ Enclosures to chemical storage area, collection of emission from loading of raw materials in particular solvents through hoods and ducts by induced draft, and control by condenser to be ensured. ➢ In case the small spillage or leakage observed, first pour the china clay

(vermiculate) on material and collect the contaminated china clay (vermiculate) and send to ETP.

- If the spillage is of inflammable liquid, switch off all the power supply in the area to prevent Electric Spark.
- Two condensers will install with cooling water and chilled brine to recover the solvent.
- Primary Condenser HE-01: Cooling Tower water or Chilled water at 5 °C will be used to condense the solvents depend on the vapor pressure at its operating conditions and the non-condensed vapors will be condensed in a Secondary Condenser.
- VOC Trap Condenser HE-02: Chilled Brine at -15 °C will be used to trap any traces of Solvent which is slipped from Secondary condenser.
- Emission of VOCs can be trapped from breathing and loading losses from storage tanks, venting of process vessels, leak from piping and equipment by means of hood connected with blower and send to condenser as shown in following diagram.
- Condensed VOCs will be send to spent solvent recovery plant.

H	**SAFETY details**
H-1	**Details regarding storage of Hazardous chemicals (For tank storages only including spent acid and spent solvent tanks**

There is no any tank storage.

Brief note on storage of Hazardous chemicals in Tanks

- Not applicable. Solvents will be store in Drum

Brief note on storage of Hazardous chemicals other than Tanks i.e. Drum, Barrels, Carboys, Bags etc.

Safety Measures for Drum Storage area:

- Some chemicals will be received at plant in drums by road truck and stored in a separate drum storage area.
- FLP type light fittings will be provided.
- Proper ventilation will be provided in go down.
- Proper label and identification board /stickers will be provided in the storage area.
- Conductive drum pallets will be provided.
- Drum handling trolley / stackers/fork lift will be used for drum handling. Separate dispensing room with local exhaust and static earthing provision will be made.
- Materials will be stored as per its compatibility study and separate area will be made for flammable, corrosive and toxic chemical drums storage.
- Smoking and other spark, flame generating item will be banned from the Gate.

Safety details of Hazardous Chemicals:

Type of Hazardous Chemicals	Safety measures
Flammable	Storage in compatible storage unit with flame proof fitting, also provide fire fighting measures. Only trained person allowed to handle

Corrosive	Storage in compatible storage unit with safe distance with other chemicals, Only trained person allowed to handle
Toxic	Storage in compatible storage unit with safe distance with other chemicals, Only trained person allowed to handle

Applicability of PESO: Will be obtained if applicable. qqqqq

H-2 **Types of hazardous Processes involved and its safety measures: (Hydrogenation process, Sulphonation, Chlorination process, Bromination Reaction etc.)**

Type of Process	**Safety measures including Automation**
Hydrogenation	Process will be operate through DCS. FLP type area will be provided. Total enclosed process system. Instrument & Plant Air System. Nitrogen blanketing in Hydrogenation reactor. Safety valve and Rupture disc provided on reactor. Cooling Chilling and power alternative arrangement have been made on reactor. Hydrogen and Nitrogen Cylinder bank away from the auto clave reactor. PRV station with shut off valve, safety valve provision will be made for hydrogenation reaction safety. Before Hydrogen Gas charging in to reactor and after completion of reaction Nitrogen Blanketing will be done. Flame arrestor will be provided on vent line of reactor and it will be extended up to roof level. Open well ventilated and fragile roofs will be provided to on reactor. Safe Catalyst charging method will be adopted. SOP will be prepared and operators will be trained for the same. Static earthing and electric earthing (Double) provided. Reactor vent extended outside the process area and flame arrestor provided on vent line. Dumping vessel arrangement will be made. Dumpers for static earthing on pipeline flanges of flammable chemical will be provided.

		Chlorination	Process will be operate through DCS. Chlorine handling area is kept well ventilated. Chlorine Emergency Kit is procured and kept ready at chlorine shed. Chlorine Hood with blower is provided with scrubbing arrangement. SCBA sets are kept ready at chlorine handling area. Safety Shower and eye wash is provided in Chlorine shed area. Chlorine absorption system is provided. In case of chlorine leakage in chlorine shed, it will be suck through blower and it will be scrubbed in Caustic scrubber. Emergency siren and wind sock is provided. Tele Communication system and mobile phones are used in case of emergency situations for communication. First Aid Boxes and Occupational health centre is made at site. Full body protection suite and other PPEs are kept ready in ECC at site. Emergency team is prepared and trained for scenario base emergency. Like Toxic control team, Fire control team, First aid team, Communication and general administration team, Medical team etc.	
		Nitration	Process will be operate through DCS. Nitration will be done in closed S.S vessels. Nitric acid will be used for nitration process. Nitric acid is an extremely corrosive acid capable of causing severe chemical burns very rapidly. Because of the hazards posed by nitric acid, it is important to take safety measures whenever handling it. In our nitration process, exothermic reaction will be controlled by adequate dosing of reaction chemicals in a fixed time (not short duration) having adequate cooling water circulation in jacket of reaction vessels. Thus, any energy generated due to exothermic reaction will be controlled by external cooling circulation and therefore vessels will not be pressurized. The nitration reaction will be controlled by systematic cooling design to withdraw the energy evolved. Adequate pressure relief valve will be provided for each vessels having pressure release capacity will be kept below -3 kg/cm2than that of reaction vessels.	
H-3	**Details of Fire Load Calculation**			

Total Plot Area:	1960.46 sq.mtr
Area utilized for plant activity:	1292 sq.mtr

Area utilized for Hazardous Chemicals Storage:	30 sq.mtr
Number of Floors:	G+2
Water requirement for firefighting in KLD :	9.847
Water storage tank provided for firefighting in KLD:	100
Details of Hydrant Pumps:	Main pump -20 HP,Jockey Pump - 15 HP & D.G Pump – 15 HP
Nearest Fire Station :	2 km- Nandesari
Applicability of Off Site Emergency Plan:	N.A

H-4	**Details of Fire NOC/Certificate:**
	Will be applied
H-5	**Details of Occupational Health Centre (OHC):**

Number of permanent Employee :	15
Number of Contractual person/Labour:	20
Area provided for OHC:	15 Sq.m
Number of First Aid Boxes :	2
Nearest General Hospital :	Deepak Medical Foundation- 1.10 Km
Nearest Fire station:	Nandesari Fire Station- 1.12 Km
Name of Antidotes to be store in plant	Diazepam 0.1 mg/kg (iv) slowly through injection, Diazem – 1 mg/kg, 0.4% Benzocaine (Novocaine) solution

- During the meeting dated 06.10.2021, the project was appraised based on the information furnished in Form – 1, Pre-Feasibility Report, Environment Management Plan and details submitted by e-mail.
- During the SEAC Video conference meeting dated 06.10.2021, Project Proponent (PP) and their technical expert and EIA consultant from M/s.: Jyoti Om Chemical Research Centre Pvt. Ltd. and made technical presentation before the Committee.
- This is brown field project proposal for manufacturing of API and its intermediate at GIDC Nandesari. Product profile with its end-use is discussed in depth. Committee noted that unit is having valid CCA of the Board for existing plant. Committee noted that there was no any SCN

during last 3 Years.

- Looking to layout plan Site Plan/ layout with fire plan & floor plans and provision of separate entry & exits, adequate wide peripheral road, OHC, production areas, raw material & finished goods storage area, ETP area, Solvent &hazardous waste storage area, utility area, etc.
- Committee noted the following:
  - Source of water is GIDC.
  - Unit had proposed total industrial effluent will be segregated and high COD Process stream will be treated in ETP after passing from stripper and Low COD stream from utility will be treated in ETP then discharge into CETP-Nandesari and in-house spray dryer.
  - Briquette is proposed as fuel in boiler, TFH & HAG.
  - Scrubber as APCM proposed for each process reactor stack.
  - PP submitted hazardous waste matrix mentioning source of generation, quantity and Mode of disposal and committed to comply the Hazardous and Other Wastes (Management and Trans boundary Movement) Rules 2016.
  - Greenbelt development plan within premises, 432.26 Sq m (22.04%) of plot area and outside premises 250 Sq. m (12.75%).
- Committee deliberated on Product profile, Layout plan, area adequacy, Storage details, Process safety, Fire safety, water balance & waste water management, Flue gas and process gas emission & Air Pollution Control System, Hazardous waste matrix, EMP, CER, Green belt, etc.
- Committee found documents and presentation submitted by PP was satisfactory.
- **After detailed discussion, it was decided to recommend the project to SEIAA Gujarat for grant of Environmental Clearance with the following specific condition:**

SPECIFIC CONDITIONS:

1. Project Proponent (PP) shall strictly abide by the outcome/decision of Hon'ble Supreme Court of India in Civil Appeal no. 8478/2020 regarding operation of the Hon'ble NGT orders dated 10/07/2019 & 14/11/2019.
2. PP shall comply conditions of any subsequent amendment or expansion or change in product mix, after the 30th September 2020, considered as per the provisions in force at that time as mentioned in the Notification vide S.O. 1223 (E) dated 27/03/2020.
3. PP shall carry out proposed project/activities in respect of Active Pharmaceutical Ingredients (API) as per the amended EIA Notification vide S.O. 1223 (E) dated 27/03/2020 and any subsequent amendments.
4. PP shall submit six monthly compliance report of Environmental Clearance without fail and the same shall be critically assessed by the regulatory authority.
5. Total number of products manufacturing shall not exceeding three (3) at a given point of time as per the plant capacity shown in plant layout.

6. GPCB shall ensure compliance of direction under section 18 (1) (b) of the Water (Prevention and Control of Pollution) act, 1974 issued by CPCB regarding compliance of CETP and also that the pollution load is not increased in the CPA/SPA for the compliance of Hon'ble NGT order.
7. (a)R & D products shall be of similar chemistry in line with the EIA Notification vide S.O. 1223 (E) dated 27/03/2020 and the pollution load shall remain the same as committed. (b) Project proponent shall not take continuous/commercial production of the R & D materials. Necessary approvals shall be obtained from the concern authorities prior to commercial production of R & D materials. (c) Unit shall submit relevant details of R & D products like raw materials, its safety measures to the regulatory authority well before R & D activity. (d) Unit shall submit relevant details of R & D products like different wastes generated (Quantity & Quality) and its management to the regulatory authority within a month of R & D activity.
8. Project proponent shall provide continuous online monitoring system for waste water discharge to Common Facilities (CETP) as per the prevailing guidelines of CPCB/GPCB.
9. Close loop solvent recovery system with adequate condenser system shall be provided to recover solvent vapors in such a manner that recovery shall be maximum and recovered solvent shall be reused in the process within premises.
10. Leak Detection and Repair (LDAR) program shall be prepared and implemented as per the CPCB guidelines. LDAR Logbooks shall be maintained.
11. All measure shall be taken to avoid soil and ground water contamination within premises.

WATER

12. Total water requirement for the project shall not exceed 28.1 KLD. Unit shall reuse 2 KLD, treated waste water. Hence, Fresh water requirement shall not exceed 26.1 KLD. It shall be met through GIDC water supply only. Prior permission from the concerned authority shall be obtained for withdrawal of water.
13. No ground water shall be tapped for the project requirements.
14. The industrial effluent generation from the project shall not exceed 12 KLD after expansion.
15. The entire industrial effluent shall be segregated and treated as mentioned below:
    c) 5 KLD, high COD effluent from process shall be treated in ETP after passing from solvent stripper and then 4.9 KLD effluent shall be treated into ETP.
    d) 7.1 KLD, low COD effluent from scrubber, washing and utility along with 4.9 KLD process effluent shall be treated in ETP consisting of primary (Hydro cavitation treatment) ETP units and 4 KLD treated effluent shall be sent to CETP of M/s NECL-Nandesari and 8 KLD effluent shall be evaporated through in-house spray dryer.
16. Unit shall feed wastewater to in-house Spray Dryer only after ensuring content of effluent for COD/VOC so as not to get air borne during evaporation in order to achieve no adverse

impacts on Environment and Human Health.

17. Treated waste water shall be sent for further treatment to CETP only after complying with the inlet norms of CETP prescribed by GPCB to ensure no adverse impact on Human Health and Environment.
18. Domestic wastewater generation shall not exceed 1 KL/day for proposed project and it shall be treated in ETP. It shall not be disposed off into Soak-Pit.
19. During monsoon season when treated sewage may not be required for the plantation / Gardening / Green belt purpose, it shall be stored within premises. There shall be no discharge of waste water outside the premises in any case.
20. Unit shall provide adequate size buffer storage tank for storage of high COD effluent for purpose of any shutdown of In-house Spray Dryer & CETP.
21. The unit shall provide metering facility at the inlet and outlets of ETP and maintain records for the same.
22. Proper logbooks of ETP; chemical consumption in Effluent treatment; quantity & quality of effluent disposal to CETP, quantity & quality of effluent recycle back in process; power consumption etc. shall be maintained and shall be furnished to the GPCB from time to time.

AIR

23. Unit shall not exceed fuel consumption and provide APCM and Stack height as mentioned in flue gas matrix.
24. Unit shall provide APCM and stack height as mentioned in process gas matrix.

HAZARDOUS & SOLID WASTE

25. All hazardous solid waste shall be managed as mentioned in hazardous waste matrix.
26. The unit shall submit the list of authorized end users of hazardous wastes along with MoU signed with them at least two months in advance prior to the commencement of production. In the absence of potential buyers of these items, the unit shall restrict the production of the respective items.

GREENBELT AREA

27. The PP shall develop green belt within premises (In Premises: 432.26 Sq. m. (22.04%) and Outside the premises: 250 Sq. m. (12.74%) ie.682.26 Sq. m.,35 % of the total plot area) as per the undertaking submitted before SEAC. Green belt shall be developed with native plant species that are significant and used for the pollution abatement as per the CPCB guidelines. It shall be implemented within 3 years of operation phase in consultation with GPCB.

28. Safety & Health:

a. PP shall obtain PESO permission for the storage and handling of hazardous chemicals.
b. PP shall provide Occupational Health Centre (OHC) as per the provisions under the Gujarat Factories Rule 68-U.
c. PP shall obtain fire safety certificate / Fire No-Objection certificate (NOC) from the

concern authority as per the prevailing Rules / Gujarat Fire Prevention and Life Safety Measures Act, 2016.

d. Unit shall adopt functional operations/process automation system including emergency response to eliminate risk associated with the hazardous processes.
e. PP shall carry out mock drill within the premises as per the prevailing guidelines of safety and display proper evacuation plan in the manufacturing area in case of any emergency or accident.
f. PP shall install adequate fire hydrant system with foam trolley attachment within premises and separate storage of water for the same shall be ensured by PP.
g. PP shall take all the necessary steps for control of storage hazards within premises ensuring incompatibility of storage raw material and ensure the storage keeping safe distance as per the prevailing guidelines of the concerned authority.
h. PP shall take all the necessary steps for human safety within premises to ensure that no any harm is caused to any worker/employee or labour within premises.
i. Flame proof electrical fittings shall be provided in the plant premises, wherever applicable.
j. Unit shall never store drum/barrels/carboys of incompatible material/chemical together.
k. Unit shall provide effective Isolation for Process area and storage of hazardous chemicals.
l. Unit shall provide effective fire hydrants, water monitors & foam application system at solvent storage area. Unit shall provide adequate safety system such as water sprinklers, water curtains, foam pouring system etc. to restrict cascade fire emergency in solvent storage area.

5	**SIA/GJ/IND2/206603/2021**	**M/s. Aarti Drugs Ltd.)** Plot No. 205, 207, 209, 211, 213, GIDC Industrial Estate - Sarigam, Umargam, Valsad	**EC REconsideration**

Project Proponent (PP) remained absent during the meeting.

Hence, Committee decided to defer this proposal and consider this in one of the upcoming SEAC meeting.

6	**SIA/GJ/IND2/206607/2021**	**M/s. Remedy Labs** Plot No. 260, Phase-I, GIDC, Naroda, Ahmedabad-382330	**EC REconsideration**

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

Project status: New

- Project proponent (PP) submitted online application vide no. **SIA/GJ/IND2/206607/2021** on dated 27.03.2021 for obtaining Environmental Clearance.
- Project proponent has submitted Form – 1, Pre-Feasibility Report & Environment Management

Plan as per Notification issued by MoEF&CC vide S.O. 1223(E) dated 27th March, 2020 regarding consideration of proposals or activities in respect of Active Pharmaceuticals Ingredients (API) as B2 category.

- This is a new project proposed for manufacturing of synthetic organic chemicals **[API & its Intermediates]** as tabulated below.

Sr. no.	Name of the Products	API OR INTERMEDIATE	CAS no	Quantity MT/Month	*End-use of the products
1	Domperidone	API	57808-66-9	50.0	Domperidone is an anti-sickness medicine. and also used to relieve nausea and vomiting.
2	R & D Products	--	--	0.05	---
Total				**50.05**	

 # Brief Note of Product Profile:

1. No of Manufacturing Plants: 1 no.
2. Brief Note regarding number of Products to be manufactured considering plant capacity:
   - Unit will manufacture only one API product within the premises.

Specific End-use of each proposed products:

Sr. No.	Name of the Product	CAS No. (Product)	Type/ Category of Product (API/ Intermediate)	In case of Intermediate stage of API			Said API is used for/End Use of said API
				Stage of Intermediate n-1, n-2, etc.	Name of API in which Intermediate Used/ End use of said Intermediate	CAS No. (API)	
1	Domperidone	57808-66-9	API	--	--	--	Domperidone is an anti-sickness medicine. and also used to relieve nausea and vomiting

Brief summary regarding End-Uses of Product Profile:

1. Total No of API: 1
2. Total No of Intermediates (n-1): 0
3. Total No of Intermediates (n-2): 0
4. Total No of Intermediates (n-3): 0

- The project falls under Category B2 of project activity 5(f) as per the schedule of EIA Notification 2006 and amendment dated 27th March, 2020.

- PP submitted an undertaking ensuring proposed product profile is in line with MoEF&CC's Notification vide S.O. 1223 (E) dated 27/03/2020 in respect of Active Pharmaceutical Ingredients (API) as category B2 projects. Undertaking as proposal of said product are eligible to consider under B2 category as per the notification of MoEF&CC dated 27.03.2020
- The proposal was considered in the SEAC video conference meeting dated 06.10.2021.
- The salient features of the project including Water, Air and Hazardous waste management are as under:

Sr. no.	Particulars	Details
A-1	Total **cost of Proposed** Project (Rs. in Crores):	

Total Project Cost
1.5 Crores

Break-up of proposed project Cost:

Details	Project Cost (Rs. In Crores)
Land	0.3 Crore
Building	0.4 Crore
Machinery	0.8 Crore

A-2	**Details of Environmental Management Plan (EMP)**	As below:

Sr. No.	Unit	Detail	Capital Cost (Rs. In Crores)	Operating Cost (Rs. In Crores)	Maintenance Cost (Rs. In Crores)	Total Recurring Cost (Rs. In Crores)
1	Waste Water	Cost of ETP, RO, MEE	0.2	0.3	0.02	0.27
2	Air	APCM	0.025	0.007	0.005	0.012
3	Hazardous Management	Cost of designated storage area, storage, handling and disposal cost	0.015	0.02	0.01	0.03

4	Fire & Safety	Fire hydrant system	0.2267	0.015	0.03	0.045
5	AWH Monitoring	NABL laboratory for regular monitoring	0.002	0.01	0	0.01
6	Green Belt Development	Cost of tree species, manure, tree planting and regular maintenance	0.005	0	0.01	0.01
7	Occupational Health	Cost of Designated area with First aid facilities, Periodical medical check-up through doctor/ hospital	0.015	0.02	0	0.02
8	Miscellaneous	Cost of SCADA and PLC system	0.05	0.02	0.01	0.03
9	CER cost	Provision of the solar street lights (12 Nos.)	0.03	0	0	0
	Total	**--**	**0.568**	**0.392**	**0.085**	**0.427**

Summary

Cost of Project in Crores per Annum:	1.5 Crore
EMP Capital Cost in Crores per Annum and Percentage:	0.568 (38 %)
EMP Recurring Cost in Crores per Annum and Percentage:	0.427 (28 %)

A-3 **Details of CER as per OM dated 01/05/2018 (In case of project falls under CPA/SPA**, CER fund allocation to be atleast 1.5 times the slabs given in the OM dated 01.05.2018 for SPA and 2 times for CPA in case of Environment Clearance as per the mechanism published vide MoEF&CC's OM vide 31.10.2019)

% as per the OM	Rs. In Crores

		2%	3.0 Lakh	

Brief note on proposed activities:

Type of activity	Budgetary cost
Provision of Solar street light to limbadiya/karai village (12 Nos.)	3.0 Lakh
Total	**3.0 Lakh**

B **Land / Plot ownership details:**

- Land is procured in the name of M/s. Remedy Labs.

B-1 **Plot area**

Total Plot Area
768 Sq. m.

B-2 Brief note on **Area adequacy** in line to proposed project activities:

- As per requirement of proposed products, unit has sufficient area for production, storage, utility, EMS system and movement which is shown in layout plan. Further unit will develop partly green belt area outside the plant premises in GIDC area.
- Area Adequacy is given here below.

Particular	Maximum material to be stored	Mode of storage with storage units	Required pallets for storage	Area required (sq.mt.)	Area provision (sq.mt.)
Raw material Storage	25 MT	250 bags 50 drum	Bags: 5 Pallets x 3 layers= 12 Sq. mtr. Drums: 8 Pallets x 2 layer = 16 Sq. mtr.	27.0	40.0
Finished product storage	5 MT	100 bags	Pallets: 2 x 3 layers = 5 Sq. mtr.	5.0	15.0
Fresh solvent storage	1 MT	4 drum	Pallets: 1 x 2 layers = 3 Sq. mtr.	5.0	20.0
Spent solvent storage	25 MT	100 drum	Pallets: 13 x 2 layers = 30 Sq. mtr.	30.0	50.0
			Total storage area required	**67.0**	**125.0**

Conclusion: As we are going to manufacture only one product and looking to the above table, available area i.e. 768 sq. smtr. is adequate to accommodate the proposed plant.

B-3 **Green belt area**

	Total (sq. meter)
Area in Sq. m	**254 Sq. m (33% of total area), out of which 175 sq.mtr. (23%) In-house and 80 sq. mtr.**

			(10%) Outside plant premises within GIDC.
		% of total area	33 %
C	**Employment generation**		
		Total	
		8	
D	**Water**		
D-1	**Source of Water Supply** (GIDC Bore well, Surface water, Tanker supply etc...) - GIDC water supply		
	Status of permission from the concern authority. ➢ Already obtained		
D-2	**Water consumption (KLD)**		

Category	**Quantity KLD**	**Remarks**
(G) Domestic	0.8	Fresh Water
(H) Gardening	0.5	Fresh Water
(I) Industrial		
Process	3.0	RO Water
Washing	0.2	RO Water
Boiler	4.8	1.2 KLD Recycle Water + 3.6 KLD Condensate Water
Cooling	4.0	1.0 KLD Fresh Water + 3.0 KLD Condensate Water
RO Reject	0.8	Fresh Water
Scrubber	0.1	Fresh Water
Industrial Total	12.9	7.8 KLD Recycle water & 5.1 KLD Fresh Water
Grand Total (A+B+C)	14.2	7.8 KL D Recycle water & 6.4 KLD Fresh Water

Brief Note on worst case scenario for water consumption:

- Unit will have manufactured only one product i.e. Domperidone and 3.0 KLD water will required for it.

-

Summary of water requirement	**Quantity** KLD	Remarks
Total water requirement for the project **(A)**	14.2	
Quantity to be **recycled (B)**	7.8	1.2 RO permeate 6.6 Condensate water

Total **fresh water** requirement **(C)**	6.4	
Ensure **Total water requirement = Fresh water + Recycled water i.e. A = B + C**		

Reuse/Recycle details (KLD) with feasibility.
[Source of reuse & application area

Source of waste water for reuse in KLD (From where it is coming)	**Application area with quantity in KLD (where it is used)**	**Characteristics of the waste water to be reused (COD, BOD, TDS etc.)**	**Remarks regarding feasibility to reuse**
RO Permeate: 1.2 KLD	Boiler : 1.2 KLD	COD<50 mg/l BOD<20 mg/l TDS<100 mg/l	RO permeate feasible for reuse
Boiler Condensate water :3.6 KLD	Boiler :3.6 KLD	pH: 6-8	feasible for reuse.
Cooling Condensate water:3.0 KLD	Cooling : 3.0 KLD	pH: 6-8	feasible for reuse.

In case of no reuse/recycle of waste water, Give brief note on justification as why no reuse/recycle.

- Not Applicable, as are reusing the RO permeate and Boiler and cooling condensate water.

D-3 **Waste water generation (KLD)**

Category	**Waste water KLD**	**Remarks**
(G) Domestic	0.6	Treated in ETP
(H) Industrial		
Process	3.30	Treated in ETP
Washing	0.20	
Boiler	0.12	
Cooling	0.10	
RO reject	0.80	
Scrubber	0.11	Reuse or sold to actual user
Total Industrial waste water	**4.63**	--
Total [A + B]	**5.23**	--

Brief Note on worst case scenario for waste water generation (Qualitative and Quantitative):

- Unit will have manufactured only one product i.e. Domperidone and 3.3 KLD process waste water will be generated.

Brief justification in case of no process effluent generation or no industrial effluent

generation or no high concentration effluent generation from proposed project (Whichever is applicable).

- Not Applicable

D-4	Mode of Disposal & Final meeting point

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Domestic:	Domestic sewage, effluent generation form utility and RO reject will be treated in ETP-2 followed by RO. Effluent from process and washing along with reject of ETP2-RO will be treated in ETP-1. Treated water from ETP-1 will be sent to common spray dryer.
Industrial:	

Clearly mention about final disposal

- Total 3.5 KLD process & washing effluent along with 0.4 KLD RO reject from ETP-2 will be collected in collection cum neutralization tank where effluent get neutralized. After sludge separation it will be stored in storage tank from where it will be sent to common spray dryer.
- Industrial effluent other than process like blowdowns, raw water RO rejects and domestic, total @ 1.6 KLD will be treated in ETP-2. Effluent other than domestic will be collected in collection tank where the same will be neutralized and chemically treated. After sludge separation, it will be taken to aeration tank where domestic effluent will be mixed. All effluents will be biologically treated and after sludge separation it will be treated in tertiary filtration followed by RO. RO permeate will be reused for boiler and reject will be taken to ETP-1 from where it will be ultimately sent to common spray dryer.

D-5	Treatment facilities:

For Domestic waste water:

Capacity of STP: Not Applicable

For Industrial waste water: Treatment facility within premises with **capacity**

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

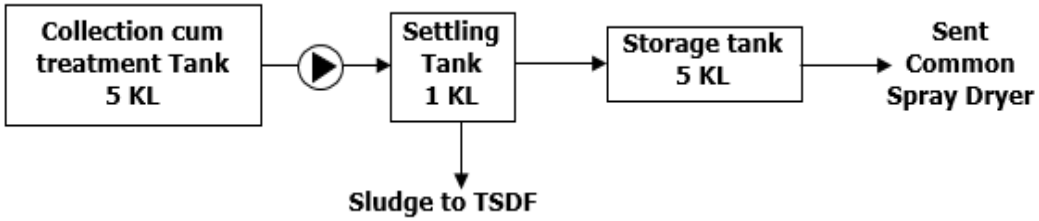
Treatment scheme including segregation at source. **(Give Characteristics of each stream i.e. COD, BOD, TDS etc.) In case of stream segregation, Separate ETP (ETP-1, ETP-2….) for each stream shall be proposed.**

- ETP Capacity: Details area given below.

There will be two separate ETP for wastewater to be generated from various sources. Process wastewater will be separately collected and treated in ETP-1 having neutralization and sludge separation units.
ETP-2 will be having primary chemical, secondary and tertiary treatment facility which will treat domestic effluent and industrial effluents other than process wastewater. Following are the details of both ETPs.

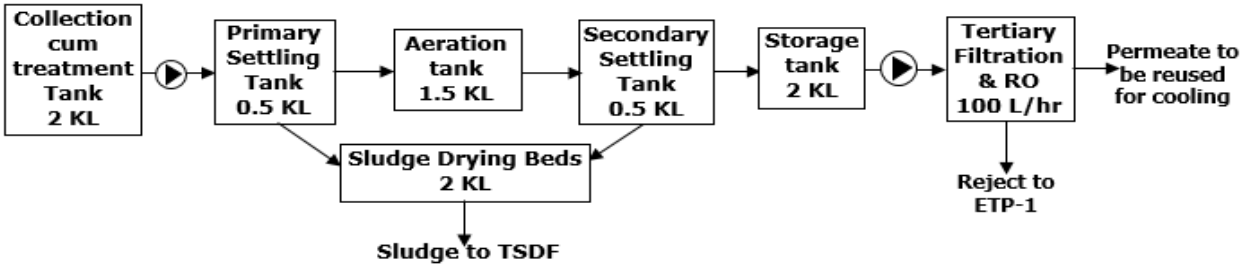
Effluent treatment plant-1

Total 3.5 KLD process & washing effluent along with 0.4 KLD RO reject from ETP-2 will be collected in collection cum neutralization tank where effluent get neutralized. After sludge separation it will be stored in storage tank from where it will be sent to common spray dryer.



Effluent treatment plant-2

Industrial effluent other than process like blowdowns, raw water RO rejects and domestic, total @ 1.6 KLD will be treated in ETP-2. Effluent other than domestic will be collected in collection tank where the same will be neutralized and chemically treated. After sludge separation, it will be taken to aeration tank where domestic effluent will be mixed. All effluents will be biologically treated and after sludge separation it will be treated in tertiary filtration followed by RO. RO permeate will be reused for cooling and reject will be taken to ETP-1 from where it will be ultimately sent to common spray dryer.



Stream wise characteristics of Effluent:

Particular	Unit	Process	Washing	Composite water to ETP	Primary Treated water to common spray dryer
Quantity	KLD	3.3	0.2	3.5	3.5
pH	--	5.0-7.0	6.0-8.0	5.0-7.0	6.5-7.5
TSS	mg/l	150-200	120-160	150-200	< 200
COD	mg/l	5000-6000	400-500	5000-6000	< 6000
BOD	mg/l	1500-2000	100-150	1500-2000	< 2000
TDS	mg/l	10000-15000	2000-2500	10000-15000	< 15000

Particular	Unit	Boiler & Cooling Blow down	RO Reject	Sewage water	Composite water to secondary	ETP-RO Reject	ETP-RO Permeate
Quantity	KLD	**0.2**	**0.8**	**0.6**	**1.6**	**0.4**	**1.2**
pH	--	6.0-7.0	6.0 - 8.0	6.0-8.0	6.0-8.0	6.5-7.5	7.0-8.0
TSS	mg/l	100-150	--	120-150	< 50	--	--
COD	mg/l	40-50	--	350-400	< 350	--	--
BOD	mg/l	10-20	--	150-200	<100	--	--
TDS	mg/l	3000-3500	4000 - 4500	1200-1500	<600	7000-8000	<100

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. Treated effluent from ETP-1 and ETP-RO reject will be send to common spray dryer.

D-6 In case of Common facility (CF) i.e CETP, Common Spray dryer, Common MEE, CHWIF etc.

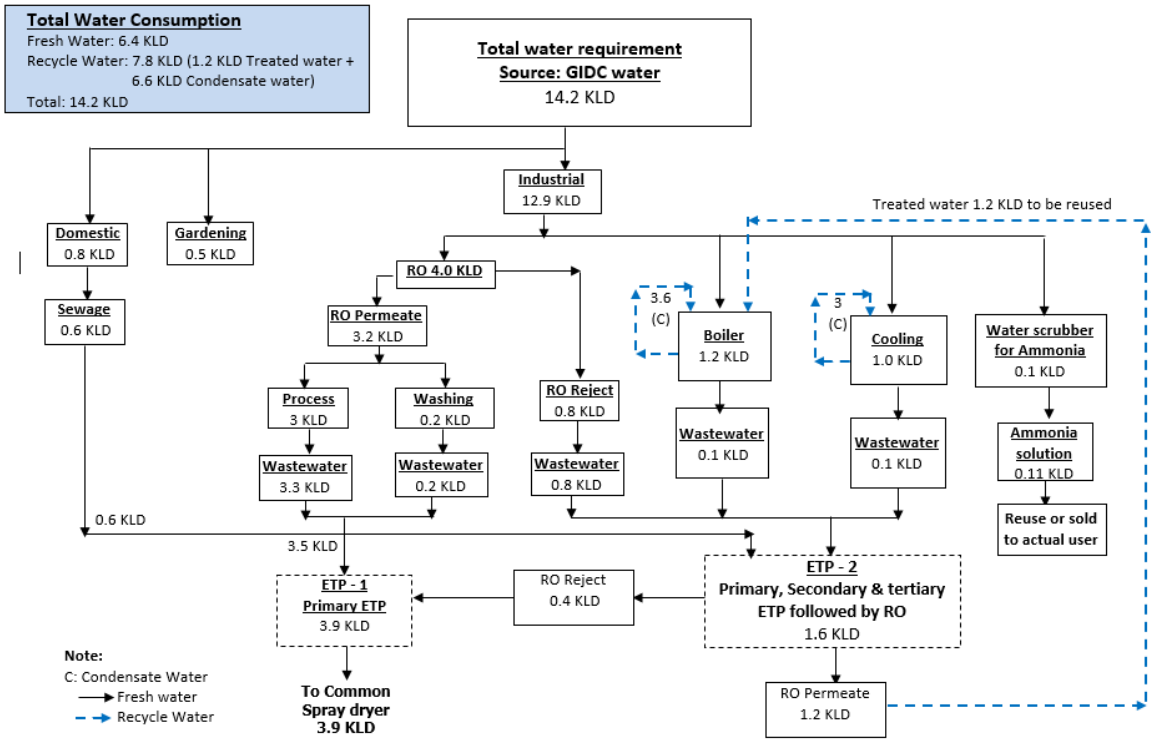
Name of Common facility (CF)(For waste water treatment)

- Common spray dryer membership will be obtained before commissioning of the project. For that we have provided notarized undertaking.

Membership of Common facility (CF) 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.

- Not Application.

D-7 Simplified water balance diagram with reuse / recycle of waste water



E Air

E-1 Brief Note on fuel based heat energy requirement and worst case scenario thereof:

- Unit has proposed to use Natural gas or LDO as fuel and will provide Adequate Stack Height for control of flue gas emission.

- DG. Set of capacity 125 KVA will be installed, which will be used in case of power failure.

E-2 **Flue gas emission details**

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

(in case of project located within CPA/SPA, APCM shall be in line to the mechanism published in the MoEFCC's OM vide dated 31.10.2019

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Sr. no.	Source of emission With Capacity	Stack Height (meter)	Type of Fuel	Quantity of Fuel MT/Day	Type of emissions i.e. Air Pollutants	Air Pollution Control Measures (APCM)
1	Boiler (Cap. 600 Kg/Hr)	30	Natural Gas or LDO	610 SCM/Day or 520 Liter/Day	PM, SO_2, NOx	Adequate Stack Height
2	D. G. Set (125 KVA)	11	HSD	35 L/day		Adequate Stack Height

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E-3 **Process gas** i.e. Type of pollutant gases (SO_2, HCl, NH_3, Cl_2, NO_xetc.)

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Sr. no.	Specific Source of emission (Name of the Product & Process)	Type of emission	Stack/Vent Height (meter)	Air Pollution Control Measures (APCM)
1	Reaction Vessel	NH_3	12	Water Scrubber

Note:

- **Details of gaseous raw materials used in proposed project**

  Not Applicable.

- **Estimation of process gas emission (Product wise and Total)**

  Liquor ammonia is used as a raw material, hence ammonia gas will be liberate from the reaction, 0.50 MT/Day liq. Ammonia will be used, so 0.005 MT/Day gas will be liberated from the reaction. Water scrubber will be installed as an APCM for that.

- **Requirement of the scrubbing media (KL per Day) considering solubility (Product wise and Total)**

  0.1 KLD water required for water scrubber.

- **Yearly generation of all bleed liquors (MT/KL per Annum) as mentioned above and its sound management in HW matrix.**

S. No.	Description	Source of generation	Quantity (MT/Annum)	Mode of disposal
1	Ammonia Solution (Bleed Liquor)	Water Scrubber	40	Collection, Storage, reuse again or sold to

					actual users.

E-4	**Fugitive emission** details with its mitigation measures. ➢ Powdered Raw materials charging will be done in closed system and in covered area. ➢ All necessary safety precautions will be taken while charging of raw materials. ➢ Raw materials and products will be stored in designated storage area as per its characteristics. ➢ Reactor and solvent handling pumps will have mechanical seals to prevent leakages. ➢ Reactors shall also be provided with breather valve to prevent losses. ➢ Pucca flooring will be provided on the inner roads of the factory to control SPM concentration in ambient air. ➢ The unit will developed Green Belt in the industrial premises as well will participate in greenbelt development program in nearby 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 assembly 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. ➢ To eliminate chances of leakages from glands of pumps, mechanical seal will be provided at all solvent pumps. ➢ Solvent recovery will not be less than 90% under any case. ➢ Spent solvents will be distilled at atmospheric pressure and distillation facility shall include condensers with sufficient Heat Transfer Area and residence time so as to achieve more than 95% recovery. ➢ All necessary firefighting systems shall be provided with alarm system. Flame proof wiring and flame proof electrical accessories shall be provided to avoid any mishap. ➢ All the vents will be connected to a common carbon adsorber for removing traces of solvent from vent gases. ➢ Nomenclature and proper label pasted on them indicating name of solvent will be made on each of the storage unit. ➢ Reactor and solvent handling pump will have proper seals to prevent leakages.
F	**Hazardous waste** (As per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016. Note: ➢ **Priorities for HW Management:** Pre-processing, Co-Processing, Reuse/Recycle within premises, Sell out to actual users having Rule-9 permission, TSDF/CHWIH. ➢ **Quantification of hazardous waste shall be based on mass balance and calculations shall be incorporated in EMP details separately.** ➢ **Disposal to scrap vendors/vendors/traders is not allowed**
F-1	**Hazardous waste management matrix**

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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	Machinery	5.1	0.05	Collection, Storage, Transportation, Disposal by selling to registered recycler
2	Discharged Bags/ Containers/ Drums	Raw Material	33.3	2	Collection, Storage, Transportation, Decontamination & Sale to GPCB approved recycler/reuse
3	Distillation Residue	From Solvent Recovery Plan & Mfg. Process	Sch – I 36.1	75	Collection, Storage, Transportation & Disposal to authorized CHWIF
4	Spent Carbon	Mfg. Process	Sch – I 28.3	48	
5	Process Residue (Organic)/	Mfg. Process	28.1	440	
6	Process Residue (Inorganic)	Mfg. Process	28.1	775	Collection, storage, Transportation and disposal to approved TSDF.
7	ETP Sludge	Effluent Treatment Plant	Sch – I 35.3	75	
8	Spent Solvent	Solvent recovery system	28.6	3620	Recovery and reuse in next batch
9	Ammonia Solution	Water Scrubber	Sch – I B-15	40	Collection, Storage, reuse again or sold to actual users.
10	Off specification products	Manufacturing process	28.6	Whatsoever generated	Collection, Storage, Transportation & Disposal to authorized CHWIF

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F-2	Membership details of **TSDF, CHWIF** etc. **(For HW management)**

Details of Membership Letter no. Date with spare capacity of the common Facility.

- **Unit have obtained provisional membership certificate of TSDF and CHWIF vide letter no. BEIL/ANK/2021 dated and, 19/06/2021.**

F-3	Details of Non-Hazardous waste & its disposal **(MSW and others)**	

Sr.	Type/Name of	Specific Source of	Quantity	Management of	

	no.	Hazardous waste	generation (Name of the Activity, Product etc.)	(MT/Annum)	HW	
	1	Non Hazardous waste will not be generated				

G	**Solvent management, VOC emissions etc.**
G-1	Brief note on Types of solvents, Details of Solvent recovery, % recovery, reuse of recovered Solvents etc.

- **Primary condenser**: Cooling tower water or chilled water will be used to condensed the solvents depend on the vapor pressure at its operating conditions and the non condensed vapors will be condensed in a secondary condenser.
- **Secondary condenser**: Chilled Brine at -5^{o}C will be used to condensate the non-condensed vapors in the secondary condensers final venting will be done after passing through carbon column.
- More than 96% of Spent Solvent will be recovered.

Sr. No.	Name of Solvent	Boiling Point	Quantity (MT/Month)			% Recovery
			Fresh	Recovered	Total	
1	O-Xylene	144	3.4	154.3	157.8	97.8
2	Toluene	110	3.4	102.6	106.0	96.7
3	MIBK	116	0.3	13.4	13.8	97.5
4	Methanol	65	3.4	169.0	172.4	98.0

G-2 Brief Note on LDAR proposed:

Leak Detection and Repair (LDAR) is a program implemented to comply with environmental regulations for reducing the fugitive emissions of targeted chemicals into the environment. Leaking equipment, such as valves, pumps, and connectors, are a large source of emissions of volatile organic compounds (VOCs) and volatile hazardous air pollutants (VHAPs).

Quarterly VOC monitoring would be conducted by NABL laboratory and six-monthly workplace VOC monitoring would be carried out to identify areas with VOC levels greater than the threshold limits. In case of any identified area appropriate controls would be put in to identify the reasons for VOC /fugitive emissions and rectify the same. Documentation of procedures for the monitoring and inspecting of emission control equipment are prepared.

The Following methodology will adopt during LDAR study:

- Identify the Chemical streams that will be monitored.
- Types of components (pumps, valves, connectors, etc.) will be monitored.
- Actions to be taken if a leak is detected.
- All the rotating equipment like pumps will be installed with Mechanical Seals to arrest any sort of emissions.
- Length of time in which an attempt to repair the leak must be performed.
- Actions that must be taken if a leak cannot be repaired within guidelines.
- Record-keeping and reporting requirements.

To prevent losses of these solvents in atmosphere, following infrastructure shall be used in addition to LDAR program.

- Leak free pumps for transfer of solvents.

- MSW Gaskets in solvent pipelines to prevent leakage from flanges.
- Minimum number of flanges, joints and valves in pipelines.
- To eliminate chances of leakages from glands of pumps, mechanical seal will be provided at all solvent pumps.
- All the rotating equipments like pumps will be installed with Mechanical Seals to arrest to arrest any sort of emissions.
- Condenser and scrubber through hoods and ducts by induced draft, and control by scrubber / dust collector to be ensured.
- In case the small spillage or leakage observed, first pour the china clay (vermiculate) on material and collect the contaminated china clay (vermiculate) and send to ETP.
- If the spillage is of flammable liquid, switch off all the power aupply in the area to prevent Electric spark.

G-3	VOC emission sources and its mitigation measures

- Due to Manufacturing process chances of VOC emissions. Entire process and material charging has been carried out in closed loop. Regular work place monitoring will be done. Standard SOP will be followed to handle powder and liquid raw materials.

H	SAFETY details
H-1	Details regarding storage of Hazardous chemicals **(For tank storages including spent acid and spent solvent tanks)**

Sr. No.	Name of chemical	Capacity of Tank	Number of Tanks	Hazardous Characteristics of Chemical
-------No Storage Tanks --------				

Brief note on Storage of Hazardous chemicals other than Tanks i.e. Drum, Barrels, Carboys, Bags etc.

- Fire hydrants shall be provided as per requirement.
- Hazardous display boards and national fire prevention association code shall be displayed on all storage media.
- On site detectors for fire based on heat&/or smoke detection with alarm system shall be provided as per requirement.
- Breathe valves and Flame arrestors shall be provided.
- No smoking display boards shall be displayed.
- Wind indicator and siren shall be provided.
- Storage of drums at ground level and take measures' to prevent corrosion of the drum base.

Safety details of Hazardous Chemicals:

Type of Hazardous chemicals	Safety Measures
Methanol	• Stored separately from strong oxidant & Kept it in well ventilated room. • Dyke wall shall provide to all above ground storage tank. • Fire hydrant system will be installed.

	• Safety shower and eye washer shall be installed near storage area. • Safety permit system shall be followed for loading and unloading. • Level gauge and level measurement instruments shall be provided for storage tanks.
Concentrated Acid	• Storage of all acids in chemically compatible containers and properly marked with hazardous symbol. • Provision of suitable level indicator for storage and day tanks. • Provision of all acids containers with containment tray. • Provision of emergency transfer arrangements for transferring material into another tank.

- **Applicability of PESO:**

  PESO permission is not applicable because requirement and storage quantity of applicable chemicals is very less.

H-2	**Types of hazardous Processes involved and its safety measures:** **(Hydrogenation process, Nitration process, Chlorination process, Exothermic Reaction etc.)**

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Types of Process	**Safety Measures including Automation**
	No such hazardous process identified. Only distillation reaction will be carried out.

H-3	**Details of Fire Load Calculation**

Total Plot Area:	768 sq.m
Area utilized for plant activity:	160 sq.m
Area utilized for Hazardous Chemicals Storage:	125 sq.m
Number of Floors:	Ground Floor +1
Water requirement for firefighting in KLD:	22 KLD
Water storage tank provided for firefighting in KLD:	100 KLD
Details of Hydrant Pumps:	4 Hydrant pumps (2 Main, 1 DG Pump & 1 Jockey pump)
Nearest Fire Station:	Naroda GIDC fire station @ 1.12 km, N
Applicability of Off Site Emergency Plan:	Yes, Applicable

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H-4	**Details of Fire NOC/Certificate:**
	➢ Fire NOC shall be obtained from concerned authority

H-5	Details of Occupational Health Centre:

Number of permanent employee:	8
Number of Contractual person/Labour:	2
Area provided for OHC:	20 sq. m
Number of First Aid Boxes:	2
Nearest General Hospital:	Shalby Hospital, 1.6 km@ SE
Name of Antidotes to be store in plant:	Milk of Magnesia, Cordinol Tab, Novasin drops for eyes, Eno, Fomepizole

- During the meeting dated 06.10.2021, the project was appraised based on the information furnished in Form – 1, Pre-Feasibility Report, Environment Management Plan and details submitted by e-mail.
- Project proponent (PP) and their Technical Expert from **M/s. Enviro Fluid Consultants** remain present during video conference meeting.
- This is Greenfield project proposed for manufacturing of synthetic organic chemicals **[API & API Intermediates]** at Naroda GIDC, Ahmedabad. Total plot area is 768 Sq. m.
- Committee noted the following:
  - ✓ GIDC letter in the name of the unit dated: 19.06.2002.
  - ✓ Product profile with specific End-use of each product. At a time, 1 product can be manufactured.
  - ✓ Site Plan/ layout with fire plan & floor plans and provision of separate entry & exit, 5 m wide peripheral road, OHC, production area, raw material & finished goods storage area, ETP area, hazardous waste storage area, utility area, 23% greenbelt within premises, etc.
  - ✓ Industrial effluent shall be segregated into two streams (1) High COD and TDS effluent (2) Low COD and TDS effluent and it shall be managed as below.
    - **<u>High COD and TDS effluent (3.9 KLD)</u>**
      - 3.5 KLD, High COD effluent from process and washing and 0.4 KLD RO reject from ETP 2 shall be treated ETP consists of primary treatment units and sent to common spray dryer for further treatment & disposal.
    - **<u>Low COD and TDS effluent (1.6 KLD)</u>**
      - 1.0 KLD, Low COD effluent from washing & Utility and 0.6 KLD, domestic effluent shall be treated in ETP consists of primary, secondary & tertiary treatment units followed by RO. 1.2 KLD, RO permeate shall be reused within plant premises and 0.4 KLD, RO reject shall be sent to common spray dryer
  - ✓ Treated waste water shall be sent to common Spray dryer only after complying with the inlet norms of common facilities prescribed by GPCB to ensure no adverse impact on Human

Health and Environment.

- ✓ Domestic wastewater generation shall not exceed 0.6 KL/day for proposed project and it shall be treated in ETP. It shall not be disposed of through soak pit/ septic tank.
- ✓ LDO or Natural gas is proposed as fuel in boiler and HSD is proposed as fuel in D. G. set.
- ✓ Water scrubber system is proposed for control of process gas emission.
- ✓ Scrubbing liquor will be sell as per Hazardous Waste Rules.
- ✓ PP submitted hazardous waste matrix mentioning source of generation, quantity and Mode of disposal and committed to comply the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016.
- ✓ Fire load calculation mentioning fire water storage (Cap: 100 KL), 8 nos. of ABC type fire extinguisher (Cap. 5 kg), 8 nos. of CO2 type fire extinguisher (Cap. 5 kg), 8 Nos. of foam type extinguishers (Cap: 5 kg) and 2 Nos. of foam trolley (Cap: 50 Litres).

- Committee deliberated on Product profile, Layout plan, Storage details, Process safety, Fire safety, water balance & waste water management, Flue gas and process gas emission & Air Pollution Control System, Hazardous waste matrix, EMP, CER, Green belt, etc.
- Looking to above details committee informed for submission of revised letter from NIA for the green belt development which is submitted by PP, through e-mail.
- Committee found submission of project proponent satisfactory.
- **After detailed discussion, Committee unanimously decided to recommend the project to SEIAA, Gujarat for grant of Environment Clearance with the following specific condition:**

SPECIFIC CONDITIONS:

22. Project Proponent (PP) shall comply conditions of any subsequent amendment or expansion or change in product mix, after the 30th September 2020, considered as per the provisions in force at that time as mentioned in the Notification vide S.O. 1223 (E) dated 27/03/2020.
23. PP shall carry out proposed project/activities in respect of Active Pharmaceutical Ingredients (API) as per the amended EIA Notification vide S.O. 1223 (E) dated 27/03/2020 and any subsequent amendments.
24. PP shall submit six monthly compliance report of Environmental Clearance without fail and the same shall be critically assessed by the regulatory authority.
25. Unit shall install CEMS **[Continuous Emission Monitoring System]** in line to CPCB directions to all SPCB vide letter no. B-29016/04/06PCI-1/5401 dated 05/02/2014 for effluent discharge and air emission as per pollutants discharge/emission from respective project and an arrangement shall also be done for reflecting the online monitoring results on the company's server, which can be assessable by the GPCB/CPCB on real time basis. **[For Small/Large/Medium (Red Category) & Whichever (Air emission & Effluent discharge) is applicable].**

26. Total number of products manufacturing shall not be exceeding one at a given point of time as per the plant capacity shown in plant layout.
27. Close loop solvent recovery system with adequate condenser system shall be provided to recover solvent vapours in such a manner that recovery shall be maximum and recovered solvent shall be reused in the process within premises.
28. Leak Detection and Repair (LDAR) program shall be prepared and implemented as per the CPCB guidelines. LDAR Logbooks shall be maintained.

WATER

29. Total water requirement for the project shall not exceed 14.2 KLD. Unit shall reuse 7.8 KLD of treated industrial effluent within premises. Hence, fresh water requirement shall not exceed 6.4 KLD and it shall be met through GIDC water supply only. Prior permission from concerned authority shall be obtained for withdrawal of water.
30. Industrial effluent shall be segregated into two streams (1) High COD and TDS effluent (2) Low COD and TDS effluent and it shall be managed as below.
    - **High COD and TDS effluent (3.9 KLD)**
        - 3.5 KLD, High COD effluent from process and washing and 0.4 KLD RO reject from ETP 2 shall be treated ETP consists of primary treatment units and sent to common spray dryer for further treatment & disposal.
    - **Low COD and TDS effluent (1.6 KLD)**
        - 1.0 KLD, Low COD effluent from washing & Utility and 0.6 KLD, domestic effluent shall be treated in ETP consists of primary, secondary & tertiary treatment units followed by RO. 1.2 KLD, RO permeate shall be reused within plant premises and 0.4 KLD, RO reject shall be sent to common spray dryer

✓ Treated waste water shall be sent to common Spray dryer only after complying with the inlet norms of common facilities prescribed by GPCB to ensure no adverse impact on Human Health and Environment.

✓ Domestic wastewater generation shall not exceed 0.6 KL/day for proposed project and it shall be treated in ETP. It shall not be disposed of through soak pit/ septic tank.

31. There shall be no discharge of waste water outside the premises in any case.

AIR

32. Unit shall not exceed fuel consumption and provide APCM and Stack height as mentioned in flue gas matrix.
33. Unit shall provide APCM and stack height as mentioned in process gas matrix.

HAZARDOUS & SOLID WASTE

34. All hazardous solid waste shall be managed as mentioned in hazardous waste matrix.

35. The unit shall submit the list of authorized end users of hazardous wastes along with MoU signed with them at least two months in advance prior to the commencement of production. In the absence of potential buyers of these items, the unit shall restrict the production of the respective items.

GREENBELT AREA

36. The PP shall develop green belt within premises 175 Sq m i.e. Approx 23% of total plot area and 80 sq. mtr i.e. 10% of total plot area at outside plant premises within GIDC as committed before SEAC. Green belt shall be developed with native plant species that are significant and used for the pollution abatement as per the CPCB guidelines. It shall be implemented within 3 years of operation phase in consultation with GPCB.

37. **Safety & Health:**

m) PP shall obtain PESO permission for the storage and handling of hazardous chemicals.

n) PP shall provide Occupational Health Centre (OHC) as per the provisions under the Gujarat Factories Rule 68-U.

o) PP shall obtain fire safety certificate / Fire No-Objection certificate (NOC) from the concern authority as per the prevailing Rules / Gujarat Fire Prevention and Life Safety Measures Act, 2016.

p) Unit shall adopt functional operations/process automation system including emergency response to eliminate risk associated with the hazardous processes.

q) PP shall carry out mock drill within the premises as per the prevailing guidelines of safety and display proper evacuation plan in the manufacturing area in case of any emergency or accident.

r) PP shall install adequate fire hydrant system with foam trolley attachment within premises and separate storage of water for the same shall be ensured by PP.

s) PP shall take all the necessary steps for control of storage hazards within premises ensuring incompatibility of storage raw material and ensure the storage keeping safe distance as per the prevailing guidelines of the concerned authority.

t) PP shall take all the necessary steps for human safety within premises to ensure that no any harm is caused to any worker/employee or labour within premises.

u) Flame proof electrical fittings shall be provided in the plant premises, wherever applicable.

v) Unit shall never store drum/barrels/carboys of incompatible material/chemical together.

w) Unit shall provide effective Isolation for Process area and storage of hazardous chemicals.

7	**SIA/GJ/IND2/206762/2021**	**M/s. Shree Sai Industries** Plot No. 1802, GIDC-Sarigam, Tal.: Umargaon, Dist.: Valsad.	**EC REconsideration**

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

Project status: New

- Project proponent (PP) submitted online application vide no. SIA/GJ/IND2/206762/2021 on dated 28.03.2021 for obtaining Environmental Clearance.
- Project proponent has submitted Form – 1, Pre-Feasibility Report & Environment Management Plan as per Notification issued by MoEF&CC vide S.O. 1223(E) dated 27th March, 2020 regarding consideration of proposals or activities in respect of Active Pharmaceuticals Ingredients (API) as B2 category.
- This is a new project proposed for manufacturing of synthetic organic chemicals **[API & its Intermediates]** as tabulated below.

Sr. No.	NAME OF PRODUCT	API Or Intermediate	Cas No.	Quantity MT/ Month	Said API is used for/End Use of said API
1.	Methyl 3- Amino Crotonate	**API**	14205-39-1	**25 Mt/Month**	**API/**hypertension coronary artery disease
2.	2,6 Dichloro Phenol	Intermediate	87-65-0		**Diclofenac/** relieve pain, swelling (inflammation), and joint stiffness
3.	Chloro Acetyl Chloride	Intermediate	79-04-9		**Diclofenac/** relieve pain, swelling (inflammation), and joint stiffness
4.	3-Ethyl-4-Methyl-2-Oxo-N-(2-Phenyl Ethyl)-2,5-Dihydro-1H-Pyrrol-1-Carboxiamide	Intermediate	247098-18-6		**Glimepiride/** to control high blood sugar
5.	Methyl 1,2-Methoxy-5-Sulfamoylbenzolate	Intermediate	33045-52-2		**Levosulpiride /**Symptoms Of Schizophrenia, Anxiety Disorders, And Dysthymia
6.	Levosulpiride	**API**	23672-07-3		**API/** antipsychotic
7.	3-Acetylphenyl Acetate (Phenylepherine HCl)	Intermediate	2454-35-5		**Phenylephrine HCl /**stuffy nose, sinus, and ear symptoms

8.	Rosuvastatin Calcium	**API**	147098-20-2		**API**/ along with a proper diet to help lower "bad" cholesterol and fats (such as LDL, triglycerides) and raise "good" cholesterol (HDL) in the blood
9.	N-[5-(Bromo Methyl)-4-(4-Fluoro Phenyl)-6-Isopropyl Pyrimidin-2-Yi]-N-Methyl Methane Sulfonamide(Rosuvastatin Calcium)	Intermediate	799842-07-2		**Rosuvastatin Calcium**/ along with a proper diet to help lower "bad" cholesterol and fats (such as LDL, triglycerides) and raise "good" cholesterol (HDL) in the blood
10.	4-(4- Fluoro-Phenyl)-6-Isopropyl-2-(Methyl Sulfonyl Methyl Amino)-Pyrimidine-5-Carboxylic Acid Ethyl Ester	Intermediate	147118-36-3		**Rosuvastatin Calcium**/ along with a proper diet to help lower "bad" cholesterol and fats (such as LDL, triglycerides) and raise "good" cholesterol (HDL) in the blood
11.	Tert-Butyl-Fluoro-Dimethyl-Silane	Intermediate	2357-76-8		**Rosuvastatin Calcium**/ along with a proper diet to help lower "bad" cholesterol and fats (such as LDL, triglycerides) and raise "good" cholesterol (HDL) in the blood
12.	N,N, Bis (2-Chloro Ethyl) Amine Hydrochloride	Intermediate	821-48-7		**Itraconazole**/ Antifungal
13.	Di Ethyl Amino Ethyl Chloride Hydrochloride	Intermediate	869-24-9		**Ketoconazole**/treat fungal and yeast infections
14.	Di Methyl Amino Ethyl Chloride Hydrochloride	Intermediate	4584-46-7		**Ketoconazole**/treat fungal and yeast infections
15.	4-(2-Chloroethyl)Morpholine Hydrochloride	Intermediate	3647-69-6		**Nimorazol**/ treatment of bacterial infections and parasitic infections

16.	3-(Cyclopropylmethoxy)-4-(Difluoromethoxy) Benzoylchloride	Intermediate	672883-68-0		**Roflumilast**/prevent worsening of chronic obstructive pulmonary disease
17.	(S)-4-(4-(5-Aminomethyl)-2oxooxaZolidin-3-Yl) Phenyl)Phorpholin-3-One	Intermediate	898543-06-1		**Rivaroxaban**/ prevent blood clots from forming due to a certain irregular heartbeat
18.	2-((4-(2-Methoxyethyl)Phenoxy)Methyl)	Intermediate	56718-70-8		**Metropolol**/ Treat High Blood Pressure (Hypertension)
19.	2-(4-(4-Chlorobenzoyl)Phenoxy-2-Methylpropanoic Acid	Intermediate	42017-89-0		**Fenofibric Acid** /lower "Bad" Cholesterol And Fats Raise "Good" Cholesterol (HDL) In The Blood
20.	Tri Ethyl Benzyl Ammonium Chloride (Teba)	Intermediate	56-37-1		**Valsartan** / To treat high blood pressure
21.	2-Benzyl Amino-1-6-Fluoro-3-4-Dihydro-2-H-Chromen-2-Yl-Ethanol	Intermediate	1030385-16-0		**Nebivolol** / improve blood flow and decrease blood pressure
22.	(3ar,7ar)-4-Benzo[A]Isothiazol-3-Yl)Octahydrospiro[Isoindole-2.1'piperazin]-2-Ium Methanesulfonate	Intermediate	186204-37-5		**Lurasidone HCl** /Anti-Psychotic
23.	(3ar,4S,7R,7as)-2-(((1R,2R)-2-((4-(Benzo[D]Isothiazol-3-Yl)Piperazin-1-Yl)Methyl)Cyclohexyl)Methyl)Hexahydro-1H-4,7-Methanoisoindole-1,3(2H)-Dione Hydrochloride	Intermediate	1644295-09-9		**Lurasidone HCl** /Anti-Psychotic
24.	R-(-)-1-(2,4-Dichloro-Phenyl)-2-Imidazol-L-Yl-Ethanol	Intermediate	24155-42-8		**Sertaconazole nitrate/** medication on the skin only
25.	2-Chloro N,N-Diphenyl Acetamide	Intermediate	5428-43-3		**Indoline /** Anti-inflammatory
26.	1-(4-Bromo-3-Bromo Ethyl Phenyl) Ethanone	Intermediate	1844064-91-0		**Velpatasvir /** to treat chronic (long-lasting) hepatitis C, a viral infection of the liver
27.	(2R,3S)-2-(2,4-Difluorophenyl)-3-(5-Fluoropyrimidin-4-Yl)-1-(1H-1,2,4-Triazol-1-Yl)Butan-2-Ol (R)-Camsylate	Intermediate	2019-11-30		**Velpatasvir /** to treat chronic (long-lasting) hepatitis C, a viral infection of the liver
28.	5-{4-[(4-(5-Cyano-1H-Indol-3-Yl)-Butyl]-Piperazin-1-Yl}-Benzofuran-2-Carboxylate Methyl	Intermediate	163521-09-3		**Vilazodone**/ treat depression

29.	17β-N-[2,5-Bis(Trifluoromethyl)-Phenyl]Carbomoyl-L -Androst-4-En-3-One	Intermediate	164656-23-9		**Dutasteride**/ treat benign prostatic hyperplasia
30.	1-(2-Methoxy Phenyl) Piperazine HCl	Intermediate	5464-78-8		**Fluanisone** /Anti-Psychotic
31.	2-Chloroethylamine Hydrochloride	Intermediate	870-24-6		**Ifosfamide** /Anti-cancer
32.	4 (2- Chloro Ethyl) Morpholine HCl	Intermediate	3647-69-6		**Morclofone /**Cough suppressant
33.	Di Methyl Amino Isopropyl Chloride HCl	Intermediate	4584-49-0		**Promethaze hydrochlore** /antipruritic
34.	Cyclo Propane Carboxylic Acid	Intermediate	1759-53-1		**Prazepam** /Anti anxiolytic
35.	Cyclo Propane Carbonyl Chloride	Intermediate	4023-34-1		**Prazepam** /Anti anxiolytic
36.	Cyclo Hexane Carbonyl Chloride	Intermediate	2719-27-9		**Praziquantel** /anti-worm
37.	Acetyl Salicoyl Chloride	Intermediate	5538-51-2		**Nitazoxanie** /Anti viral
38.	Di Methyl Amino Ethyl Chloride Hydrochloride	Intermediate	4584-46-7		**Dibenzepin**/Anti-depressant
39.	Di Ethyl Amino Ethyl Chloridehydrochloride	Intermediate	869-24-9		**Dibenzepin** /Anti depressant
40.	2-Di Iso Propyl Amino Ethyl Chloridehydrochloride	Intermediate	4261-68-1		**Disopyrame** /antiarrhythmic
41.	Terbinafine HCl	**API**	78628-80-5		**API** /Anti- Fungal
42.	N-Methyl Naphthyl Methyl Amine Hydrochloride	Intermediate	65473-13-4		**Terbinafine HCl** /Anti- Fungal
43.	Nebivolol Hydrochloride	**API**	152520-56-4		**Nebivolol Hydrochloride** /Anti Hypertensive
44.	Pentoxyphylline	**API**	6493-05-6		**Pentoxyphylline /**Hemorrheologic agent
45.	Trazodone Hydrochloride	**API**	25332-39-2		**API** /Anti depressant
46.	2-{3-[4-(3-Chlorophenyl)Piperazin-1-Yl]Propyl}[1,2,4]Triazolo[4,3-A]Pyridin-3(2H)-One	Intermediate	19794-93-5		**Trazodone Hydrochloride** /Anti depressant
47.	2-{3-[4-(3-Chlorophenyl)Piperazin-1-Yl]Propyl}[1,2,4]Triazolo[4,3-A]Pyridin-3(2H)-One Hydrochloride	Intermediate	25332-39-2		**Trazodone Hydrochloride** /Anti depressant
48.	1-(3-Chloro Phenyl) 4-(3 Chloro Propyl)Piperazine Hydrochloride	Intermediate	52605-52-4		**Trazodone Hydrochloride** /Anti depressant
49.	Ranolazine Tech	**API**	95635-56-6		**API** /Anti Anginal

50.	Aripiperazole Hydrochloride	**API**	1008531-60-9		**API/** treatment of schizophrenia, bipolar I, major depressive disorder
51.	7-Hydroxy-3,4-Dihydroquinolin-2(1H)-One	Intermediate	22246-18-0		**Aripiperazole Hydrochloride /** treatment of schizophrenia, bipolar I, major depressive disorder
52.	Silodosin	**API**	160970-54-7		**API/**Anti - Inflammatory
53.	(R)-1-(3-Hydroxypropyl)-5-(2-((2-(2-(2,2,2-Trifluoroethoxy) Silodosin Technical	Intermediate	160970-54-7		**Silodosin /**Anti - Inflammatory
54.	1-Acetyl-5-(2-Aminopropyl) Indoline-7-Carbonitrile (A7)	Intermediate	175837-01-1		**Silodosin /**Anti - Inflammatory
55.	6-Hydroxy-3,4-Dihydroquinolin-2(1H)-One	Intermediate	54197-66-9		**Cilastazol/** antiplatelet
56.	7-Hydroxy-3,4-Dihydroquinolin-2(1H)-One	Intermediate	22246-18-0		**Aripiperazole**/ Anti Psychotic
57.	Mannich Hydrochloride	Intermediate	42036-65-7		**Tramadol** /pain reliever
58.	Duloxetin Hydrochloride	Intermediate	136434-34-9		**Duloxetin Hydrochloride** /Anti dipressant
59.	Pyrrolidine, 2-(2-Chloroethyl)-1methyl Hydrochloride	Intermediate	56824-22-7		**Azelastine hydrochloride/** Anti histamine
60.	Phthaloyl Amlodipine	**API**	88150-62-3		**Phthaloyl amlodipine/**treat high blood pressure
61.	Diethyl 2-(((3-Chlorophenyl)Amino)Methylene)Malonate	Intermediate	3412-99-5		**Hydroxychloroquine/** treat rheumatoid arthritis and systemic lupus erythematosus
62.	1-(2-Chloroacetyl)Pyrrolidine-2-Carboxamide	Intermediate	207557-35-5		**Vilbagliptin/**treatment of diabities
63.	2-Amino-5-Methyl Thiozole	Intermediate	7305-71-7		**Meloxicam** /Anti - Inflammatory
64.	2-Chloron,N-Diphenyl Acetamide (Indapamide)	Intermediate	5428-43-3		**Indapamide/** reduce the risks of major vascular toxicities
65.	Sertraline Mandelate Salt (Sertraline HCl)	Intermediate	254731-40-3		**Sertraline HCl** / treat depression
	***R&D**			**0.1 MT/Month**	

	Total	**25 MT/Month**	

 # Brief Note of Product Profile:

3. No of Manufacturing Plants: 1 no.
4. Brief Note regarding number of Products to be manufactured considering plant capacity:
   - At a time 2 Nos. of unit processes will be carried out.

Specific End-use of each proposed products:

Sr No.	NAME OF PRODUCT	CAS No.	Type/ Category of Product (API/ Intermediate)	Stage of Intermediate n-1, n-2, etc	Name of API in which Intermediate Used/ End use of said Intermediate	CAS No. (API)	Said API is use for/End Use o said API
1	Methyl 3- Amino Crotonate	14205-39-1	**API**	**-**	-	-	**API/**hypertensio coronary arter disease
2	2,6 Dichloro Phenol	87-65-0	Intermediate	**n-2**	**Diclofenac**	15307-86-5	**Diclofenac/** relieve pain, swelling (inflammation), a joint stiffness
3	Chloro Acetyl Chloride	79-04-9	Intermediate	**n-1**	**Diclofenac**	15307-86-5	**Diclofenac/** relieve pain, swelling (inflammation), a joint stiffness
4	3-Ethyl-4-Methyl-2-Oxo-N-(2-Phenyl Ethyl)-2,5-Dihydro-1H-Pyrrol-1-Carboxiamide	247098-18-6	Intermediate	**n-1**	**Glimepiride**	93479-97-1	**Glimepiride/** t control high blo sugar
5	Methyl 1,2-Methoxy-5-Sulfamoylbenzolate	33045-52-2	Intermediate	**n-1**	**Levosulpiride**	23672-07-3	**Levosulpirid /**Symptoms O Schizophrenia Anxiety Disorde And Dysthymi
6	Levosulpiride	23672-07-3	**API**	-	-	-	**API/ antipsycho**
7	3-Acetylphenyl Acetate (Phenylepherine HCl)	2454-35-5	Intermediate	**n-1**	**Phenylephrine HCl**	61-76-7	**Phenylephrin HCl /**stuffy nos sinus, and ea symptoms
8	Rosuvastatin Calcium	147098-20-2	**API**	-	-	-	**API**/ along with proper diet to h lower "bad" cholesterol and (such as LDL triglycerides) a raise "good"

							cholesterol (HDL the blood
9	N-[5-(Bromo Methyl)-4-(4-Fluoro Phenyl)-6-Isopropyl Pyrimidin-2-Yi]-N-Methyl Methane Sulfonamide(Rosuvastatin Calcium)	799842-07-2	Intermediate	n-3	**Rosuvastatin Calcium**	147098-20-2	**Rosuvastatin Calcium/** alon with a proper die help lower "bad cholesterol and f (such as LDL triglycerides) ar raise "good" cholesterol (HDL the blood
10	4-(4- Fluoro-Phenyl)-6-Isopropyl-2-(Methyl Sulfonyl Methyl Amino)-Pyrimidine-5-Carboxylic Acid Ethyl Ester	147118-36-3	Intermediate	**n-2**	**Rosuvastatin Calcium**	147098-20-2	**Rosuvastatin Calcium/** alon with a proper die help lower "bad cholesterol and f (such as LDL triglycerides) ar raise "good" cholesterol (HDL the blood
11	Tert-Butyl-Fluoro-Dimethyl-Silane	2357-76-8	Intermediate	**n-1**	**Rosuvastatin Calcium**	147098-20-2	**Rosuvastatin Calcium/** alon with a proper die help lower "bad cholesterol and f (such as LDL triglycerides) ar raise "good" cholesterol (HDL the blood
12	N,N, Bis (2-Chloro Ethyl) Amine Hydrochloride	821-48-7	Intermediate	**n-1**	**Itraconazole**	84625-61-6	**Itraconazole/** Antifungal
13	Di Ethyl Amino Ethyl Chloride Hydrochloride	869-24-9	Intermediate	**n-2**	**Ketoconazole**	65277-42-1	**Ketoconazole**/tr fungal and yea infections
14	Di Methyl Amino Ethyl Chloride Hydrochloride	4584-46-7	Intermediate	**n-1**	**Ketoconazole**	65277-42-1	**Ketoconazole**/tr fungal and yea infections
15	4-(2-Chloroethyl)Morpholine Hydrochloride	3647-69-6	Intermediate	**n-1**	**Nimorazol**	6506-37-2	**Nimorazol/** treat nt of bacterial infections and parasitic infectio
16	3-(Cyclopropylmethoxy)-4-(Difluoromethoxy) Benzoylchloride	672883-68-0	Intermediate	**n-1**	**Roflumilast**	162401-32-3	**Roflumilast**/prev t worsening o chronic obstruct pulmonary disea
17	(S)-4-(4-(5-Aminomethyl)-2oxooxa Zolidin-3-Yl) Phenyl)Phorpholin-3-One	898543-06-1	Intermediate	**n-1**	**Rivaroxaban**	366789-02-8	**Rivaroxaban** prevent blood cl from forming due a certain irregul heartbeat
18	2-((4-(2-	56718-	Intermedi	**n-1**	**Metropolol**	37350-	**Metropolol/** Tre

	Methoxyethyl)Phenoxy)Methyl)	70-8	ate			58-6	High Blood Pressure (Hypertension
19	2-(4-(4-Chlorobenzoyl)Phenoxy-2-Methylpropanoic Acid	42017-89-0	Intermediate	**n-1**	**Fenofibric Acid**	42017-89-0	**Fenofibric Aci** /lower "Bad" Cholesterol An Fats Raise "Goo Cholesterol (HD In The Blood
20	Tri Ethyl Benzyl Ammonium Chloride (Teba)	56-37-1	Intermediate	**n-1**	**Valsartan**	137862-53-4	**Valsartan** / To treat high bloo pressure
21	2-Benzyl Amino-1-6-Fluoro-3-4-Dihydro-2-H-Chromen-2-Yl-Ethanol	1030385-16-0	Intermediate	**n-1**	**Nebivolol**	99200-09-6	**Nebivolol** / improve blood fl and decrease blo pressure
22	(3ar,7ar)-4-Benzo[A]Isothiazol-3-Yl)Octahydrospiro[Isoindole-2.1'piperazin]-2-Ium Methanesulfonate	186204-37-5	Intermediate	**n-2**	**Lurasidone HCl**	367514-88-3	**Lurasidone HC** /Anti-Psychoti
23	(3ar,4S,7R,7as)-2-(((1R,2R)-2-((4-(Benzo[D]Isothiazol-3-Yl)Piperazin-1-Yl)Methyl)Cyclohexyl)Methyl)Hexahydro-1H-4,7-Methanoisoindole-1,3(2H)-Dione Hydrochloride	1644295-09-9	Intermediate	**n-1**	**Lurasidone HCl**	367514-88-3	**Lurasidone HC** /Anti-Psychoti
24	R-(-)-1-(2,4-Dichloro-Phenyl)-2-Imidazol-L-Yl-Ethanol	24155-42-8	Intermediate	**n-1**	**Sertaconazole nitrate**	99592-39-9	**Sertaconazol nitrate/** medicat on the skin onl
25	2-Chloro N,N-Diphenyl Acetamide	5428-43-3	Intermediate	**n-1**	**Indoline**	120-72-9	**Indoline /** Anti inflammatory
26	1-(4-Bromo-3-Bromo Ethyl Phenyl) Ethanone	1844064-91-0	Intermediate	**n-2**	**Velpatasvir**	1377049-84-7	**Velpatasvir /** t treat chronic (lon lasting) hepatitis a viral infection the liver
27	(2R,3S)-2-(2,4-Difluorophenyl)-3-(5-Fluoropyrimidin-4-Yl)-1-(1H-1,2,4-Triazol-1-Yl)Butan-2-Ol (R)-Camsylate	2019-11-30	Intermediate	**n-1**	**Velpatasvir**	1377049-84-7	**Velpatasvir /** t treat chronic (lon lasting) hepatitis a viral infection the liver
28	5-{4-[(4-(5-Cyano-1H-Indol-3-Yl)-Butyl]-Piperazin-1-Yl}-Benzofuran-2-Carboxylate Methyl	163521-09-3	Intermediate	**n-1**	**Vilazodone**	163521-08-2	**Vilazodone**/ tre depression
29	17β-N-[2,5-Bis(Trifluoromethyl)-Phenyl]Carbomoyl-L -	164656-23-9	Intermediate	**n-1**	**Dutasteride**	164656-23-9	**Dutasteride**/ tre benign prostati hyperplasia

	Androst-4-En-3-One						
30	1-(2-Methoxy Phenyl) Piperazine HCl	5464-78-8	Intermediate	**n-1**	**Fluanisone**	1480-19-9	**Fluanisone** /A Psychotic
31	2-Chloroethylamine Hydrochloride	870-24-6	Intermediate	**n-1**	**Ifosfamide**	3778-73-2	**Ifosfamide** /A cancer
32	4 (2- Chloro Ethyl) Morpholine HCl	3647-69-6	Intermediate	**n-1**	**Morclofone**	31848-01-8	**Morclofone /**Cough suppressant
33	Di Methyl Amino Isopropyl Chloride HCl	4584-49-0	Intermediate	**n-1**	**Promethaze hydrochlore**	58-33-3	**Promethaze hydrochlore** /antipruritic
34	Cyclo Propane Carboxylic Acid	1759-53-1	Intermediate	**n-2**	**Prazepam**	2955-38-6	**Prazepam** /An anxiolytic
35	Cyclo Propane Carbonyl Chloride	4023-34-1	Intermediate	**n-1**	**Prazepam**	2955-38-6	**Prazepam** /An anxiolytic
36	Cyclo Hexane Carbonyl Chloride	2719-27-9	Intermediate	**n-1**	**Praziquantel**	55268-74-1	**Praziquantel** /a worm
37	Acetyl Salicoyl Chloride	5538-51-2	Intermediate	**n-1**	**Nitazoxanie**	55981-09-4	**Nitazoxanie** /A viral
38	Di Methyl Amino Ethyl Chloride Hydrochloride	4584-46-7	Intermediate	**n-2**	**Dibenzepin**	4498-32-2	**Dibenzepin**/An depressant
39	Di Ethyl Amino Ethyl Chloridehydrochloride	869-24-9	Intermediate	**n-1**	**Dibenzepin**	4498-32-2	**Dibenzepin** /A depressant
40	2-Di Iso Propyl Amino Ethyl Chloridehydrochloride	4261-68-1	Intermediate	**n-1**	**Disopyrame**	3737-09-5	**Disopyrame** /antiarrhythmi
41	Terbinafine HCl	78628-80-5	**API**	-	-	-	**API** /Anti- Fung
42	N-Methyl Naphthyl Methyl Amine Hydrochloride	65473-13-4	Intermediate	**n-1**	**Terbinafine HCl**	78628-80-5	**Terbinafine H** /Anti- Fungal
43	Nebivolol Hydrochloride	152520-56-4	**API**	-	-	-	**Nebivolol Hydrochlorid** /Anti Hypertensi
44	Pentoxyphylline	6493-05-6	**API**	-	-	-	**Pentoxyphylli /**Hemorrheolog agent
45	Trazodone Hydrochloride-Api	25332-39-2	**API**	-	-	-	**API** /Anti depressant
46	2-{3-[4-(3-Chlorophenyl)Piperazin-1-Yl]Propyl}[1,2,4]Triazolo[4,3-A]Pyridin-3(2H)-One	19794-93-5	Intermediate	**n-3**	**Trazodone Hydrochloride**	**25332-39-2**	**Trazodone Hydrochlorid** /Anti depressa
47	2-{3-[4-(3-Chlorophenyl)Piperazin-1-Yl]Propyl}[1,2,4]Triazolo[4,3-A]Pyridin-3(2H)-One Hydrochloride	25332-39-2	Intermediate	**n-2**	**Trazodone Hydrochloride**	**25332-39-2**	**Trazodone Hydrochlorid** /Anti depressa
48	1-(3-Chloro Phenyl) 4-(3 Chloro Propyl)Piperazine Hydrochloride	52605-52-4	Intermediate	**n-1**	**Trazodone Hydrochloride**	**25332-39-2**	**Trazodone Hydrochlorid** /Anti depressa

49	Ranolazine Tech	95635-56-6	**API**	**-**	**-**	-	**API** /Anti Angin
50	Aripiperazole Hydrochloride	1008531-60-9	**API**	-	**-**	-	**API/** treatment schizophrenia bipolar I, majo depressive disor
51	7-Hydroxy-3,4-Dihydroquinolin-2(1H)-One	22246-18-0	Intermediate	**n-1**	**Aripiperazole Hydrochloride**	1008531-60-9	**Aripiperazole Hydrochloride** treatment of schizophrenia bipolar I, majo depressive disor
52	Silodosin	160970-54-7	**API**	-	-	-	**API/**Anti - Inflammatory
53	(R)-1-(3-Hydroxypropyl)-5-(2-((2-(2-(2,2,2-Trifluoroethoxy) Silodosin Technical	160970-54-7	Intermediate	**n-2**	**Silodosin**	160970-54-7	**Silodosin /**Ant Inflammatory
54	1-Acetyl-5-(2-Aminopropyl) Indoline-7-Carbonitrile (A7)	175837-01-1	Intermediate	**n-1**	**Silodosin**	160970-54-7	**Silodosin /**Ant Inflammatory
55	6-Hydroxy-3,4-Dihydroquinolin-2(1H)-One	54197-66-9	Intermediate	**n-1**	**Cilastazol**	73963-72-1	**Cilastazol/** antiplatelet
56	7-Hydroxy-3,4-Dihydroquinolin-2(1H)-One	22246-18-0	Intermediate	**n-1**	**Aripiperazole**	129722-12-9	**Aripiperazole**/ A Psychotic
57	Mannich Hydrochloride	42036-65-7	Intermediate	**n-1**	**Tramadol**	27203-92-5	**Tramadol** /pain reliever
58	Duloxetin Hydrochloride	136434-34-9	Intermediate	**n-1**	**Duloxetin Hydrochloride**	136434-34-9	**Duloxetin Hydrochlorid** /Anti dipressar
59	Pyrrolidine, 2-(2-Chloroethyl)-1methyl Hydrochloride	56824-22-7	Intermediate	**n-1**	**Azelastine hydrochloride**	79307-93-0	**Azelastine hydrochloride** Anti histamine
60	Phthaloyl Amlodipine	88150-62-3	**API**	-	-	-	**Phthaloyl amlodipine/**tre high blood press
61	Diethyl 2-(((3-Chlorophenyl)Amino)Methylene)Malonate	3412-99-5	Intermediate	**n-1**	**Hydroxychloroquine**	118-42-3	**Hydroxychloro ne/** treat rheumatoid arth and systemic lup erythematosus
62	1-(2-Chloroacetyl)Pyrrolidine-2-Carboxamide	207557-35-5	Intermediate	**n-1**	**Vildagliptin**	274901-16-5	**Vildagliptin/**trea ent of diabities
63	2-Amino-5-Methyl Thiozole	7305-71-7	Intermediate	**n-1**	**Meloxicam**	71125-38-7	**Meloxicam** /An Inflammatory
64	2-Chloron,N-Diphenyl Acetamide (Indapamide)	5428-43-3	Intermediate	**n-1**	**Indapamide**	26807-65-8	**Indapamide/** reduce the risks major vascula toxicities

65	Sertraline Mandelate Salt (Sertraline HCl)	254731-40-3	Intermediate	**n-1**	**Sertraline HCl**	79617-96-2	**Sertraline HC** treat depressio

Brief summary regarding End-Uses of Product Profile:

5. Total No of API: 11
6. Total No of Intermediates (n-1): 43
7. Total No of Intermediates (n-2): 09
8. Total No of Intermediates (n-3): 02

- The project falls under Category B2 of project activity 5(f) as per the schedule of EIA Notification 2006 and amendment dated 27th March, 2020.
- PP submitted an undertaking ensuring proposed product profile is in line with MoEF&CC's Notification vide S.O. 1223 (E) dated 27/03/2020 in respect of Active Pharmaceutical Ingredients (API) as category B2 projects. Undertaking as proposal of said product are eligible to consider under B2 category as per the notification of MoEF&CC dated 27.03.2020
- The proposal was considered in the SEAC video conference meeting dated 06.09.2021.
- The salient features of the project including Water, Air and Hazardous waste management are as under:

Sr. no.	Particulars	Details
A-1	Total **cost of Proposed** Project (Rs. in Crores):	

Total Project
3.80 Crores

Break-up of proposed project Cost:

Details	**Project Cost (Rs. In Crores)**
Land	**0.50**
Building	**1.31**
Plant & Machinery & Other	**1.12+0.87**

A-2	**Details of Environmental Management Plan (EMP)**	As below:

Sr. No	**Unit**	**Detail**	**Capital Cost (Rs. In Lakhs)**	**Operating Cost/ Month (Rs. In Lakhs)**	**Maintenance Cost / Month (Rs. In Lakhs)**	**Total Recurring Cost / Month (Rs. In Lakhs)**
1	Waste Water	Primary ETP: 2.0 KLD & in-House MEE: 2.0 KLD	4.4	1.2	0.12	1.32
2	Air & LDAR	4 No. Scrubber, 2 No. MCS	22.6	0.57	0.28	0.85
3	Hazardous Management	Membership & Disposal +	1.0	2.53	-	2.53

			Incineration				
			Transportation	-	0.08	-	0.08
	4	Fire & Safety	Fire Hydrant & pipeline System	14.0	0.13	0.06	0.19
			Safety equipment/PPES	5.4	0.05	0.03	0.08
			Fire Extinguisher & Foam Trolley	2.1	0.02	0.01	0.03
			Integrated DCS	20.0	1.0	0.02	1.02
			Flameproof Electric Fitting	5.0	0.25	0.05	0.30
	5	AWH Monitoring	In House Monitoring	2.0	0.1	-	0.10
	6	Green Belt Development	Trees	0.3	0.03	0.02	0.05
	7	Occupational Health	OHC, Training & Medical Check-up	2.0	0.2	0.1	0.30
	8	CER Activities	2% as per OM dated 01/05/2018	8.0	0.039	0.026	0.07
	Total			**86.8~ 87.0**			**6.92**

Summary

Cost of Project in Crores	3.80 Crores
EMP Capital Cost in Crores	0.87 Crores
EMP Recurring Cost in Crores (annum)	0.83 Crores

A-3 **Details of CER as per OM dated 01/05/2018 (In case of project falls under CPA/SPA,** CER fund allocation to be at least 1.5 times the slabs given in the OM dated 01.05.2018 for SPA and 2 times for CPA in case of Environmental Clearance as per the mechanism published vide MoEF & CC's OM vide 31.10.2019.)

% As per the OM	Rs. in Lacs
2.0%	8.00

Brief note on proposed activities:

Activities (On basis of Needs Assessment)	**Phase Wise Budget**		
	1st Year	**2nd Year**	**TOTAL**
Solid Waste Management– • Installation of OWC 250Kg X 1 Nos @ 3.5 Lacs/Unit – **Village Manda** • Distribution of Bins (Wet & Dry) – For Segregation of Waste – Rs. **50,000 (Rs. 1000 per twin bins)**	4.0	-	4.0
Solar **Installation of solar panel (2 KW – 2 lakh X 2 nos. = 4.0 Lakh) village: Punat, Daheli**	-	4.0	4.0
Total Cost	**Approx. INR**		**8.0 Lakhs**

B **Land / Plot ownership details:**
GIDC Letter No. GIDC/RM/VPI/PLT/FTO/SRG/6539 on Dated: 27/01/2011

B-1 **Plot area**

Total Plot area
864.0 Sq. m.

B-2 Brief note on **Area adequacy** in line to proposed project activities:

- ✓ Production capacity: 25 MT/Month
- ✓ Company will store its raw material in Drums (We procure Raw Materials from the local market. 90% of these raw materials are easily available from this market. Hence, no excess quantity of raw materials will be stored).
- ✓ 12.5 m² area provided for the Boiler House.
- ✓ 70.00 m² (G+2) area will be provided for the manufacturing of the proposed products.
- ✓ Company has proposed 68.00 m2 (G+1) for storage hazardous waste.
- ✓ Company has proposed 10.00 for storage fuel & fly ash storage area (fly ash will be collect, stored in hazardous area).

S.N.	Particulars	Criteria for Storage	Inventory Required (MT)(KL)	Area Required m^2	Area Proposed m^2
1	Finished product storage area(G+1) (2-week inventory)	65 Drums/Bags 0.5 MT/ 1m2	13.0	26.0	56.0
2	Raw Material Store area (G+2) (2-week inventory)	0.5 MT/ $1m^2$	50.0	100.0	156.0
3	Cylinder Storage Area (Hydrogen Gas, Chlorine Gas, Nitrogen gas, HCl gas)	-	0.92	10.0	17.0
4	Drum Storage Area	25 Drums	5.0	12.5	22.0
5	Hazardous Waste Storage Area (G+1) (90 Day Inventory)	-	40.0 & 90.0 (Fly Ash)	65.0	136.0
			199.0 MT	**213.5 m^2**	**387.0 m^2**

- ✓ **Hence, Adequate area is available for proposed Bulk drug intermediate mfg. Facility.**

B-3 **Green belt area**

	Total (Sq. meter)
Area in Sq. meter	286.00 Sq. meter **(Approx. 33.0 % of total plot area)** [155.5 Sq. meter (18%-Inside Plant Premises) 130.5 Sq. meter (15%-Front side of Plant)]
% of total area	33%

C **Employment generation**

Total
15 Employees Direct = 10 Employees Indirect = 5 Employees

D	**WATER**
D-1	**Source of Water Supply** (GIDC, Bore well, Surface water, Tanker supply etc...) • GIDC Water Supply Authority
	Status of permission from the concern authority. ➢ Obtained (GIDC Letter No. GIDC/RM/VPI/PLT/FTO/SRG/6539 on Dated: 27/01/2011)
D-2	**Water consumption (KLD)**

Sr. No.	Category	Total Water Consumption (KL/Day)			Remarks
		Total Water	Recycled	Fresh Water	
1.	**Domestic**	1.00	-	1.00	GIDC Water Supply Authority
2.	**Gardening**	1.00	-	1.00	
3.	**Industrial**				
	Process	Nil	-	Nil	
	Boiler	19.00	15.00	4.00	Total Water requirement: 19 KLD Condensate Recovery: 15 KLD Make up Water: 4 KLD
	Cooling	3.0	-	3.0	
	Washing	0.3	-	0.3	
	Scrubbing	2.0	0.5	1.5	
	Total Industrial	**24.3**	**15.5**	**8.8**	
Total (1 + 2 + 3)		**26.3**	**15.5**	**10.8**	

Brief Note on worst case scenario for water consumption:
Total Fresh Water Requirement of the proposed project will be 10.8 KLD, out of which Water Consumption for Process will be Nil.

-

Summary of water requirement	**Quantity** KLD	Remarks
Total water requirement for the project **(A)**	26.3	GIDC Water Supply Authority
Quantity to be **recycled (B)**	15.5	
Total **fresh water** requirement **(C)**	10.8	
Ensure **Total water requirement = Fresh water + Recycled water i.e., A = B + C**		

Reuse/Recycle details (KLD) with feasibility.
[Source of reuse & application area]

Source of waste water for reuse 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**
Boiler Condensate (15.00 KLD)	Boiler (15.00 KLD)	TDS<100 mg/l BOD< BDL COD< BDL	Yes, it is feasible.

	Boiler Blowdown 0.2 KLD	Scrubber (0.5 KLD)	pH: 7.5-8.0 TSS: <78 mg/l TDS: <250mg/l BOD: <14 mg/l COD: <44 mg/l	
	Cooling Waste water 0.3 KLD			

In case of no reuse/recycle of waste water, give brief note on justification as why no reuse/recycle.

- In Boiler 15 KLD condensate recovery considered in the recycle, hence make up reduced to 4 KLD.
- Boiler & Cooling Blow down @ 0.5 KLD will be reuse in Scrubbing after Neutralization.

D-3 **Waste water generation (KLD)**

Category	Waste Water Generation (KL/Day)	Mode of disposal
(A)Domestic	**0.8**	Treated in Primary ETP
(B)Industrial		
Process	Nil	
Cooling	0.3	Reuse in Scrubber
Boiler	0.2	
Washing	0.3	Treated in Primary ETP
Scrubbing Solution (25-30% HCl/NaOCl)	1.0	End User
Scrubbing Solution (25-30% Na_2SO_3)	1.0	End User
Total Ind.	**2.8**	
Total (A+B)	**3.6**	

-

Brief Note on worst case scenario for waste water generation (Qualitative and Quantitative):

Waste Water Generation for Process will be Nil.

Brief justification in case of no process effluent generation or no industrial effluent generation or no high concentration effluent generation from proposed project (Whichever is applicable).

- Not Applicable.
- There will be effluent generation. The detail has been furnished in water Balance.

D-4 Mode of Disposal & Final meeting point

Domestic:	Domestic wastewater@ 0.8 KLD will be Subjected to Primary ETP.
Industrial:	In-house ZLD. (1.1 KLD treated water subject to in-house Evaporator).

-

Clearly mention about final disposal

D-5 Treatment facilities

For Domestic waste water: -

Capacity of STP: Not Applicable

For Industrial waste water: Treatment facility within premises with **capacity**
[In-house ETP (Primary, Secondary, Tertiary), MEE, Stripper, Spray Dryer, STP etc.
Treatment scheme including segregation at source. **(Give Characteristics of each stream i.e. COD, BOD, TDS etc.) In case of stream segregation, Separate ETP (ETP-1, ETP-2….) for each stream shall be proposed.**
Treatment facility within premises with **capacity**
[In-house ETP (Primary, Secondary, Tertiary), MEE, Stripper, Spray Dryer, STP etc.

- Hydraulic Load
- ETP Neutralization = 1.1 KLD
- In-House Evaporator=1.1 KLD

- Capacity
- ETP Neutralization = 2.0 KLD
- In-House Evaporator=2.0 KLD

Stream 1 –

- Wastewater 0.5 KLD (0.2 KLD from Boiler & 0.3 KLD from cooling) will be collected in Equalization cum Neutralization Tank & then reused for Scrubbing.

Sr. No.	Parameter	Unit	Utilities Characteristics		after neutralization
			Boiler	Cooling	
Quantity (KLD)			**0.2**	**0.3**	**0.5**
1	pH	pH Unit	7.5-8.0	7.5-8.0	7.5-8.0
2	TSS	mg/L	56	87	<75
3	TDS	mg/L	500	100	<260
4	BOD	mg/L	10	16	<14
5	COD	mg/L	30	50	<42
6	Ammo. Nitrogen	mg/L	Nil	Nil	Nil

Stream 2 –

- Wastewater 1.1 KLD from washing & Domestic will be subjected to Evaporator after Neutralization.

Sr. No.	Parameter	Unit	Wastewater Characteristics		Effluent after neutralization
			Washing	Domestic	
Quantity (KLD)			**0.3**	**0.8**	**1.1**
1	pH	pH Unit	7.5-8.0	6.0-8.0	7.5-8.0
2	TSS	mg/L	150	200	186
3	TDS	mg/L	2500	800	909
4	BOD	mg/L	520	250	272
5	COD	mg/L	1528	10	607
6	Ammo. Nitrogen	mg/L	Nil	Nil	Nil

Stream 3 (Scrubbing Solution)

- 0.5 KLD (25-30% HCl), 0.5 KLD (25-30% NaOCl) & 1.0 KLD (25-30% Na_2SO_3) will be sent to end users registered under Rule-9.

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 as there will be no discharge

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

- Primary ETP & Evaporator.

D-6 In case of Common facility (CF) i.e. **CETP, Common Spray dryer, Common MEE, CHWIF etc.**

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

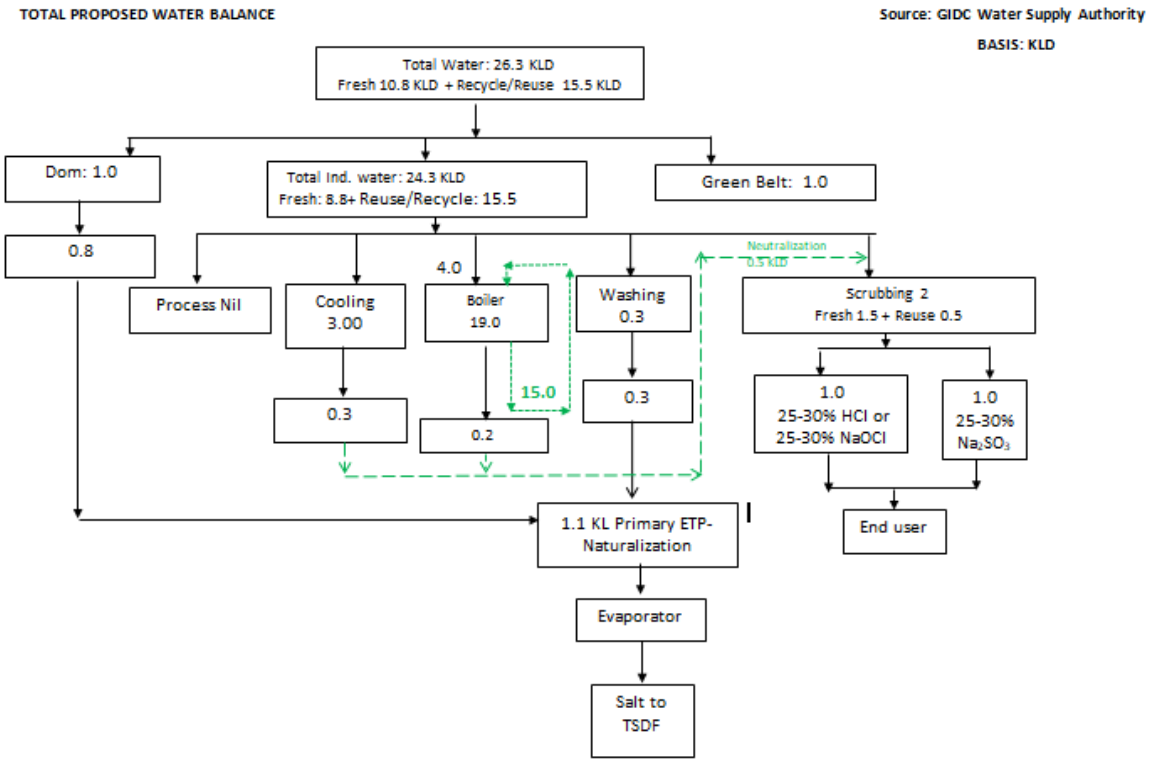
- Not Applicable

Membership of Common facility (CF) 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.

- **Not Applicable**

D-7 **Simplified water balance diagram with reuse / recycle of waste water**



E **AIR**

E-1 **Brief Note on fuel based Heat energy requirement and worst case scenario thereof:**

SN	Fuel Based Heat Energy	Proposed Fuel	Calorific Value (kcal/kg)	Working Hours (Worst Case)	Fuel Consumption in worst case
1	Boiler (0.8 TPH)	Natural Gas	7900 – 8500 kcal/kg	24 Hrs	1810.0 SCM/Day
		OR			
		Bio Coal	3800-4300 kcal/kg	24 Hrs	4.0 MT/Day
2	TFH (5 Lac Kcal /Hr)	Natural Gas	7900 – 8500 kcal/kg	24 Hrs	1913.0 SCM/Day
		OR			
		Bio Coal	3800-4300 kcal/kg	24 Hrs	4.0 MT/Day

E-2 **Flue gas emission details**

No. of Boilers/TFH/Furnaces/DG sets etc. with capacities viz. TPH, Kcal/hr, MT/hr, KVA etc. (In case of Project located within CPA/SPA , APCM shall be in line to the mechanism published in the MOEFCC's OM vide dated 31.10.2019)

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

	Capacity						
1	Steam Boiler (0.8 TPH)	30/0.5	Natural Gas Or Bio Coal	1810.0 SCM/Day Or 4.0 MT/Day	MCS + Water Scrubber Adequate Stack Height	PM < 150 mg/Nm^3 SO_X<100 ppm NO_X<50 ppm
2	TFH (5 Lac Kcal /Hr)		Natural Gas Or Bio Coal	1913.0 SCM/Day Or 4.0 MT/Day	MCS + Water Scrubber Adequate Stack Height	
3	D.G. Set Stand by (125 KVA)	11/0.25	Diesel	15 lit/hr	Adequate Stack Height	

E-3 **Process gas** 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)	Stack/Vent Height (meter)	Type of emission	Air Pollution Control Measures (APCM)
1	Reaction Vessel-1 **(Chlorination)** Cyclo propane carbonyl chloride	18/0.2	HCl: 20 mg/Nm3 Cl2: 9 mg/Nm3	Two Stage Water/Alkali Scrubber
2	Reaction Vessel-2 **(Sulfonation)** Cyclo propane carbonyl chloride	18/0.2	SO_2:40 mg/Nm3	Two Stage Alkali Scrubber

Note:

- **Details of gaseous raw materials used in proposed project**
- **Estimation of process gas emission (Product wise and Total)**
- **Requirement of the scrubbing media (KL per Day) considering solubility (Product wise and Total)**
- **Yearly generation of all bleed liquors (MT/KL per Annum) as mentioned above and its sound management in HW matrix.**

Sn	Product	Gaseous Raw Material	Process Gas Emission	Total Emission (MT/Day)	Requirement of Scrubbing Media (KL Per Day)	Solution/ bleed liquors (KLD)	Solubility (%)	Solution / Bleed liquors (MT/Annum)
1	Cyclo propane carbonyl chloride	Thionyl chloride	HCl	0.3	0.7 (Caustic + Water)	1.0	> 90	182.5 MT/Annum (25-30 % HCl)
								182.5 MT/Annum (25-30 % NaOCl)
2	Cyclo propane carbonyl chloride	Thionyl chloride	SO_2	0.3	0.7 (Caustic + Water)	1.0	> 90	365.0 MT/Annum (25-30% Na_2SO_3)

E-4 **Fugitive emission** details with its mitigation measures.

To mitigate fugitive emissions, the following steps would be taken:

- ✓ Minimum number of flanges, joints and valves in pipelines
- ✓ Selection / use of state-of-the art leak proof valves
- ✓ Provision of mechanical seals in pumps
- ✓ Proper preventive maintenance of roofs and seals for tanks
- ✓ Monitoring and preventive maintenance of valves, flanges, joints, etc.
- ✓ Fugitive emission over reactors, formulation areas, centrifuges, chemical loading, transfer area, shall be collected through hoods and ducts by induced draft and controlled by dust collector.
- ✓ For particulate / dust emissions from the coal handling system: Water will be sprinkled to control particulate / dust emission from coal storage area.
- ✓ Green belt will be developed along the plant premises
- ✓ De-dusting system will be provided at solid product finishing area.
- ✓ All transfer points will be fully closed.
- ✓ Overflow system with return line to storage tank from batch tank will be provided to prevent hazardous material overflow.

F **Hazardous waste**

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

Note:

- ➢ **Priorities for HW Management:** Pre-processing, Co-Processing, Reuse/Recycle within premises, Sell out to actual users having Rule-9 permission, TSDF/CHWIH.
- ➢ **Quantification of hazardous waste shall be based on mass balance and calculations shall be incorporated in EMP details separately.**
- ➢ **Disposal to scrap vendors/vendors/traders is not allowed**

F-1 **Hazardous waste management matrix**

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	35.3/SCH-I	1.0	Collection, Storage, Transportation, disposal at nearest TSDF site.
2.	Evaporator Salt	Evaporator	35.3/SCH-I	1.5	
3.	Process Waste (Inorganic)	Mfg. Process	28.1/SCH-I	155.0	
4.	Used Oil/ Spent Oil	TFH, DG & Other Utilities	5.1/SCH-I	0.2	Collection, Storage, Transportation & Reuse as lubricant or sale to authorized re-refiners.
5.	Discarded Container	Raw Material Supplier	33.1/SCH-I	25.0 (Nos. 1125	Collection, Storage, Transportation,

		s/ Bags/Liners			Container) (Nos. 25000 Bags/Liners)	Decontamination & Reuse/ Sell to Authorised Recyclers (under Rule-9)
	6.	Distillation Residue	Distillation Process	20.3/SCH-I	43.0	Collection, Storage, Transportation & send to pre/co-processing units (cement industries) OR disposal at nearest CHWIF site.
	7.	Process Waste (Organic)	Mfg. Process	28.1/SCH-I	740.0	
	8.	Spent Carbon	Mfg. Process	28.3/SCH-I	22.0	
	9.	Spent Solvent	Mfg. Process	28.6/SCH-I	*1752.0	**Collection, Storage, Handling & Subjected to distillation assembly to recover the solvent & Reuse within premise.**
	10.	Scrubbing Solution 25-30% NaOCl	From Scrubber (Chlorination)	Sch-I/ 28.1	182.5	Collection, Storage, Transportation & Sell to End Users having permission under Rule-9.
		Scrubbing Solution 25-30% HCl			182.5	
	11.	Scrubbing Solution 25-30% Sodium Sulphite (Na_2SO_3)	From Scrubber (Suphonation)	Sch-I/ 28.1	365.0	
	12.	Off Specification Product	Mfg. Process (Batch Failure)	Sch-I/ 28.4	1.0	Collection, Storage Transportation & send to Pre /Co-processing unit or send to CHWIF
	***Justification for spent solvent generation & Captive reused**					

Product Name	Solvent	Fresh Qty. Used MT/Day	Qty. Recovered MT/Day	Qty. Used MT/Day	Storage (At a Time)
* (5-{4-[(4-(5-Cyano-1H-indol-3-yl)-butyl]-piperazin-1-yl}-benzofuran-2-carboxylate methyl)	Methanol	0.2	4.8	5.0	5.0 KL (200 Lit X 25Nos. Drum)
Total MT/Day		**0.2**	**4.8**	**5.0**	
Total MT/Month		**6.0**	**144.0**	**150.0**	
Total MT/Year		**73.0**	**1752.0**	**1825.0**	

F-2 Membership details of **TSDF, CHWIF** etc.
(For HW management)

Details of Membership letter no. & Date with spare capacity of the Common Facility.

- **TSDF, CHWIF- M/s. BEIL, Ankleshwar. (Vide Letter No.: BEIL/ANK/2021 Dated: 31/7/2021)**

F-3 Details of Non-Hazardous waste & its disposal
(MSW and others)

Sr. no.	Type/Name of Other wastes	Specific Source of generation (Name of the Activity, Product etc.)	Quantity (MT/Annum)	Management of Wastes
1	Fly Ash	Boiler& TFH Fuel (Bio-coal)	360.0	Collection, storage, transportation & send to Brick manufacturer OR farmer for agricultural purposes.

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

G-1 Brief Note on types of solvents, Details of Solvent recovery, % recovery, reuse of recovered Solvents etc.

Product	Solvent	Qty MT/MT	Recovery	Distillation Residue	Total Losses	% Recovery
5-{4-[(4-(5-Cyano-1H-indol-3-yl)-butyl]-piperazin-1-yl}-benzofuran-2-carboxylate methyl)	Methanol	8.75	8.4	0.2188	0.35	96

G-2 **Brief Note on LDAR proposed:**

The Following methodology to be adopted during LDAR study:

- Identify the Chemical streams that must be monitored.
- Types of components (pumps, valves, connectors, etc.) to be monitored
- Frequency of monitoring.
- Actions to be taken if a leak is detected.
- Length of time in which an attempt to repair the leak must be performed.
- Actions that must be taken if a leak cannot be repaired within guidelines.
- Record-keeping and reporting requirements.

G-3 **VOC emission** sources and its mitigation measures

- Leak Free Pumps for transfer of solvents.
- MSW Gaskets in solvent pipelines to prevent leakage from flanges.
- Minimum number of flanges, joints and valves in pipelines.
- To eliminate chances of leakages from glands of pumps, mechanical seal will be

provided at all solvent pumps.

- All the rotating equipment like pumps will be installed with Mechanical Seals to arrest any sort of emissions.
- Condenser and scrubber post Reactor with cooling arrangement.
- Enclosures to chemical storage area, collection of emission from loading of raw materials in particular solvents through hoods and ducts by induced draft, and control by condenser to be ensured.
- In case the small spillage or leakage observed, first pour the china clay (vermiculate) on material and collect the contaminated china clay (vermiculate) and send to ETP.
- If the spillage is of inflammable liquid, switch off all the power supply in the area to prevent Electric Spark.
- Two condensers will install with cooling water and chilled brine to recover the solvent.
- Primary Condenser HE-01: Cooling Tower water or Chilled water at 5 °C will be used to condense the solvents depend on the vapor pressure at its operating conditions and the non-condensed vapors will be condensed in a Secondary Condenser.
- VOC Trap Condenser HE-02: Chilled Brine at -15 °C will be used to trap any traces of Solvent which is slipped from Secondary condenser.
- Emission of VOCs can be trapped from breathing and loading losses from storage tanks, venting of process vessels, leak from piping and equipment by means of hood connected with blower and send to condenser as shown in following diagram.
- Condensed VOCs will be send to spent solvent recovery plant.

H	**SAFETY details**
H-1	**Details regarding storage of Hazardous chemicals** **(For tank storages only including spent acid and spent solvent tanks)**

Brief note on storage of Hazardous chemicals in Tanks

- **Not proposed**

Brief note on storage of Hazardous chemicals other than Tanks i.e. Drum, Barrels, Carboys, Bags etc.

Safety Measures for Drum Storage area:

- Some chemicals will be received at plant in drums by road truck and stored in a separate drum storage area.
- FLP type light fittings will be provided.
- Proper ventilation will be provided in go down.
- Proper label and identification board /stickers will be provided in the storage area.
- Conductive drum pallets will be provided.
- Drum handling trolley / stackers/fork lift will be used for drum handling. Separate dispensing room with local exhaust and static earthing provision will be made.
- Materials will be stored as per its compatibility study and separate area will be made for flammable, corrosive and toxic chemical drums storage.
- Smoking and other spark, flame generating item will be banned from the Gate.

Safety details of Hazardous Chemicals:

Applicability of PESO: Not proposed

H-2	**Types of hazardous Processes involved and its safety measures:** **(Hydrogenation process, Sulphonation, Chlorination process, Bromination Reaction etc.)**

Type of Process	Safety measures including Automation

		Sulphonation& Chlorination (Through Thionyl Chloride)	• Provisions of safety Valve &rupture disk on reactor. • Provisions of auto dumping Vessel. • Required PPEs like full body protection PVC apron, Hand gloves, gumboot, Respiratory mask etc. will be provided to operator. • **To avoid runaway reaction, TC charging will be done gradually & slowly.** • **Charging will be done only through closed line and system. Scrubber attached with closed system.** • **Make sure the absorber unit (two stage Alkali scrubber) is working and capable of handling vented SO2 / HCl fumes.** • **Neutralizing agent will be kept ready for tackle any emergency spillage.** • Safety Shower and eye wash will be provided near process area. • For Thionyl Chloride evacuate area in down wind direction up to 0.3 km (300 meter) in small spillage. • Emergency siren and wind sock will be provided. • Tele Communication system and mobile phone will be used in case of emergency situations for communication. • Total close process will be adopted for Thionyl chloride charging. • Caution note and emergency first aid will be displayed and train for the same to all employees. • First Aid Boxes will be available in process area. • Emergency organization and team will be prepared as per on site-Off site emergency planning. • Emergency team will be prepared and trained for scenario base emergency. Like Toxic control team, Fire control team, First aid team, communication and general administration team, Medical team etc. • Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. • Use water spray to reduce vapors; do not put water directly on leak, spill area or inside container. Keep combustibles (wood, paper, oil, etc.) away from spilled material. • Cover with DRY earth, DRY sand or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.
		Hydrogenation	➢ **DCS base** process controls and operation of plant will be installed. ➢ Provisions of safety Valve &rupture disk on reactor. ➢ All electrical equipment's shall be installed as per Hazardous Area Classification. ➢ **Total enclosed process system.** ➢ Instrument & Plant Air System. ➢ **Nitrogen blanketing in Hydrogenation reactor.** ➢ **Emergency dumping vessel will be provided during unforeseen circumstances.** ➢ Safety valve and Rupture disc provided on reactor. ➢ Cooling, Chilling and alternate power arrangement have been made on reactor. ➢ Process area and Hydrogen cylinder shall be far away as per standards practice. ➢ PRV station with shut off valve, safety valve provision will be made for hydrogenation reaction safety. ➢ Standard Operating procedure shall be followed during operation of Hydrogen Gas charging in to reactor and after completion of reaction Nitrogen purging will be done.

			➢ Flame arrestor will be provided on vent line of reactor and it will be extended above the roof level. ➢ Safe Catalyst charging method will be adopted. ➢ SOP will be displayed and operators will be trained for the same. ➢ Static earthing and electric earthing (Double) will be provided. ➢ Jumpers for static earthing on pipeline flanges of flammable chemical will be provided. ➢ **Hydrogen gas detector will be installed for early detection of gas leak.**
		Chlorination (Chlorine Gas)	➢ Chlorine Emergency Kit will be procured and kept ready at process site. ➢ Chlorine Hood with blower will be provided with scrubbing arrangement. ➢ SCBA sets will be kept ready at site. ➢ Safety Shower and eye wash will be provided in process area. ➢ Chlorine absorption system will be provided. In case of chlorine leakage in chlorine shed it will be suck through blower and it will be scrubbed in Caustic scrubber. ➢ Emergency siren and wind sock will be provided. ➢ Tele Communication system and mobile phone will be used in case of emergency situations for communication. ➢ First Aid Boxes and Occupational health centre will be made at site. ➢ Emergency organization and team will be prepared as per On site-Off site emergency planning. ➢ Full body protection suite and other PPEs will be kept ready at site. ➢ Emergency team will be prepared and trained for scenario base emergency. Like Toxic control team, Fire control team, First aid team, Communication and general administration team, Medical team etc. **Evacuate the area in down wind direction** ➢ For Chlorine evacuate area in down wind direction up to 0.4 km (400 meter) in small spillage and in case of large spillage, evacuate the area in down wind direction 3.5 kms (3500 meters). ➢ SOP will be prepared for safe charging of Chlorine Cylinders. ➢ Safety Valve will be provided on chlorine header line and it will be connected to caustic scrubber. ➢ Safety valve will be provided on vaporizer header and outlet of safety valve connected to scrubber. ➢ Flow and temperature controllers will be provided on process line. ➢ Chlorine Gas detectors will be provided in process area.
H-3	**Details of Fire Load Calculation**		
	Total Plot Area:	864 Sq.mt	
	Area utilized for plant activity:	70.00 Sq.mt (G+2)	
	Area utilized for Hazardous Chemicals Storage:	68.00 Sq.mt	
	Number of Floors Area:	G+2	
	Water requirement for firefighting in KLD :	7830 Liters	
	Water storage tank provided for firefighting in KLD:	2,00,000 Liters	
	Details of Hydrant Pumps:	Fire water Pump will be available. We will have 01 No's of electrical fire water Pump located at	

			pump house having capacity 4550.0 liters/min and 01 No's of Diesel pump having capacity 4550.0 litres/min. Apart from this we have 01 Nos Jockey Pumps of capacity 1080.0 litres/min which maintains the Fire water Header Pressure at 8.0 kg/cm^2.
		Nearest Fire Station :	Fire Station : Sarigam GIDC Fire Station (Distance from project site: 1.58 km)
		Applicability of Off Site Emergency Plan:	--
H-4	**Details of Fire NOC/Certificate:**		
	Will be Applied		
H-5	**Details of Occupational Health Centre (OHC):**		

Number of permanent Employee :	10
Number of Contractual person/Labour :	5
Area provided for OHC:	16.00 Sq. m
Number of First Aid Boxes :	10
Nearest General Hospital :	Shriji Hospital, Bhilad
Name of Antidotes to be store in plant :	Artificial respiration, First Aid, etc.

- During the meeting dated 06.10.2021, the project was appraised based on the information furnished in Form – 1, Pre-Feasibility Report, Environment Management Plan and details submitted by e-mail.
- Project proponent (PP) and their Technical Expert from M/s. Envycraft Environmental Services remain present during video conference meeting.
- This is Greenfield project proposed for manufacturing of synthetic organic chemicals **[API & API Intermediates]** at GIDC Sarigam. Total plot area is 864.0 Sq. m.
- Committee noted the following:
  - ✓ GIDC letter in the name of the unit dated: 27.01.2011.
  - ✓ Product profile with specific End-use of each product. At a time, 1 product can be manufactured.
  - ✓ Site Plan/ layout with fire plan & floor plans and provision of separate entry & exit, 5 m wide peripheral road, OHC, production area, raw material & finished goods storage area, ETP area, hazardous waste storage area, utility area, greenbelt (33% - 286.00 Sq. meter) within premises-155.5 Sq. meter (18%) + GIDC areas - 130.5 Sq. meter (15%).
  - ✓ Generated industrial effluent from process shall be nil, blowdown from cooling & boiler shall be recycled in scrubbing section after neutralization, effluent from washing & domestic section shall be treated in Primary ETP and subjected to in-house evaporator.
  - ✓ Domestic effluent will be treated in ETP.
  - ✓ Briquette / Solid fuel OR Natural gas is proposed as fuel in Boiler & TFH.
  - ✓ Two stage scrubbing system is proposed for control of process gas emission.

- ✓ Scrubbing liquor will be sell as per Hazardous Waste Rules.
- ✓ PP submitted hazardous waste matrix mentioning source of generation, quantity and Mode of disposal and committed to comply the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016.
- ✓ Fire load calculation mentioning fire water storage (Cap: 200 KL), 20 Nos. of foam type extinguishers (Cap: 9 L) and 3 Nos. of foam trolley (Cap: 50 Litres).

- Committee deliberated on Product profile, Layout plan, Storage details, Process safety, Fire safety, water balance & waste water management, Flue gas and process gas emission & Air Pollution Control System, Hazardous waste matrix, EMP, CER, Green belt, etc.
- Committee found submission of project proponent satisfactory.
- **After detailed discussion, Committee unanimously decided to recommend the project to SEIAA, Gujarat for grant of Environment Clearance with the following specific condition:**

SPECIFIC CONDITIONS:

38. Project Proponent (PP) shall comply conditions of any subsequent amendment or expansion or change in product mix, after the 30th September 2020, considered as per the provisions in force at that time as mentioned in the Notification vide S.O. 1223 (E) dated 27/03/2020.
39. PP shall carry out proposed project/activities in respect of Active Pharmaceutical Ingredients (API) as per the amended EIA Notification vide S.O. 1223 (E) dated 27/03/2020 and any subsequent amendments.
40. PP shall submit six monthly compliance report of Environmental Clearance without fail and the same shall be critically assessed by the regulatory authority.
41. Unit shall install CEMS **[Continuous Emission Monitoring System]** in line to CPCB directions to all SPCB vide letter no. B-29016/04/06PCI-1/5401 dated 05/02/2014 for effluent discharge and air emission as per pollutants discharge/emission from respective project and an arrangement shall also be done for reflecting the online monitoring results on the company's server, which can be assessable by the GPCB/CPCB on real time basis. **[For Small/Large/Medium (Red Category) & Whichever (Air emission & Effluent discharge) is applicable].**
42. Total number of products manufacturing shall not exceeding one at a given point of time as per the plant capacity shown in plant layout.
43. Close loop solvent recovery system with adequate condenser system shall be provided to recover solvent vapours in such a manner that recovery shall be maximum and recovered solvent shall be reused in the process within premises.
44. Leak Detection and Repair (LDAR) program shall be prepared and implemented as per the CPCB guidelines. LDAR Logbooks shall be maintained.

WATER

45. Total water requirement for the project shall not exceed 26.3 KLD. Unit shall reuse 15.5 KLD of treated industrial effluent within premises. Hence, fresh water requirement shall not exceed 10.8 KLD and it shall be met through GIDC water supply only. Prior permission from concerned authority shall be obtained for withdrawal of water.
46. The industrial effluent generation from the project shall not exceed 2.8 KLD.

✓ Industrial effluent generated from process shall be nil, blowdown from cooling & boiler 0.5 KLD shall be recycled in scrubbing section after neutralization, effluent from washing 0.3 KLD & domestic section 0.8 KLD shall be treated in Primary ETP and subjected to in-house evaporator. Scrubbing solutions 2 KLD shall be sent to end users.

47. Domestic wastewater generation shall not exceed 0.8 KL/day for proposed project and it shall be treated in ETP.

AIR

48. Unit shall not exceed fuel consumption and provide APCM and Stack height as mentioned in flue gas matrix.
49. Unit shall provide APCM and stack height as mentioned in process gas matrix.

HAZARDOUS & SOLID WASTE

50. All hazardous solid waste shall be managed as mentioned in hazardous waste matrix.
51. The unit shall submit the list of authorized end users of hazardous wastes along with MoU signed with them at least two months in advance prior to the commencement of production. In the absence of potential buyers of these items, the unit shall restrict the production of the respective items.

GREENBELT AREA

52. The PP shall develop green belt 286.00 Sq. meter i.e Approx 33% of total plot area [within premises-155.5 Sq. meter (18%) + GIDC areas - 130.5 Sq. meter (15%)] as committed before SEAC. Green belt shall be developed with native plant species that are significant and used for the pollution abatement as per the CPCB guidelines. It shall be implemented within 3 years of operation phase in consultation with GPCB.
53. **Safety & Health:**
    a) PP shall obtain PESO permission for the storage and handling of hazardous chemicals.
    b) PP shall provide Occupational Health Centre (OHC) as per the provisions under the Gujarat Factories Rule 68-U.
    c) PP shall obtain fire safety certificate / Fire No-Objection certificate (NOC) from the concern authority as per the prevailing Rules / Gujarat Fire Prevention and Life Safety Measures Act, 2016.
    d) Unit shall adopt functional operations/process automation system including emergency

response to eliminate risk associated with the hazardous processes.

e) PP shall carry out mock drill within the premises as per the prevailing guidelines of safety and display proper evacuation plan in the manufacturing area in case of any emergency or accident.

f) PP shall install adequate fire hydrant system with foam trolley attachment within premises and separate storage of water for the same shall be ensured by PP.

g) PP shall take all the necessary steps for control of storage hazards within premises ensuring incompatibility of storage raw material and ensure the storage keeping safe distance as per the prevailing guidelines of the concerned authority.

h) PP shall take all the necessary steps for human safety within premises to ensure that no any harm is caused to any worker/employee or labour within premises.

i) Flame proof electrical fittings shall be provided in the plant premises, wherever applicable.

j) Unit shall never store drum/barrels/carboys of incompatible material/chemical together.

k) Unit shall provide effective Isolation for Process area and storage of hazardous chemicals.

8	**SIA/GJ/IND2/59429/2020**	**M/s Aarti Industries Limited (Unit IV)** Plot no. 41/2, GIDC Notified Industrial Estate, Jhagadia, Ta- Jhagadia, Dist - Bharuch, Gujarat	**EC REconsideration**

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

Project status: **New**

- Project proponent (PP) submitted online application vide No- SIA/GJ/IND2/59429/2020 on dated 04.02.2021 for obtaining Environmental Clearance (EC).
- The SEIAA issued TOR to PP vide their letter dated 03.09.2020.
- Project proponent has submitted EIA Report prepared by M/s Eco Chem Sales & Services based on the TOR issued by SEIAA.

This is a new project proposed for manufacturing of Synthetic organic chemicals tabulated below:

S. No.	Name of product/IUPAC name	CAS Number	Quantity MTPA	End Use of Products
A	Halogenated benzene and toluene intermediates (Other derivatives and same pollution load)			
1	2,4 Dichloro fluorobenzene (2,4 DCFB)	1435-48-9	5600 (either/or) *2,3 dichloro	Pharma Intermediate
2	2,6 Dichloro fluorobenzene (2,6 DCFB)	2268-05-05		Pharma Intermediate
3	p-chloro fluoro benzene (PCFB)	352-33-0		Pharma Intermediate

4	o-chloro fluoro benzene (OCFB)	348-51-6	toluene (2,3 DCT) not more than 500 TPA	Pharma Intermediate
5	2,4 dichloro toluene (2,4 DCT)	95-73-8		Dyes & Dye Intermediates, Basic Pharma Intermediates
6	2,6 dichloro toluene (2,6 DCT)	118-69-4		Pharma Intermediates
7	2,3 dichloro toluene (2,3 DCT)*	32768-54-0		Pharma Intermediates
8	Ortho chloro Toluene (OCT)	95-49-8	30000 (either/ or)	Dyes & Dye Intermediates, Basic Pharma Intermediates, Pigments, Polymer
9	Para chloro Toluene (PCT)	106-43-4		Dyes & Dye Intermediates, Basic Pharma Intermediates, Pigments, Polymer
10	Meta chloro Toluene (MCT)	108-41-8		Pharma Intermediates
11	Dichloro toluenes (DCT mixture)	Multiple		Pharma Intermediates, Dyes & Dye Intermediates
B	Fluorinated Specialty Chemicals (Other derivatives and same pollution load)			
1	2-chloro-4-fluorotoluene (2C4FT)*	452-73-3.	1200 (either/ or) *2-chloro-4-fluorotoluene (2C4FT) not more than 700 TPA	Pharma Intermediate
2	3-fluorotoluene (3FT)	352-70-5		Pharma Intermediate
3	4-fluorotoluene (4FT)	352-32-9		Pharma Intermediate
4	Fluorobenzene (FB)	462-06-6		Pharma
5	1,4 difluorobenzene (1,4 DFB)	540-36-3		Pharma Intermediate
6	1,2,4 trifluorobenzene (1,2,4 TFB)	367-23-7		Pharma Intermediate
7	Benzotrifluoride (BTF)	98-08-8	8000 (either/ or)	Pharma Intermediate , Veterinary drug intermediate
8	Para chloro benzotrifluoride (PCBTF)	98-56-6		Pharma Intermediate , Veterinary drug intermediate
9	2,4 dichloro benzotrifluoride (2,4 DCBTF)	320-60-5	1200 (either/ or)	Speciality chemicals intermediate
10	3-fluoro benzotrifluoride (3 FBTF)	401-80-9		Pharma Intermediates
C	Halex Derivatives (Other derivatives and same pollution load)			
1	3-chloro-4-fluoro nitro benzene (3,4 CFNB)	350-30-1	5000 (either/ or)	Pharma Intermediates
2	2-fluoro-5 chloro nitro	345-		Pharma Intermediate , Veterinary drug

	benzene (2,5 FCNB)	18-6		intermediate
D	Other Halex Derivatives (Other derivatives and same pollution load)			
1	2-fluoro - 3-chloro nitro benzene (2,3 FCNB)	2106-49-2	5000 (either/ or)	Pharma Intermediates
2	2,3,4-trifluoro nitrobenzene (2,3,4 TFNB)	771-69-7		Pharma Intermediates
3	4-fluoro benzaldehyde (PFBAD)	459-57-4		Pharma Intermediates
4	2,6-difluoro benzonitrile (2, 6 DFBN)	1897-52-5		Pharma Intermediates
5	2-fluoro nitrobenzene (OFNB)	1493-27-2		Pharma Intermediates
6	Para-fluoro nitro benzene (PFNB)	350-46-9		Pharma Intermediates
7	2,4 di fluoro nitro benzene (2,4 DFNB)	446-35-5		Pharma Intermediates
E	Nitrated Intermediates (Other derivatives and same pollution load)			
1	4-nitro-N-methyl phthalimide (4 NPI)	1663-84-7	12000	Polymer
F	Other Nitrated Intermediates (Other derivatives and same pollution load)			
1	2,4-dichloro-3-fluoro nitro benzene (2,4,3 DCFNB)	393-79-3	5000 (either/ or)	Pharma Intermediate
2	3-nitro benzotrifluoride (MNBTF)	98-46-4		Pharma Intermediate , Veterinary drug intermediate
3	3-nitro-4-chloro benzotrifluoride (CNBTF)	121-17-5		Pharma Intermediates
4	3,5-dinitro-4-chloro benzotrifluoride (CDNBTF)	393-75-9		Pharma Intermediates
5	1-(3-nitrophenyl) ethanone (3-NAP)	121-89-1		Pharma Intermediates
6	2,4-dichloro-3,5-dinitro benzotrifluoride (DCDNBTF)	29091-09-6		Speciality chemicals intermediate
G	Chlorinated Intermediates (Other derivatives and same pollution load)			
1	6-chloro-2-nitro toluene (6 CONT)	83-42-1	5000 (either/ or)	Veterinary drug intermediate & Speciality chemical intermediate
2	4-chloro-2-nitro toluene (4 CONT)	89-59-8		Veterinary drug intermediate & Speciality chemical intermediate
3	3,5 dichloro benzoyl chloride (35 DCBoC)	2905-62-6	2000 (either/ or)	Pharma Intermediates
4	3,4 dichloro benzotrifluoride (3, 4 DCBTF)	328-84-7		Plastics intermediate & Pharma intermediate

H	Advanced Intermediates (Other derivatives and same pollution load)			
1	2-nitro-4-methyl sulfonyl benzoic acid (NMSBA)	110964-79-9	1500	Speciality chemicals intermediate
2	(2,6-Diisopropyl-4-Phenoxy-Phenyl)Thiourea (DIPPT)	135252-10-7	800	Speciality chemicals intermediate
3	7-fluoro-1,1,3-trimethyl-2,3-dihydro-1H-inden-4-amine (IDA)	1383809-95-7	400 (either/ or)	Speciality chemicals intermediate
4	2,4,5-Trifluorophenylacetic acid (TFPAA)	209995-38-0		Pharma Intermediates
5	10,11-Dihydro-5H-dibenz[b,f]azepine (IDB)	494-19-9	1000 (either/ or)	Pharma
6	5H-Dibenz[b,f]azepine (ISB)	256-96-2		Pharma
7	10-Methoxy-5H-dibenzo[b,f]azepine (10MISB)	4698-11-7		Pharma
I	Oxidation Intermediates (Other derivatives and same pollution load)			
1	4-methyl benzoic acid (PTA)	99-94-5	1500 (either/ or)	Pharma Intermediate
2	2-methyl benzoic acid (OTA)	118-90-1		Pharma Intermediate
3	3-methyl benzoic acid (MTA)	99-04-7		Pharma Intermediate
4	4-nitro benzoic acid (PNBA)	62-23-7		Pharma Intermediate
5	2-chloro benzoic acid (OCBA)	118-91-2		Pharma Intermediate
6	4-chloro benzoic acid (PCBA)	74-11-3		Plastics intermediate & Pharma intermediate
7	2-chloro-4-fluoro benzoic acid (OCPFBA)	2252-51-9		Pharma Intermediates
J	Condensation Products (Other derivatives and same pollution load)			
1	4,4'-dinitro diphenyl ether (4,4 DNDPE)	101-63-3	3500 (either/ or)	Polymer Intermediates
2	3,4'-dinitro diphenyl ether (3,4 DNDPE)			Polymer Intermediates
K	Hydrogenated Intermediates (Other derivatives and same pollution load)			
1	2,3,4 trifluoro aniline (2,3,4 TFA)	3862-73-5	6000 (either/	Pharma intermediate

2	3-(Trifluoromethyl)aniline (MABTF)	98-16-8	or) *1-(3-aminophenyl) ethanone (3-AAP) not more than 500 TPA	Pharma Intermediate , veterinary drug intermediate
3	3-chloro-2-methylaniline (3 COT)	87-60-5		Food chemicals & Pharma intermediates
4	2-Chloro-4-methylaniline (OCPT)	615-65-6		Dye & Pigment intermediate
5	1-(3-aminophenyl) ethanone (3-AAP)	99-03-6		Pharma
6	4,4'-diamino diphenyl ether (4,4 DADPE)	101-80-4	2500 (Either/ or)	Polymer
7	3,4'-diamino diphenyl ether (3,4' DADPE)	2657-87-6		Polymer
L	Sulfonated Intermediates (Other derivatives and same pollution load)			
1	2-Sulfobenzaldehyde, sodium salt (BOSA)	1008-72-6	2500 (either/ or)	Pharma Intermediate
2	4-Sulfobenzaldehyde, sodium salt (BPSA)	5363-54-2		Pharma Intermediate
3	4-Aminotoluene-3-sulfonic acid (4B Acid)	88-44-8		Pharma Intermediate
4	2-Amino-4-chloro-5-methylbenzenesulfonic acid (2B Acid)	88-51-7		Pharma Intermediate
5	3,4-Diaminobenzenesulfonic acid (Orthaminic Acid)	7474-78-4	5000	Speciality chemicals intermediate , Battery Chemicals
M	Diazotization Intermediates (Other derivatives and same pollution load)			
1	3-methylphenol (MC)	108-39-4	1200	Pharma Intermediate
2	3,4-dimethylphenol (3,4 Xylenol)	95-65-8	800 (either/ or) *2-fluorophenol (OFP) not more than 400 TPA	Pharma Intermediate
3	2,3-dichlorophenol (2,3 DCP)	576-24-9		Pharma Intermediate
4	2-fluorophenol (OFP)*	0367-12-4		Pharma Intermediate
5	1,2,3-trifluorobenzene (1,2,3 TFB)	1489-53-8		Pharma Intermediate
6	4-fluorophenol (PFP)	371-41-5		Pharma Intermediate
7	1-(3-hydroxyphenyl) ethanone (3 HAP)	121-71-1		Pharma

N	Photochlorinated Intermediates (Other derivatives and same pollution load)			
1	Benzyl chloride (BC)	100-44-7	10000 (either/ or)	Pharma Intermediate
2	Benzalchloride (BDC)	98-87-3		Pharma Intermediate
3	Benzotrichloride (BTC)	98-07-7		Pharma Intermediate
4	Para chloro benzyl chloride (PCBC)	104-83-6	9000 (either/ or)	Pharma Intermediate
5	Para chloro benzal chloride (PCBDC)	13940-94-8		Pharma Intermediate
6	Para chloro benzotrichloride (PCBTC)	5216-25-1		Pharma Intermediate
7	Ortho chloro benzyl chloride (OCBC)	611-19-8	13000 (either/ or)	Cosmetics additives and Pharma intermediate
8	Ortho chloro benzal chloride (OCBDC)	88-66-4		Pharma Intermediate
9	Ortho chloro benzotrichloride (OCBTC)	2136-89-2		Pharma Intermediate
10	2,4 dichloro benzotrichloride (2,4 DCBTC)	13014-18-1	3600 (either/ or)	Pharma Intermediate
11	Para fluoro benzotrichloride (PFBTC)	402-42-6		Speciality chemicals intermediate
12	Meta fluoro benzotrichloride (MFBTC)	401-77-4		Speciality chemicals intermediate
O	Hydrolysis Intermediates (Other derivatives and same pollution load)			
1	Ortho chloro benzaldehyde (OCBAD)	89-98-5	4500 (either/ or)	Cosmetics additives and Pharma intermediate
2	Para chloro benzaldehyde (PCBAD)	104-88-1		Pharma Intermediate
3	2,4 dichloro benzaldehyde (24 DCBAD)	874-42-0		Pharma Intermediate
4	Benzoyl chloride (BoC)	98-88-4	2400 (either/ or)	Pharma Intermediate
5	Para chloro benzoyl chloride (PCBoC)	122-01-0		Pharma Intermediate
6	Para fluoro benzoyl chloride (PFBoC)	403-43-0		Pharma Intermediate
P	Ammoxidation Intermediates (Other derivatives and same pollution load)			
1	Ortho chloro benzonitrile	873-	7000	Food chemicals, Veterinary intermediate &

	(OCBN)	32-5	(either/ or)	Pharma intermediates
2	Para chloro benzonitrile (PCBN)	623-03-0		Food chemicals, Veterinary intermediate & Pharma intermediates
3	2,6 dichloro benzonitrile (26 DCBN)	1194-65-6		Pharma intermediate
Q	Miscellaneous Products (Other derivatives and same pollution load)			
1	Potassium Fluoride (KF)	7789-23-3	9000	Pharma Intermediates
R	Calcium Chloride Solid ($CaCl_2$)	10043-52-4	74711	Oil exploration & used for brine solution
S	Developmental Products for synthetic organic chemicals (e.g. Dye & dyes intermediate, bulk drugs and intermediate, synthetic rubber, basic organic chemicals, other synthetic organic chemical and chemical intermediates, Specialty chemicals, API and its formulations and other new R&D product)	Multi products Pilot Plant	250	Pharma Intermediate and Speciality Chemicals
Total			240161	

Brief Note of Product Profile:

1. **No of Manufacturing Plants: 9 Nos.**
2. **Brief Note regarding number of Products to be manufactured considering plant capacity: The number of products are 100, however proposed is multipurpose plant and not all the products will be manufactured at the same time, also the manufacturing process will be continuous and batch wise so production will be either or of different products in each group based on the market demand.**

- The project falls under Category B of project activity 5(f) as per the schedule of EIA Notification 2006.
- The presentation was considered in the video conference meeting dated 13.05.2021.
- During the video conference meeting dated: 13.05.2021, the project was appraised based on the information furnished by technical expert of PP M/s. Eco Chem Sales & Services. Project proponent and technical expert of PP remained present during video conference meeting.
- 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 to December-2019. Ambient Air Quality monitoring was carried out PM_{10}, $PM_{2.5}$, SO_2 and NOx at Eight locations, including the project site. Values conform to the prescribed standards for Ambient Air Quality. The incremental Ground Level Concentration (GLC) has been computed using "AERMOD View". Incremental GLC's for all parameters remain within 500 m from the project site. 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 detailed proposed safeguard measures including On-Site / Off-Site Emergency Plan has been covered in the RA report.
- Committee noted that this is a Greenfield project proposed for manufacturing of Synthetic organic chemicals plant at GIDC Jhagadia. Total plot area is 2,15,055.34Sq m.
- Committee noted the following:
  - ✓ Product profile discussed in depth.
  - ✓ Site Plan/ layout with fire plan and provision of separate entry & exit, 9 m& 12 m peripheral road for emergency exit, 6 Nos of assembly points, production area, pilot plant, OHC, hazardous waste storage area, tank farm, ETP, utility area, chlorine storage area, raw material & finished goods storage area, truck parking, boiler & coal storage area, 33% greenbelt within premises, etc.
  - ✓ Imported Coal is proposed as fuel in boiler, furnaces/ Thermopack.
  - ✓ PP submitted hazardous waste matrix mentioning source of generation, quantity and Mode of disposal and committed to comply the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016.
  - ✓ Scrubbing system is proposed for control of process gas emission.
  - ✓ Stream wise segregation of effluent will be carried out.
  - ✓ Concentrated stream from process will be treated with Fenton treatment followed by MEE & ATFD. MEE condensate will be further treated in ETP.
  - ✓ MEE condensate and dilute stream from process will be treated in primary, secondary & tertiary ETP followed by RO & MEE+ ATFD. RO permeate & MEE condensate will be reused within premises.
  - ✓ Boiler & cooling tower blow down and effluent from DM & softener will be treated in RO & MEE+ ATFD. RO permeate & MEE condensate will be reused within premises.
  - ✓ Fire load calculation mentioning fire water reservoir (Cap: 3000 KL) and 36 Nos of foam extinguishers.

- Committee deliberated on Product profile, Layout plan, Storage details, Process safety, Fire safety, water balance & waste water management, Flue gas and process gas emission & Air Pollution Control System, Hazardous waste matrix, EMP, CER, Green belt, TOR compliances, etc.
- Committee insisted to provide following details:
  - ✓ Notarized undertaking regarding utilization of natural gas as fuel as priority fuel after it is available.
  - ✓ Justification regarding quantity of spent solvent generation and its reuse.
  - ✓ SOP for handling and storage of benzene.
  - ✓ Need based CER activities considering the health & environment aspects.
  - ✓ Adequate fire water storage tank considering the plot area and storage of hazardous chemicals.
- **After detailed discussion, Committee unanimously decided to consider the proposal in the upcoming SEAC meeting only after satisfactory submission of the following:**
  1. Notarized undertaking regarding utilization of natural gas as fuel as priority fuel after it is available. Also submit revised flue gas matrix mentioning natural gas as alternative fuel.
  2. Justification regarding quantity of spent solvent generation and its reuse. Also submit revised hazardous waste matrix mentioning adequate quantity of generation & reuse of spent solvent.
  3. SOP for handling and storage of benzene & its safety measures.
  4. Revised need based CER activities considering the health & environment aspects.
  5. Revised fire load calculation mentioning adequate fire water storage tank considering the plot area and storage of hazardous chemicals.
- PP submitted their reply for the query raised by SEAC during SEAC meeting dated 13.05.2021 through email.
- The proposal was reconsidered in the SEAC video conference meeting dated 20.07.2021.
- Revised Salient features of the project including Water, Air and Hazardous waste management are as under:

<table>
<tr><td>Sr. no.</td><td>Particulars</td><td>Details</td></tr>
<tr><td>A-1</td><td>Total cost of Proposed Project
(Rs. in Crores):
<table><tr><td>Total Project Cost</td></tr><tr><td>1414 Crores</td></tr></table>
Break-up of proposed project Cost:
<table><tr><td>Details</td><td>Project Cost
(Rs. In Crores)</td></tr><tr><td>Land</td><td>39</td></tr></table></td><td></td></tr>
</table>

		Building	390	
		Plant & Machinery + DCS system for all processes	882	
A-2	**Details of Environmental Management Plan (EMP)**			As below:

Sr. No	***Unit***	***Detail***	***Capital Cost (Rs. In Crores)***	***Operating Cost (Rs. In Crores)***	***Maintenance Cost (Rs. In Crores)***	***Total Recurring Cost (Rs. In Crores)***
1	Waste Water	ETP/Fenton/RO/MEE/STP. online meter (TOC, Flow, pH COD etc., CETP Membership & discharge expense, Environment Laboratory and its equipment etc.	44.00	9.54	0.53	10.07
2	Air	Scrubber/Cyclone/ESP/ Bag Filter/Dust Collector/Stack, Online CEMS, etc., Ambient Air Monitoring Equipments/Weather Station etc.	11.25	1.24	0.06	1.30
3	Hazardous Management/ Solid waste	Like Storage facility, TSDF Membership, E-waste/BMW/Fly ash/Batteries rule & disposal cost	8.00	52.21	0.00	52.21
4	Fire & Safety	Fire Hydrant/ water system, PPE, Fire extinguishers, ventilation, Occupational Health, First Aid etc.	39.00	0.48	0.02	0.5
5	Green Belt Development	Green Belt/Tree plantation, saplings, maintenance	0.50	0.099	0.0002	0.1
6	Rain water Harvesting	Construction of collection tank, pipes and equipment	0.25	0.004	0.001	0.05
Total			**103.00**	**-**	**--**	**64.23**

Summary

Cost of Project in Crores per Annum:	1414.00 Cr.
EMP Capital Cost in Crores per Annum and Percentage:	103 (7.28%)
EMP Recurring Cost in Crores per Annum and Percentage:	64.23 (4.54%)

A-3 **Details of CER as per OM dated 01/05/2018**

% as per the OM	Rs. in Crores
0.5%	Rs. 7.07 Cr.

In case of more than % as per the OM, mention the same. – Not applicable

Brief note on proposed activities for CER:

CER activities to be done (Amount in Lacs)

Sr. No.	CER Activities	Highlights of Activities	Location	Capital Cost					Recurring Cost					Total	Remark
				1st Year	2nd Year	3rd Year	4th Year	5th Year	1st Year	2nd Year	3rd Year	4th Year	5th Year		
1	Health & Hygiene Project	1, Dental care through mobile van 2, Medical camps with appropriate treatments for all nearby villagers 3, Colloboration with CHC/PHC for health infrastructure developments 4, Colloboration with nearby hospitals JIA, Seva Rural for facility development 5, Hygiene awareness for	Kapalsadi, Selod, Talodara, Kharchi, Fulwadi, Sardarpura, Jhagadia, Dharoli, Bhalod, Amaljar, Avidha, Asha, Boridra, Dadhal, Kararvel	10	10	10	10	10	18	18	18	18	18	**140**	Here provided estimated approximate cost so final reports will be submitted half yearly with actual details. All activities will be done through our own NGO "Aarti Foundation ".

		community through medical team 6, Swatch Bharat Abhiyan for community													
2	Environment (Tree Plantation)	1, Land reformation for tree plantation 2, Fencing & Security infrastructure development 3, Tree plantation 4, Maintenance of plantation 5, Drip Irrigation	Kapalsadi, Selod, Talodara, Kharchi, Fulwadi, Sardarpura, Jhagadia, Dharoli, Bhalod, Amaljar, Avidha, Asha, Boridra, Dadhal, Kararvel	17	15	15	15	15	8	8	8	8	8	**117**	
3	Water Conservation Project	1, Lake formation 2, Check Dam Formation 3, Khet Talavadi formation 4, Water recharge borewell 5, Maintenance of water bodies	Kapalsadi, Selod, Talodara, Kharchi, Fulwadi, Sardarpura, Jhagadia, Dharoli, Bhalod, Amaljar, Avidha, Asha, Boridra, Dadhal, Kararvel	60	60	60	60	60	30	30	30	30	30	**450**	
	Total			**87**	**85**	**85**	**85**	**85**	**56**	**56**	**56**	**56**	**56**	**707**	

B	**Land / Plot ownership details:** The plot has been purchased by M/s. Aarti Industries Limited. from GIDC Notified Industrial Estate, Jhagadia. Land possession document are attached in EIA report
B-1	**Plot area** Total Plot area

	215055.34 Sq. m.
B-2	Brief note on **Area adequacy** in line to proposed project activities:

Description	***Area sq.m.***
Plant area	14445.00
Pilot Plant	625.00
Utility (Boiler House,TFH,DG set area, raw water tank, Fire tank, Trolley Area, Dispatch room, pump room, weighbridge etc)	19645.00
ETP /MEE/RO block area & Hazardous waste storage area	4648.00
Canteen/Security/Office/OHC /Watch tower etc.	3347.00
Coal Storage Area	1250.00
Storage/Tank Farms/ warehouses	7145.50
Open land + Road	79343.73
Greenbelt area	71009.27
Parking area	13596.84
Total Plot Area	**215055.34**

- The unit will be manufacturing a maximum of 20 groups of products at a time. The raw materials will be procured on a campaign basis.
- The unit has Ware House, Tank farm Area (7145.5 Sq. m). This is sufficient to store all the raw materials required for the proposed project.
- Unit has proposed 9-12 m wide road for easily Goods Carrier Movement also 13596.84
  Sq. m will be allotted as parking area.
- Separate entry & exit and adequate margin all-round the periphery for unobstructed easy movement of the emergency vehicle / fire tenders without reversing back is also taken care.

Justification for Adequate Area

Unit will be adequate of proposed plot area with respect to plant machineries, EMS, Green belt, safety aspect, raw material & product storage area considering worst case scenario.

B-3 **Green belt area**

	Total (Sq. meter)
Area in Sq. meter	71009.27
% of total area	33.01%

In case of GREEN-BELT partly outside premises, give complete details like exact location (Lat-Long), Agreement/MoU with specific area etc.- Not

	Applicable
C	**Employment generation** Total: 1550 **In case of Indirect employment, Give details. -** As mentioned above
D	**WATER**
D-1	**Source of Water Supply** (GIDC, Bore well, Surface water, Tanker supply etc...) -GIDC
	Status of permission from the concern authority. 1. Permission obtained 7000 KLD from GIDC vide OW NO. NAA/CO/JHG/666 dated 18.08.2020
D-2	**Water consumption (KLD)**

Sr. No.	***Particular***	***Total water consumption (KLD)***	***Remarks***
A	Domestic	100	Fresh Water
B	Gardening	100	Recycled sewage water 100 KLD from STP
C	Industrial		
1	Process	2254	Fresh Water
2	Washing	20	Fresh Water
3	D.M & Boiler	1240	Fresh Water for Boiler
4	Softener Plant	2715	Fresh Water for Cooling Tower
5	Cooling Tower	3374	Recycled RO & MEE permeate
Industrial Total		**9603**	**--**
Grand Total (A+B+C)		**9803**	**Total water requirement for the Project**

Brief Note on worst case scenario for water consumption:

Summary of water	***Quantity***	***Remarks***

requirement	*KLD*	
Total water requirement for the project (A)	9803	--
Quantity to be recycled (B)	3474	**--**
Total fresh water requirement (C)	6329	**--**
Ensure Total water requirement = Fresh water + Recycled water i.e. A = B + C		

Reuse/Recycle details (KLD) with feasibility.

[Source of reuse & application area]

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.***
2329 KLD (Process 2309 KLD+ Washing 20 KLD)	Cooling Tower: 3374 KLD	PH: 7-8 COD: 50-70 mg/l BOD: 10-20 mg/l TDS: 70-100 mg/l	Feasible to reuse
1324 KLD from Utilities			
100 KLD from Domestic sewage	Gardening, cooling and toilet flushing: 100 KLD	pH:7-8 COD: <50 mg/l BOD:< 10 mg/l	

In case of no reuse/recycle of waste water, Give brief note on justification as why no reuse/recycle.

- Not Applicable

D-3

Waste water generation (KLD)

Sr. No.	***Particular***	***Proposed Waste Water Generation (KLD)***	***Effluent treatment and disposal/ Remarks (if any)***
A	Domestic	100	Generated Sewage will be treated in STP and treated water will be recycled in greenbelt, cooling tower and toilet flushing
B	Industrial		
1	Process	2309	Effluent is segregated into 4

						streams based on characteristics 1. High COD, high TDS @250 KLD: Treatment through Fenton, MEE/ATFD then to ETP 2. High COD, low TDS @123 KLD : Treatment through Fenton, MEE/ATFD then to ETP 3. low COD, high TDS @946 KLD : Treatment through MEE/ATFD then to ETP 4. low COD, low TDS @990 KLD : to ETP 5. Total 2264 KLD will be taken in ETP, treated water of 200KLD effluent will be discharged to NCT and remaining effluent will undergo RO/MEE treatment and then will be recycled in process and cooling tower	
			2	Washing	20	Sent to ETP collection tank for treatment	
			3	DM Reject & Boiler Blow Down	160	Sent to Utility RO plant followed by MEE/ATFD	
			4	Softener Reject & Cooling blow down	1164	Sent to Utility RO plant followed by MEE/ATFD	
			Total Industrial waste water (B)		**3653**	**3653 KLD= 3374 KLD will be recycled+79 TPD will be MEE+ ATFD Salts+200 KLD will be discharge**	
			Total Waste Water (A+B)		**3753**	**--**	
			Industrial water recycled		**3374**	**Recycled from MEE+ATFD condensate & RO permeate**	
			Discharged to NCT through GIDC drainage line		**200**	**To NCT pipeline for deep sea disposal**	
			Domestic water recycled		**100**	**Recycled in greenbelt cooling tower& toilet flushing**	

Brief Note on worst case scenario for waste water generation (Qualitative and Quantitative):

Group	Worst case Scenario (KLD)
A-Halogenated benzene and toluene intermediates (Other derivatives and same pollution load)	0
B-Fluorinated Specialty Chemicals (Other derivatives and same pollution load)	151
C-Halex Derivatives (Other derivatives and same pollution load)	23
D-Other Halex Derivatives (Other derivatives and same pollution load)	250
E-Nitrated Intermediates (Other derivatives and same pollution load)	274
F-Other Nitrated Intermediates (Other derivatives and same pollution load)	108
G-Chlorinated Intermediates (Other derivatives and same pollution load)	68
H-Advanced Intermediates (Other derivatives and same pollution load)	335
I-Oxidation Intermediates (Other derivatives and same pollution load)	46
J-Condensation Products (Other derivatives and same pollution load)	20
K-Hydrogenated Intermediates (Other derivatives and same pollution load)	40
L-Sulfonated Intermediates (Other derivatives and same pollution load)	189
M-Diazotization Intermediates (Other derivatives and same pollution load)	89
N-Photochlorinated Intermediates (Other derivatives and same pollution load)	356
O-Hydrolysis Intermediates (Other derivatives and same pollution load)	83
P-Ammoxidation Intermediates (Other derivatives and same pollution load)	34
Q-Miscellaneous Products (Other derivatives and same pollution load)	229
Pilot Plant	15
Total	**2309**

Brief justification in case of no process effluent generation or no industrial effluent generation or no high concentration effluent generation from proposed project (Whichever is applicable).

2. Not Applicable

D-4	Mode of Disposal & Final meeting point
-	

Domestic:	100 KLD will be send to STP and treated water from STP recycled for greenbelt, cooling tower and toilet flushing
Industrial:	200 KLD of treated waste water will be discharge to NCT pipeline for deep sea disposal

-

Clearly mention about final disposal

D-5	Treatment facilities

For Domestic waste water:

Capacity of STP: 110 KLD

Name	***Quantity (nos.)***	***Capacity each (KLD)***
STP	1	110

For Industrial waste water: Treatment facility within premises with **capacity**

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

Name	***Quantity (nos.)***	***Capacity each (KLD)***
ETP (Primary, secondary & tertiary)	1	2400
MEE+ATFD-1 (stream-1)	1	280
MEE+ATFD-2 (stream-2)	1	140
MEE+ATFD-3 (stream-3)	1	1000
MEE+ATFD-4 (stream-4)	1	100
RO (Process)	1	2200
Utility MEE+ATFD	1	150
Utility R.O	1	1500

Treatment scheme including segregation at source. **(Give Characteristics of each stream i.e. COD, BOD, TDS etc.) In case of stream segregation, Separate ETP (ETP-1, ETP-2….) for each stream shall be proposed.**

Stream Characteristics:

Stream-1

STREAM 1	**Parameters**	**Before Fenton (Feed to Fenton)**	**Before MEE (Feed to MEE)**	**Feed to ETP (MEE condensate)**
250 KLD High COD & High TDS	pH	2.5-3	7-8	7-8
	TSS in mg/l	200-300	90-120	60-90
	TDS in mg/l	20000-30000	21000-32000	500-700
	COD in mg/l	10000-25000	3000-7000	1000 -3000
	BOD in mg/l	4000 -9000	1000-3000	400 -800

	N-NH3 in mg/l	150-200	50-60	30-50

Stream-2

STREAM 2	***Parameters***	***Before Fenton (Feed to Fenton)***	***Before MEE (Feed to MEE)***	***Feed to ETP (MEE condensate)***
123 KLD High COD & Low TDS	pH	2.5-3	7-8	7-8
	TSS in mg/l	200-300	60-90	40-60
	TDS in mg/l	2000-2500	2100-2600	700-1000
	COD in mg/l	10000-25000	3000-7000	1000 -3000
	BOD in mg/l	1800-3000	1000-2000	400-700
	N-NH3 in mg/l	100-200	20-40	10-30

Stream 3

STREAM 3	***Parameters***	***Feed to MEE***	***Feed to ATFD***	***Feed to ETP (MEE condensate)***
946 KLD low COD & high TDS	pH	7-8	7-8	7-8
	TSS in mg/l	200-300	100-200	10-20
	TDS in mg/l	50000-60000	300000-400000	500-600
	COD in mg/l	1200-2000	500-600	1000-1800
	BOD in mg/l	300-400	20-30	300-600
	N-NH3 in mg/l	20-30	5-10	10-20

Stream-4

STREAM 4	***Parameters***	***Before ETP***
990 KLD low COD, low TDS	pH	7-8
	TSS in mg/l	200-300
	TDS in mg/l	3000-5000
	COD in mg/l	2000-4000
	BOD in mg/l	800-1500
	N-NH3 in mg/l	70-80

Composite Characteristics of all four Streams

Composite of all 4 STREAMS	***Parameters***	***ETP Inlet (before Prima***	***After Primary Treatment (Before Bio-reacto***	***After Bio-reactor (Feed to tertiary***	***After Tertiary Treatment (RO Feed)***	***RO Permeate***	***RO Reject***	***MEE Feed(After pretreatment)***	***MEE Condensate (To cooling Tower)***

		ry treatment)	***r)***	***treatment :ASF/ PSF)***					
Stream 1 : 250 KLD + Stream 2 : 123 KLD + Stream 3 : 946 KLD + Stream 4 : 990 KLD =2309 KLD	pH	7-8	7.5-8.5	6.9 - 8.3	7.2-8.2	6.8-7.5	7-8	7-8	7-8
	TSS in mg/l	100-150	50-70	55-75	50-70	02-05	1000-1700	25-50	20-30
	TDS in mg/l	1660-2600	1500-2500	1500-2500	1500-2500	50-60	37500-62500	37500-62500	70-100
	COD in mg/l	1500-3000	1450-2950	150-210	140-200	05-10	3500-5000	2000-3000	50-70
	BOD in mg/l	600-1100	575-1075	20-30	18-28	02-04	150 - 235	50-100	10-20
	N-NH3 in mg/l	40-60	30-50	10-20	10-20	NIL	200 - 400	10-20	NIL

Characteristics of Discharge Stream (200 KLD)

Parameters	***After Tertiary Treatment for discharge outside the premises***	***GPCB Discharge Norms***
pH	7.2-8.2	5.5-8.5
TSS in mg/l	50-70	100
COD in mg/l	140-200	100
BOD in mg/l	18-28	30
N-NH3 in mg/l	10-20	50

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.

3. Not Applicable

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

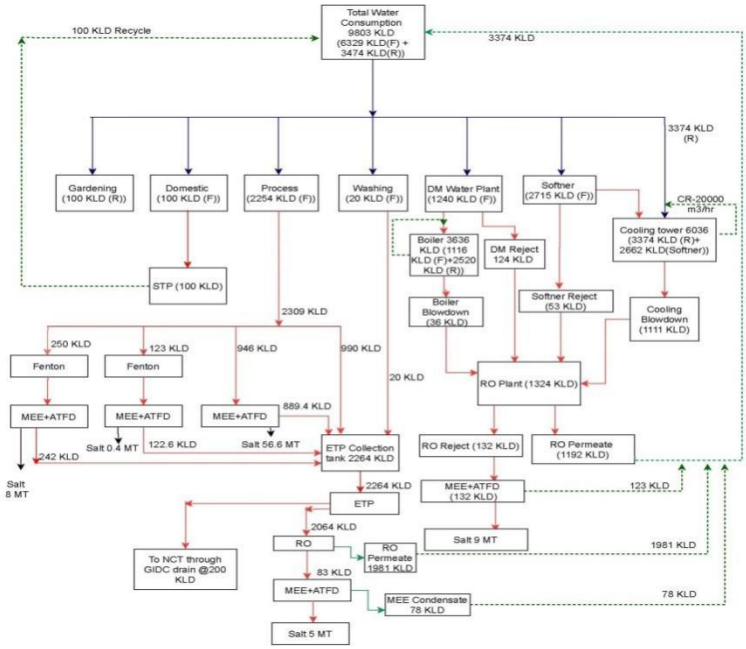
4. Not Applicable

D-6 In case of Common facility (CF) i.e. **CETP, Common Spray dryer, Common MEE, CHWIF etc.**

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

- Not Applicable

	Membership of Common facility (CF) 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.
	➢ Not Applicable
D-7	**Simplified water balance diagram with reuse / recycle of waste water**



E	**AIR**
E-1	**Brief Note on fuel based Heat energy requirement and worst case scenario thereof:**

S. No.	Name	Requirement
1	Coal for Boiler	533 TPD (2 Nos Boiler)
2	Natural Gas for Boiler	4450 SCM/Hr (1 No Boiler)
2	Coal for Furnaces/ Thermopack	40 TPD
3	HSD for DG Set	600 lit/ hr *(for each DG set)*

**Note: Natural gas will be used based on its availability*

E-2	**Flue gas emission details** No. of Boilers/TFH/Furnaces/DG sets etc. with capacities viz. TPH, Kcal/hr, MT/hr, KVA etc. (In case of Project located within CPA/SPA , APCM shall be in line to the mechanism published in the

MOEFCC's OM vide dated 31.10.2019)

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	Coal Fired Boiler (2 nos x 50TPH)	60	Coal	533 TPD (2 Nos Boiler)	PM, SO_2& NOx	ESP & Lime dosing along with coal (i.e. Dry scrubber)+ OCEMS
2	Natural gas fired Boiler* (1 no x 50TPH)	30	Natural Gas	4450 SCM/Hr (1 Nos Boiler)		Adequate Stack height
2	Furnaces / Thermopack (2 x 20 lakh Kcal/hr)	30	Coal	40 TPD		Bag filter & Lime dosing along with coal (i.e. Dry scrubber)
3	DG Set (8 x 2000kVA)	11	HSD	600 lit/ hr (for each DG set)		Adequate Stack Height

**Note: Natural gas will be used based on its availability*

E-3 **Process gas** i.e. Type of pollutant gases (SO_2, HCl, NH_3, Cl_2, NO_x etc.)

-

Sr. no.	Specific Source of emission (Name of the Product & Process)	Type of emission	Stack/Vent Height (meter)	Air Pollution Control Measures (APCM)
1	Scrubber of Denitro Chlorination of Group A products	Cl_2 HCl	15	3 stage scrubber H2SO4 , Water, Caustic scrubber
2	Scrubber of Fluorinator of Group B products	HCl	12	Water scrubber
3	Scrubber of Fluorinator of Group M products	HF	12	Aq HF solution scrubber

4	Scrubber of Chlorinator of Group A products	HCl	15	Water scrubber
5	Nitration products storage facility	NOx	12	2 stage H2O2 + caustic solution & Water scrubber
6	Scrubber of Chlorinator of Group G products	Cl_2 HCl	15	2 stage Water Caustic scrubber
7	Bromination products storage facility	HBr	12	Caustic scrubber
8	Scrubber of Fluorinator of Group B products	HF	12	Aq. HF solution scrubber
9	Scrubber of PhotoChlorinator of Group N products	Cl_2 HCl	15	2 stage Water , Caustic scrubber
10	$CaCl_2$ dryer vent	PM	20	2 stage Water , Caustic scrubber
11	Scrubber of Pilot plant (Acidic gas)	Cl_2 HCl	11	Caustic scrubber
12	Scrubber of Pilot plant (Alkaline gas)	Cl_2 HCl	11	Caustic scrubber

Note:

- **Details of gaseous raw materials used in proposed project**

Groups with S.No.	Name of Products	Name of gaseous Raw materials	RM in MT/Month
A1	2,4 – Dichlorofluoro benzene (2,4-DCFB)	Chlorine gas	271.6
A2	2,6- Dichlorofluorobenzene (2,6-DCFB)	Chlorine gas	241.0
A3	Parachloroflurobenzene (PCFB)	Chlorine gas	304.4
A4	Orthochlorofluorobenzene (OCFB)	Chlorine gas	304.4
A5	2,4- dichloro toluene (2, 4 DCT)	Chlorine gas	252.2

A6	2,6- dichloro toluene (2,6-DCT)	Chlorine gas	252.2
A7	2,3- dichloro toluene (2,3-DCT)	Chlorine gas	270.9
A8, A9 & A10	2-Chloro Toluene (OCT,PCT,MCT)	Chlorine gas	1557.7
A11	Dichloro toluenes mixture	Chlorine gas	1383.8
B1	2-chloro-4-fluorotoluene	Cl2 gas	58.1
		H2 gas	1.4
D4	2,6 DFNB	Chlorine	347.0
F6	DCDNBTF	Chlorine gas	959.1
G1 & G2	6-CONT, 4-CONT	Chlorine gas	212.5
G4	3,4 DCBTF	Chlorine gas	61.3
H1	NMSBA	Air	55.0
H3	IDA	Hydrogen gas	0.6
H5	IDB	Hydrogen gas	7.1
I1	PTA (4-methylbenzoicacid)	O2	20.8
I2	OTA	O2	50.7
I3	MTA	O2	50.0
I4	PNBA	O2	25.0
I5	OCBA	O2	13.2
I6	PCBA	O2	13.2
I7	OCPFBA	O2	12.5
K1	2,3,4-Tri fluoro aniline	H2 gas	21.9
K2	3-(Trifluoromethyl)aniline	H2 gas	19.4
K3	3-Chloro ortho toludine	H2 gas	24.7
K4	2-Chloro-4-methylaniline	H2 gas	24.7
K5	1-(3-aminophenyl) ethanone 3-AAP	H2 gas	2.1
K6	4,4'-Diamino Diphenyl Ether	Hydrogen Gas	42.2
K7	3,4'-Diamino Diphenyl Ether	Hydrogen Gas	42.2
N1	BC	Chlorine gas	519.2
N2	BDC	Chlorine gas	816.7
N3	BTC	Chlorine gas	1009.2
N4	PCBC	Chlorine gas	367.5
N5	PCBDC	Chlorine gas	605.3
N6	PCBTC	Chlorine gas	771.8
N7	OCBC	Chlorine gas	530.8
N8	OCBDC	Chlorine gas	874.3
N9	OCBTC	Chlorine gas	1114.8
N10	2,4-DCBTC	Chlorine gas	268.5
N11	PFBTC	Chlorine gas	332.7
N12	MFBTC	Chlorine gas	332.7

P1	O-chlorobenzonitrile (OCBN)	NH3	80.1
		Oxygen	226.2
P2	P-chlorobenzonitrile (PCBN)	NH3	80.1
		Oxygen	226.2
P3	2,6-Dichlorobenzonitrile (2,6 DCBN)	NH3	64.1
		Oxygen	180.9

- **Estimation of process gas emission (Product wise and Total):** As mentioned in air emission matrix table above
- **Requirement of the scrubbing media (KL per Day) considering solubility (Product wise and Total):** As given below

S. NO.	Group	Product	Scrubber Media	KL/D
A	**Halogenated benzene and toluene intermediates (Other derivatives and same pollution load)**			
1	24 DCFB	2,4 Dichloro fluorobenzene (2,4 DCFB)	Sulphuric Acid Water 10 % NaOH	18.68 10.84 20.40
2	26 DCFB	2,6 Dichloro fluorobenzene (2,6 DCFB)	Sulphuric Acid Water 10 % NaOH	18.68 9.61 18.09
3	PCFB	p-chloro fluoro benzene (PCFB)	Sulphuric Acid Water 10 % NaOH	18.68 12.16 22.86
4	OCFB	o-chloro fluoro benzene (OCFB)	Sulphuric Acid Water 10 % NaOH	18.68 12.15 22.86
5	24 DCT	2,4 dichloro toluene (2,4 DCT)	Sulphuric Acid Water 10 % NaOH	11.35 9.85 21.15
6	26 DCT	2,6 dichloro toluene (2,6 DCT)	Sulphuric Acid Water 10 % NaOH	11.35 9.85 21.15
7	23 DCT	2,3 dichloro toluene (2,3 DCT)	Water	1.42
8	OCT	Ortho chloro Toluene (OCT)	Water	74
9	PCT	Para chloro Toluene (PCT)		
10	MCT	Meta chloro Toluene (MCT)		
11	DCT mixture	Dichloro toluenes (DCT mixture)	Water	85.3
B	**Fluorinated Specialty Chemicals (Other derivatives and same pollution load)**			

1	2C4FT	2-chloro-4-fluorotoluene (2C4FT)	Water HF	4.8 6.34
2	BTF	Benzotrifluoride (BTF)	Water	51.85
3	PCBTF	Para chloro benzotrifluoride (PCBTF)	Water	41.94
4	24 DCBTF	2,4 dichloro benzotrifluoride (2,4 DCBTF)	Water	5.2
5	3 FBTF	3-fluoro benzotrifluoride (3 FBTF)	Water	7.3
G	**Chlorinated Intermediates (Other derivatives and same pollution load)**			
1	6 CONT	6-chloro-2-nitro toluene (6 CONT)	Water	14.57
2	4 CONT	4-chloro-2-nitro toluene (4 CONT)	10 % NaOH	8.67
3	35 DCBoC	3,5 dichloro benzoyl chloride (35 DCBoC)	Water	3.01 25.54
4	34 DCBTF	3,4 dichloro benzotrifluoride (3, 4 DCBTF)	10 % NaOH	2.93 0.007
M	**Diazotization Intermediates (Other derivatives and same pollution load)**			
1	OFP	2-fluorophenol (OFP)	Aq HF	3.155
N	**Photochlorinated Intermediates (Other derivatives and same pollution load)**			
1	BC	Benzyl chloride (BC)	Water	24.93
2	BDC	Benzalchloride (BDC)	Water	39.19
3	BTC	Benzotrichloride (BTC)	Water	48.5
4	PCBC	Para chloro benzyl chloride (PCBC)	Water	17.65
5	PCBDC	Para chloro benzal chloride (PCBDC)	Water	29.08
6	PCBTC	Para chloro benzotrichloride (PCBTC)	Water	37.08
7	OCBC	Ortho chloro benzyl chloride (OCBC)	Water	25.5
8	OCBDC	Ortho chloro benzal chloride (OCBDC)	Water	42.01
9	OCBTC	Ortho chloro benzotrichloride (OCBTC)	Water	53.56
10	24 DCBTC	2,4 dichloro benzotrichloride (2,4 DCBTC)	Water	12.9
11	PFBTC	Para fluoro benzotrichloride (PFBTC)	Water	15.97

12	MFBTC	Meta fluoro benzotrichloride (MFBTC)	Water	15.97

- **Yearly generation of all bleed liquors (MT/KL per Annum) as mentioned above and its sound management in HW matrix:** Bleed liquor is considered in Hazardous waste Management matrix

E-4 **Fugitive emission** details with its mitigation measures:

Sr. No.	***Source***	***Control Measures***
1.	Pump handling odorous chemicals and pressured gases	Use of mechanical seals of pumps and compressor. All pipeline and pipe fitting shall be well maintain, wear and tear shall be attended promptly.
2.	At reactor during charging of liquid and solids chemicals	Liquid raw material will be charged by pumping and closed loop.
3.	Pressure release valve emission from pipeline	For highly pressurized lines, vent lines of PRVs to air pollution control device in case of toxic gases.
4.	Release from sampling lines	Using a close loop sampling system.
5.	Emission from bulk storage tank during unloading	Breather valve, PSVs, Rupture disc will be provided. Vapour recovery system will be installed for process and storage vent tank.
6.	Leak from valves, flanges, plugs and instrument connection.	Welded pipes will be used wherever feasible. Suitable gasket material to be used. Suitable gland packing will be used in valves. Periodic inspection and maintenance of pipes and pipe fittings.
7.	Chemical vapours from wet cake in filtration and drying area	Filtration will be done out in Agitated Neutch filter. Transfer and drying of wet-cake done in system shall be adopted, worker shall be provided PPEs, fume extraction system shall be provided, whenever require.
8.	Warehouse storing drums and bags	Spillages shall be strictly prevented by providing dip pans, proper handling equipment, minimum manual operation, local exhaust and roof top ventilators. Spill control procedures and equipment shall be provided.

F	**Hazardous waste** (As per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016. Note: ➢ **Priorities for HW Management:** Pre-processing, Co-Processing, Reuse/Recycle within premises, Sell out to actual users having Rule-9 permission, TSDF/CHWIH: Mentioned in below table ➢ **Quantification of hazardous waste shall be based on mass balance and calculations shall be incorporated in EMP details separately.** ➢ **Disposal to scrap vendors/vendors/traders is not allowed: Noted**
F-1	**Hazardous waste management matrix**

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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 Waste	ETP	I-35.3	12350	Collection, Storage, Transportation, disposal to TSDF/ Co processing.
2	Discarded containers/Plastic waste/ bags/drums/carboys	Packing material	I-33.1	500	Collection, Storage, Decontamination and Disposal by sold to authorized dealers/ recyclers/ Contaminated waste sent to TSDF site/ Co processing.
3	Used oil	Maintenance of Machineries and equipment	I-5.1	70	Collection, Storage, Transportation, Disposal by selling to registered re-processors.
4	Distillation Residue	Process	I-26.1	29376	Collection, Storage, transportation, disposal at CHWIF/Co-incineration/Co processing.

5	MEE + ATFD salt	Waste water treatment	I-35.3	23700	Collection, Storage, transportation, disposal Landfilling / Incineration/ Co processing
6	Process Solid Waste	Process	I-26.1	11618	Collection, Storage, transportation, disposal to TSDF/Co processing
7	$CaCl_2$ sludge	Process	I-35.3	6214	Collection, Storage, Transportation, disposal to TSDF/Co processing.
8	Calcium Chloride Solution as Brine	Process	II-C2	188997	Collection, storage, transportation & sold to authorized actual end users having Rule 9 permission
9	Off-specification product	Process	I-26.1	25	Collection, Storage, transportation, disposal to disposal by Co-processing/Incineration .
10	Non- recyclable plastic waste & PPE's	Process waste	I-33.1	200	Collection, Storage, Transportation, disposal to TSDF.
11	Spent Carbon	From ETP	I-36.2	70	Collection, Storage, transportation sent for co-processing /incineration
12	Spent Catalyst	Process	I-26.5	25	Collection, Storage, Decontamination, Disposal by sold to registered regenerators/ TSDF
13	Hydrochloric Acid	Process waste from Group A,B, D, F, G, H, N & O products	II-B15	159345	Collection, Storage, Transportation & reuse manufacturing of in-house $CaCl_2$ plant or will be sold to market as per Rule 9 of Hazardous and Other wastes (Management & Transboundary Movement) Rules 2016

	14	Nitrosyl Sulphuric Acid	Process waste from Group A & D products	II-B15	13196	Will be sold to market as per Rule 9 of Hazardous and Other wastes (Management & Transboundary Movement) Rules 2016		
	15	Sulphuric acid	Process waste from Group L & M products	II-B15	28043			
	16	Sodium Hypochlorite	Process waste from Group A,D,G & H products	II-B15	19733			
	17	Potassium chloride	Process waste from Group D & C products	II-B2	8130			
	18	Tetrafluoroboric acid	Process waste from Group B &M products	II-B15	11417			
	19	Acetaldehyde	Process waste from Group M products	II-B5	380			
	20	NaCl solution	Process waste from Group H products	II-B15	7252			
	21	Acetic Acid	Process waste from Group H products	II-B15	1143			
	22	Ammonium dihydrogen phosphate ($NH_4H_2PO_4$)	Process waste from Group H products	II-B35	740			
	23	5,5-Dimethylhydantoin	Process waste from Group H products	II-B10	685			
	24	Triethylamine hydrobromide ($Et_3N.HBr$)	Process waste from Group H products	II-B10	2240	Will be sold to market as per Rule 9 of Hazardous and Other wastes (Management		

					& Transboundary Movement) Rules 2016
25	Recovered Solvent	Process	I-26.4	199333 TPM	Recovered and recycled in house processes/ Remarks: • Total solvent required 205085 TPM, • Total Solvent recovered 199333 TPM, • Fresh Solvent required 5752 TPM, • Percentage recovered 97.2%

F-2	Membership details of **TSDF, CHWIF** etc. **(For HW management)**

Details of Membership letter no. & Date with spare capacity of the Common Facility.

- Membership from TSDF, CHWIF & Co-processing unit have been obtained from BEIL vide letter no. BEIL/ANK/2020 dated 29.08.2020. MoU with Rule 9 end users obtained.

F-3	Details of Non-Hazardous waste & its disposal **(MSW and others)**	MoU for fly ash obtained with M/s Mamta bricks and Cement Articles dated 28.12.2020.

Sr. no.	Type/Name of Other wastes	Specific Source of generation (Name of the Activity, Product etc.)	Quantity (MT/Annum)	Management of Wastes
1	Fly Ash	Boiler, Furnaces/Thermopack	32800	Sold to Brick and Cement Manufacturers/ Construction activities
2	Office Waste	Admin/ Office	30	Collection, Storage, Transportation Registered recyclers/Co processing
3	Insulation Waste/ Thermocol	Plant and machinery	150	Collection, Storage, Transportation disposal by at TSDF Site/Co processing

4	E-waste/Electrical waste	Plant and machinery	25	Collection, Storage, Transportation, Disposal by selling to authorized recyclers
5	Battery waste	Plant and machinery	100 Nos.	Collection, Storage, Transportation, Disposal by selling to authorized recyclers
6	Bio-medical waste	Occupational health centre	1	Collection, Storage, Transportation, Disposal to CBWTF-Incineration
7	Glass	Plant/lab/ Buildings	15	Collection, Storage, Transportation, disposal/sold to scrap processors
8	STP Waste (Sludge)/Kitchen waste	STP/Canteen	100	Collection, Storage and disposal as manure.
9	RO Membranes	Water Treatment Plant	5	Collection, Storage, Transportation disposal by at TSDF Site

G	**Solvent management**, VOC emissions etc. VOC emissions etc. Solvent will be recovered through solvent recovery system
G-1	Brief Note on types of solvents, Details of Solvent recovery, % recovery, reuse of recovered Solvents etc.

Name of Product/ Group	***Name of the solvent***	***Quantity, MT/M***	***Recovered, MT/M***	***% RECOVERY***
3-chloro-4-fluoro nitro benzene	Sulfolane	27499	27117	98.61%
2-fluoro-5 chloro nitro benzene		27499	27325	99.37%

2-fluoro - 3-chloro nitro benzene		18152	17423	95.98%
2,3,4-trifluoro nitrobenzene		13124	12666	96.51%
4-fluoro benzaldehyde		9027	8889	98.46%
2,6-difluoro benzonitrile		3422	2281	98.77%
2-fluoro nitrobenzene		10055	9922	98.67%
2,4-dichloro-3,5-dinitro benzotrifluoride	EDC	39583	38194	96.49%
3,5 dichloro benzoyl chloride	Toluene	5629	5516	98.00%
2-nitro-4-methyl sulfonyl benzoic acid	MDC	8845	8515	96.27%
2-nitro-4-methyl sulfonyl benzoic acid	Methanol	1776	1740	97.94%
5H-Dibenz[b,f]azepine	O-nitro toluene	139	136	98.00%
5H-Dibenz[b,f]azepine	Toluene	556	544	98.00%
5H-Dibenz[b,f]azepine	Ethanol	278	272	98.00%
10-Methoxy-5H-dibenzo[b,f]azepine	Methanol	1462	1392	95.25%
10-Methoxy-5H-dibenzo[b,f]azepine	Toluene	2800	2767	98.83%
4-methyl benzoic acid	Acetonitrile	3448	3386	98.19%
4-nitro benzoic acid	Ethanol	2671	2563	95.96%
2-chloro-4-fluoro benzoic acid	AcOH	5006	4836	96.59%
4,4'-dinitro diphenyl ether	DMAc	13951	13407	96.10%
3,4'-dinitro diphenyl ether	DMAc	13951	13407	96.10%
3-chloro-2-methylaniline	Methanol	42339	41492	98.00%
2-Chloro-4-methylaniline	Methanol	42339	41492	98.00%
1-(3-aminophenyl) ethanone	Toluene	57	56	98.00%

4,4'-diamino diphenyl ether	DMAc	18054	17988	99.63%
3,4'-diamino diphenyl ether	DMAc	18055	17989	99.63%
4-Aminotoluene-3-sulfonic acid	ODCB	8385	8073	96.27%
2-Amino-4-chloro-5-methylbenzenesulfonic acid	ODCB	11675	11258	96.43%
2-fluorophenol	MDC	342	335	98.00%
2-fluorophenol	ODCB	342	335	98.00%
4-fluorophenol	MDC	192	188	98.00%
1-(3-hydroxyphenyl) ethanone	Toluene	1036	1016	98.00%

G-2 **Brief Note on LDAR proposed:**

Following steps will be followed for effective implementation of LDAR Program:

1. **Identification of volatile chemicals which may contribute in VOCs:**

In the proposed plant there are various chemicals which may contribute in VOCs as provided in Table in G-1 section above:

2. **Identification of all the probable sources of leakage; Such as valves, pumps and connectors**

List of the sources of probable leakages is as follows.

- Valves/Flanges
- Pump glands handling above chemicals
- Open vents from the tank top
- Pump seals
- Compressor seals
- Pressure relief devices
- Process drains
- LPDs (Low Point Drains)
- HPVs (High Point Vents)

3. Selection of appropriate method for leak detection.

Considering the nature of the chemical; appropriate method shall be selected for leak detection of individual chemicals from the list given below:

- Visual check
- LEL meter
- VOC meter

Methods for rectification of identified leaks:

For all identified leaks, closure shall be ensured with the help of maintenance department and records for the same shall be maintained.

VOC and Controls:-

- To prevent losses of these solvents in atmosphere, following infrastructure shall be

used in addition to LDAR program.

- Leak Free Pumps for transfer of solvents.
- MSW Gaskets in solvent pipelines to prevent leakage from flanges.
- Unloading of solvents from Tanker to Storage Tank through appropriate Transferring system.
- Condenser and scrubber system with proper cooling arrangement.
- Closed loop sampling for sampling of Relative materials.

Monitoring of Solvent Losses:-

- In storage and consumption of solvents in various products will be measured through Level transmitters and load cells weighing systems resp. The quantity at each stage will be reconciled periodically to arrive at losses.
- Batch output will be monitored and reconciled with quantity of input raw materials added.
- Workplace VOC monitoring will be carried out at the shop floor.
- Periodic Leakage Audit at Plant.

G-3 | **VOC emission** sources and its mitigation measures

Sr. No.	*Source*	*Control Measures*
1.	Pump handling odorous chemicals and pressured gases	Use of mechanical seals of pumps and compressor. All pipeline and pipe fitting shall be well maintain, wear and tear shall be attended promptly.
2.	At reactor during charging of liquid and solids chemicals	Liquid raw material will be charged by pumping and closed loop.
3.	Pressure release valve emission from pipeline	For highly pressurized lines, vent lines of PRVs to air pollution control device in case of toxic gases.
4.	Release from sampling lines	Using a close loop sampling system.
5.	Emission from bulk storage tank during unloading	Breather valve, PSVs, Rupture disc will be provided. Vapour recovery system will be installed for process and storage vent tank.
6.	Leak from valves, flanges, plugs and instrument connection.	Welded pipes will be used wherever feasible. Suitable gasket material to be used. Suitable gland packing will be used in valves. Periodic inspection and maintenance of pipes and pipe fittings.
7.	Chemical vapours from wet cake in filtration and drying area	Filtration will be done out in Agitated Neutch filter. Transfer and drying of wet-cake done in system shall be adopted, worker shall be provided PPEs, fume extraction system shall be provided, whenever require.
8.	Warehouse storing drums and bags	Spillages shall be strictly prevented by providing dip pans, proper handling

		equipment, minimum manual operation, local exhaust and roof top ventilators. Spill control procedures and equipment shall be provided.

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H	**SAFETY details**
H-1	**Details regarding storage of Hazardous chemicals** **(For tank storages only including spent acid and spent solvent tanks)**

Brief note on storage of Hazardous chemicals in Tanks

Sr. no	Name of Chemical	Capacity of Tank	Number of Tanks	Hazardous Characteristics of Chemical
1	Toluene	96	1	Flammable
2	Bromine	14	1	Corrosive + Toxic
3	HNO_3	57	1	Oxidizer + Corrosive + Toxic
4	Oleum	30	1	Corrosive + Toxic
5	Acetone	7	1	Flammable
6	Potassium fluoride	300	1	Toxic
7	Potassium hydroxide	272	1	Corrosive
8	Hydrogen fluoride	182	1	Irritant
9	Ammonium thiocyanate	60	1	Irritant
10	Methanol	96	1	Flammable
11	Ethanol	30	1	Flammable
12	M- Xylene	25	1	Flammable
13	Acetonitrile	2	1	Flammable
14	Liquid NH_3	50 KL	1	Toxic
15	Phenol	8	1	Toxic/Flammable
16	Chlorine	900 kg tonner	10	Toxic

Brief note on storage of Hazardous chemicals in Tanks

- Checking schedule/maintenance Schedule for Pump, Control valves, Air Instrument system and Instrument will be prepared
- Testing, inspection and certification will be carried out for all pressure vessels, lifting

tackles and storage tanks as per Factories Act.

- Calibration will be carried out to maintain the flow indicator.
- Mechanical sealed pumps will be used to avoid and reduce leakages and fugitive emissions.
- Double mechanical seals will be provided for agitators
- Dyke wall will be provided for each tank.
- Secondary control will be provided for material transfer in the form of leakage collection tray.
- Alarm system will be provided for deviation of temperature, Pressure and level in storage tanks.
- Cooling arrangement will be provided for storage tank in case of fire/Heat.
- Double earthing system/Earthing grid will be provided for tanks.
- Safety system like Emergency Shut Down (ESD') switches will be provided for proper functioning.
- Sprinkler system, gas/fire detectors and Remote operated valves (ROV) will be provided as safety system.
- Lightening protection systems will be provided to cover tank farm.
- Wind socks at various locations to know the direction of wind in case of a leak or fire

Brief note on storage of Hazardous chemicals other than Tanks i.e. Drum, Barrels, Carboys, Bags etc.

- Store in designated ventilated godown, availability of safety showers, provision of dust mask, face shield and eye goggles
- Sprinklers System, Safety Showers will be provided.

Safety details of Hazardous Chemicals:

Type of Hazardous Chemicals	Safety measures
FLAMMABLE & EXPLOSIVE SOLVENTS	• Separate Isolated Storage Area will be constructed as per explosive department requirement and separation distance will be maintained, accordingly. • Workers and Operators handling such materials will be trained for the hazards (fire/explosion, health, and chemical reactivity) associated with them. • Lightening arrestor will be provided on the top of tallest structure. • NFPA label (hazard identification) capacity and content will be displayed on respective barrels. • Every time it will be ensured that barrels are cleaned and no chemicals are as a residue to avoid mixing and causing explosion or any mishap • While decanting chemicals proper earthing arrangement will be ensured to avoid static charge • Good housekeeping will be maintained. • Work Instructions shall be prepared and followed.

	• Proper health and safety rules for the same shall be followed. • Hazardous Solvents shall be received through truck in barrels and stored in storage area as per safety rules and guidelines. • Proper ventilation will be provided in storage room. • Proper label and identification board /stickers will be provided in the storage area. • Area shall be marked as “Hazardous Chemical Storage”, “No Smoking”, “Hot work Restricted”. No cell phones • Fire hydrant monitors, Flame detectors, Temperature actuated heat detectors with alarms, automatic sprinkler systems etc. shall be installed in storage area, if required. • Materials will be stored as per its compatibility study and separate area will be made for flammable, corrosive and toxic chemical storage. • Comp ability chart of chemicals stored will be displayed in storage area. • MSDS of chemicals stored will be available in storage area
FOR TOXIC CHEMICALS	• Storage area should be cool, dry, well ventilated, and clean and protected from external heat source. • It should be remote from elevators, gangways or ventilating systems. • Ventilation must be sufficient to prevent accumulation of vapour pockets. All fan switches should be outside the storage area. • The building for the storage should be entirely of non-combustible construction and separate from other building. In case the storage is not in a different building it should be ground floor with at least two exists opening outside and separated from other parts of the building by fire resisting walls and floors. • Keep "emergency kits' handy and in proper working condition to control leakage and train workers in their use. • Appropriate facility for absorption through caustic soda/lime/soda ash solutions should be established and maintained in the event of leakage. The containers should not be immersed in same absorption media. • Self-breathing apparatus, gas mask and 'emergency kits' should be located at strategic points under working condition and to be easily accessible in the event of emergency. • Appropriate minimum safety distances as stipulated in the above mentioned rules have to be maintained from buildings or group of buildings or adjacent property.

- **Applicability of PESO :** Yes, PESO permission will be obtain before commissioning of the project

H-2	**Types of hazardous Processes involved and its safety measures:** **(Hydrogenation process, Nitration process, Chlorination process, Exothermic Reaction etc.)**

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Type of Process	**Safety measures including Automation**

Dinitrochlorination	• DCS control system. • chlorine gas leakage detection sensors • Suitable MOC selection • 2 Stage scrubber • Closed loop system with high alarm alert. • High pressure and high temperature interlock to cut off steam.
Chlorination	• DCS control system. • chlorine gas leakage detection sensors • Suitable MOC selection • 2 Stage scrubber • Closed loop system with high alarm alert. • high pressure and high temperature interlock to cut off steam.
Fluorination	• In case of skin contact: Fluorine hydrolyzes very rapidly yielding hydrofluoric acid so that skin burns are like that from exposure to HF. Flush affected area with copious amounts of water for 5 minutes. Remove contaminated clothing as rapidly as possible. Apply 2.5% calcium gluconate gel to the affected area and continue to apply every 15 minutes while seeking immediate medical attention. • In case of eye contact: Fluorine is corrosive and irritating to the eyes. Flush contaminated eye(s) immediately with copious quantities of water. Continue for a minimum of 30 minutes. Seek medical attention immediately. • In case of inhalation: Even very low concentrations may irritate the respiratory tract and brief exposure to 50 ppm can be intolerable. High concentrations can cause severe damage to the respiratory system and can be fatal. PROMPT MEDICAL ATTENTION IS NECESSARY IN ALL CASES OF OVEREXPOSURE. Conscious persons should be assisted to an area with fresh, uncontaminated air. • In case of ingestion: Not a likely route of exposure
Nitration	• Nitration will be done in closed S.S vessels. • Nitric acid will be used for nitration process. Nitric acid is an extremely corrosive acid capable of causing severe chemical burns very rapidly. Because of the hazards posed by nitric acid, it is important to take safety measures whenever handling it. • In our nitration process, exothermic reaction will be controlled by adequate dosing of reaction chemicals in a fixed time (not short duration) having adequate cooling water circulation in jacket of reaction vessels. Thus, any energy generated due to exothermic reaction will be controlled by external cooling circulation and therefore vessels will not be pressurized. • The nitration reaction will be controlled by systematic cooling design to withdraw the energy evolved. • Adequate pressure relief valve will be provided for each vessels having pressure release capacity will be kept below -3 kg/cm2than that of reaction vessels.
Sulfonation	• To allocate sufficient resources to maintain safe and healthy conditions of work. • To take steps to ensure that all known safety factors are taken

		into account in the design, construction, operation and maintenance of plants, machinery and equipment. • To ensure that adequate safety instructions are given to all employees. • To provide necessary protective equipment, safety appliances and clothing wherever necessary and to ensure their proper use. • To inform employees about materials, equipment or processes used in their work, which are known to be potentially hazardous to health or safety. • To keep all operations and methods of work under regular review for making necessary changes from the point of view of safety. • To provide appropriate facilities for first aid and prompt treatment of injuries and illness at work.
	Bromination	• Inform all personnel of the potential hazards of contact with bromine and train them in appropriate first-aid procedures. • Store and handle bromine over drip pans drained by a sump that is vented to a scrubber system. • Bromine handling areas should be clearly marked and restricted to qualified and trained personnel only. • Maintain and clean uncontaminated equipment, floors, and work areas. • Immediately contain and clean up all bromine spills. • Wear approved respiratory equipment and protective clothing. • Carefully release anhydrous ammonia vapor to neutralize bromine vapors in the air. Be careful not to over apply anhydrous ammonia. • Pour soda ash solution or hypo solution1 on the liquid bromine to neutralize. • Using cold water, wash neutralized bromine to a sump for disposal. • Open doors and windows to ventilate. • Avoid contact of bromine with strong reducing agents, strong alkalis, metals, wood, paper products, fabric, grease, and oil or other combustible materials.
	Oxidation	• Appropriate personal protective equipment (e.g., safety goggles, gloves, fire resistant or all cotton lab coat) must be worn when working with oxidizers. • If a reaction is potentially explosive or if the reaction is unknown, use a fume hood (with the sash down as a protective barrier), safety shield, or other methods for isolating the material or the process. • The quantity of oxidizer used should be the minimum necessary for the procedure. Do not leave excessive amounts of an oxidizer in the vicinity of the process. • Oxidizers should be stored in a cool, dry place. • Oxidizers must be segregated from organic material, flammables, combustibles and strong reducing agents such as zinc, alkaline metals, and formic acid
	Hydrogenation	• DCS control system. • Hydrogen gas leakage detection sensors

	• Hydrogen gas venting system • Suitable MOC selection • Closed loop system with high alarm alert. • high pressure and high temperature interlock to cut off steam

H-3	**Details of Fire Load Calculation**

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Total Plot Area:	63738 m^2
Area utilized for plant activity:	14445
Area utilized for Hazardous Chemicals Storage:	1490 m^2
Number of Floors:	Ground +5 Floors
Water requirement for firefighting in KLD :	2460 m^3
Water storage tank provided for firefighting in KLD:	5000 m^3
Details of Hydrant Pumps:	2 Nos. of Electrical pumps (410 m3/hr capacity)
Nearest Fire Station :	Jhagadia Fire Station
Applicability of Off Site Emergency Plan:	Yes

-

H-4	**Details of Fire NOC/Certificate:** Will be obtained as it is a Greenfield project
H-5	**Details of Occupational Health Centre (OHC):**

-

Number of permanent Employee :	1
Number of Contractual person/Labour :	1
Area provided for OHC:	200 m^2
Number of First Aid Boxes :	20
Nearest General Hospital :	Jayaben Modi Hospital, Ankleshwar
Name of Antidotes to be store in plant :	**Chemical** / **Antidote / Medical Treatment**

				Toluene	• Wash the affected skin with plenty of water. • Administer Oxygen or shift to fresh air. • Diazepam 0.1 mg / kg. (iv), bed rest. • Don't apply Epinephrine, Ifridin etc. Don't apply milk, vegetable oil or alcohol. • Give Diazepam0.1 mg/kg (iv)slowly through injection, bed rest. • Diazem – 1 mg/kg. (Intravenous),Epencephala, Ephedrine		
				Methanol.	• Ethanol (30% solution from inside, 5% solution from outside i.e. by intravenous injection), Epicake Syrup. • In case of acidosis give Sodium bicarbonate. • In case of delirium give Diazepam 10 mg. by intravenous injection. • Folinic acid (Leucovorin), 1 mg/kg, iv, 4 hourly. • Other are activated charcoal with sorbitol • Caffeine • Calcium Gluconate • Oxygen		
				Chlorine	• Deriphylline Inj., Phenobarbitone Inj., Phenobarbitone Tab.		

- Project proponent (PP) and their Technical Expert from M/s. Eco chem sales and service remain present during video conference meeting.

1. Committee noted the reply presented by PP as follows:
   - ✓ PP has submitted notarized undertaking showing unit will unit first two, 50 TPH boiler of coal fired and then unit will install natural gas fired boiler on availability of Natural gas and submitted revised flue gas emission matrix.
   - ✓ Unit has proposed an in house Solvent recovery system as a part of the process plant.

Recovered solvent will be reused in the same process. There will be no generation of Spent solvent and submitted revised Hazardous waste matrix.

- ✓ SOP for toluene storage and its handling, revised CER activity and revised fire load calculation and safety details.

- Looking to notarized undertaking with mentioning. first two, 50 TPH boiler of coal fired and then unit will install natural gas fired boiler on availability of Natural gas in place of Notarized undertaking regarding utilization of natural gas as fuel as priority fuel after it is available, Committee asked for clarification regarding it. Technical expert of PP informed that proposed project is not economically viable due to using natural gas as fuel in place of coal. Committee disagree with request of PP and informed that as well established and diversified in various sector group, PP have to think about Environment in place of financial problem due to usage of natural gas as fuel. Looking to usage of coal as fuel 800 MT/Day which is huge quantity, Committee insisted for submission of status of Natural gas pipeline work in proposed project area in GIDC Jhagadia along with status of natural gas application by PP at respective authority for usage of natural gas as fuel, PP could not submit details regarding it.
- Looking to CER activity like fund for farmers and education purpose in nearby villages, Committee insisted for CER fund allocation for Environment purpose for which PP is agreed upon and later on submitted Revised CER activity for Environment purpose through e-mail.
- **After detailed discussion, Committee unanimously decided to consider the project in one of upcoming meeting after submission of following documents:**

1. Status of Natural gas pipeline work in proposed project area in GIDC Jhagadia along with status of natural gas application by PP at respective authority for usage of natural gas as fuel.

- PP submitted their reply on PARIVESH vide dated 30.09.2021
- PP was called for presentation on 06.10.2021.
- PP submitted as below:

2. Gujarat Gas Limited, has shown willingness, vide its letter no. GGL\C&M\ANK\NWPRS\11 dated August 27, 2021 to cater demand of 4450 SCM/hr natural gas for usage as fuel (For One Boiler of 50 TPH) through its widely spread network in the project area. And also submitted confirmation letter for the same from Gujarat Gas Limited.

- Committee found documents and reply submitted by PP were satisfactory.
- **After detailed discussion, Committee unanimously decided to recommend the project to SEIAA, Gujarat for grant of Environment Clearance with the following specific condition:**

SPECIFIC CONDITIONS:

1. Project proponent (PP) shall install CEMS **[Continuous Emission Monitoring System]** in line to CPCB directions to all SPCB vide letter no. B-29016/04/06PCI-1/5401 dated 05/02/2014 for effluent discharge and air emission as per pollutants discharge/emission from respective project and an arrangement shall also be done for reflecting the online monitoring results on the company's server, which can be assessable by the GPCB/CPCB on real time basis. **[For Small/Large/Medium (Red Category) & Whichever (Air emission & Effluent discharge) is applicable]**.
2. GPCB shall ensure compliance of direction under section 18 (1) (b) of the Water (Prevention and Control of Pollution) act, 1974 issued by CPCB regarding compliance of CETP and also that the pollution load is not increased in the CPA/SPA for the compliance of Hon'ble NGT order.
3. Close loop solvent recovery system with adequate condenser system shall be provided to recover solvent vapours in such a manner that recovery shall be maximum and recovered solvent shall be reused in the process within premises.
4. Leak Detection and Repair (LDAR) program shall be prepared and implemented as per the CPCB guidelines. LDAR Logbooks shall be maintained.
5. PP shall comply the approved wild life conservation plan for conservation of schedule/species conservation plan observed within the study area as per details submitted by PP.
6. The National Ambient Air Quality Emission Standards issued by the Ministry vide G. S. R. No. 826 (E) dated 16th November, 2009 shall be complied with.
7. National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G. S. R. 608 (E) dated 21/07/2010 and amended from time to time shall be followed.
8. Unit shall have to adhere to the prevailing area specific policies of GPCB with respect to the discharge of pollutants, and shall carry out the project development in accordance & consistence with the same.
9. The project proponent must strictly adhere to the stipulations made by the Gujarat Pollution Control Board, State Government and/or any other statutory authority.
10. All measures shall be taken to avoid soil and ground water contamination within premises.
11. PP shall use natural gas for utilities preferably but in case use of other fuel, PP shall put properly designed APCM with regular/periodic stack monitoring system to ensure that there shall be no increase in pollution load for the compliance of directives of Honourable NGT.

WATER

1. Total water requirement for the project shall not exceed 9803 KLD. Unit shall reuse 3474 KLD of treated industrial effluent within premises. Hence, fresh water requirement shall not exceed 6329 KLD and it shall be met through GIDC supply only. Prior permission from concerned authority shall be obtained for withdrawal of water.

2. The industrial effluent generation from the project shall not exceed 3653 KLD.
3. Total Industrial effluent shall be treated in ETP, RO & MEE+ATFD and treated effluent shall be sent to FETP of M/s NCT through pipeline for further treatment and disposal.
4. Unit shall discharge wastewater to GIDC underground drainage leading to FETP of M/s. NCT only after complying with inlet norms prescribed by GPCB and no adverse impacts on Environment and Human Health.
5. Domestic wastewater generation shall not exceed 100 KL/day for proposed project and it shall be treated in STP. It shall not be disposed off through soak pit/ septic tank.

AIR

6. Unit shall not exceed fuel consumption and provide APCM and Stack height as mentioned in flue gas matrix.
7. Unit shall provide APCM and stack height as mentioned in process gas matrix.
8. PP shall use approved fuels only as fuel in boilers.

HAZARDOUS & SOLID WASTE

9. All hazardous solid waste shall be managed as mentioned in hazardous waste matrix.
10. The unit shall submit the list of authorized end users of hazardous wastes along with MoU signed with them at least two months in advance prior to the commencement of production. In the absence of potential buyers of these items, the unit shall restrict the production of the respective items.

GREENBELT AREA

The PP shall develop green belt within premises (71009.27 Sq m i.e. 33.01 % of the total plot area) as per the undertaking submitted before SEAC. Green belt shall be developed with native plant species that are significant and used for the pollution abatement as per the CPCB guidelines. It shall be implemented within 3 years of operation phase in consultation with GPCB.

11. Safety & Health:

a) PP shall obtain PESO permission for the storage and handling of hazardous chemicals.
b) PP shall provide Occupational Health Centre (OHC) as per the provisions under the Gujarat Factories Rule 68-U.
c) PP shall obtain fire safety certificate / Fire No-Objection certificate (NOC) from the concern authority as per the prevailing Rules / Gujarat Fire Prevention and Life Safety Measures Act, 2016.
d) Unit shall adopt functional operations/process automation system including emergency response to eliminate risk associated with the hazardous processes.
e) PP shall carry out mock drill within the premises as per the prevailing guidelines of

safety and display proper evacuation plan in the manufacturing area in case of any emergency or accident.

f) PP shall install adequate fire hydrant system with foam trolley attachment within premises and separate storage of water for the same shall be ensured by PP.

g) PP shall take all the necessary steps for control of storage hazards within premises ensuring incompatibility of storage raw material and ensure the storage keeping safe distance as per the prevailing guidelines of the concerned authority.

h) PP shall take all the necessary steps for human safety within premises to ensure that no any harm is caused to any worker/employee or labor within premises.

i) Flame proof electrical fittings shall be provided in the plant premises, wherever applicable.

j) Unit shall provide effective fire hydrants, water monitors & foam application system at solvent storage area and unit shall provide adequate safety system such as water sprinklers, water curtains, foam pouring system etc. to restrict cascade fire emergency in solvent storage area.

09	**SIA/GJ/IND2/215664/2021**	**M/s. Kewin Chemicals Pvt Ltd.** Plot No. C1b-214, Phase-Ii, Vatva Gidc, Ahmedabad	**EC-Amendment**

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

Project status: **EC-Amendment**

- This is an existing unit proposed for expansion of manufacturing of “Synthetic Organic Chemicals” [API & its Intermediates] for which was accorded Environmental Clearance vide letter no. **SEIAA/GUJ/EC/5(f)/1200/2018** dated: 01/11/2018
- Now, project proponent has applied online vide proposal no. **SIA/GJ/IND2/215664/2021** for EC-Amendment in EC letter no. **SEIAA/GUJ/EC/5(f)/1200/2018** dated: 01/11/2018 for change in mode of disposal from common spray drying facility of GESCSL to CETP of GESCSL. PP further submitted that due to the proposed amendment there shall be no change in Production Profile, Raw Materials, Water balance, Air Profile,, ETP and other except mode of Discharge of treated effluent.
- PP was called for presentation in the SEAC meeting dated 13.07.2021.
- During the meeting dated 13.07.2021, technical presentation made during the meeting by technical expert of PP, M/s Green Circle Inc. Vadodara and project proponent.
- PP presented that they have applied for EC-Amendment for change in mode of disposal from common spray drying facility of GESCSL to CETP of GESCSL.
- PP presented the following documents:

- ✓ Requested to change mode of disposal from common spray drying facility of GESCSL to CETP of GESCSL. PP further submitted that due to the proposed amendment there shall be no change in Production Profile, Raw Materials, Water balance, Air Profile,, ETP and other except mode of Discharge of treated effluent

- Committee observed that CETP of GESCSL has not obtained CCA for their expanded capacity. Committee felt that performance of the CETP needs to be reviewed and such proposals with additional load to the CETP shall be considered only after valid CC&A of CETP.
- In view of the above facts and direction under section 18 (1) (b) of the Water (Prevention and Control of Pollution) act, 1974 issued by CPCB regarding compliance of CETP, after deliberation, SEAC unanimously decided to reconsider in the upcoming SEAC meeting only after satisfactory submission regarding CETP performance for last 6 months and valid CTO. Committee also decided to delist this application without intimation to the project proponent in case of non-submission of the additional details sought within 180 days.
- **This project has been scheduled on Parivesh portal due to technical error. However, Committee considered the proposal and heard the project proponent. Committee found that no new facts or information submitted in line with the earlier minutes dated 24.08.2021. After deliberation, SEAC unanimously decided to reconsider in the upcoming SEAC meeting only after satisfactory submission regarding CETP performance for last 6 months and valid CTO. Committee also decided to delist this application without intimation to the project proponent in case of non-submission of the additional details sought within 180 days.**

10	**SIA/GJ/IND2/224101/2021**	**M/s. Cambay Organics Pvt. Ltd.** Survey No 194/1,paiki,Village-Sokhada, Khambhat, Anand,	**EC-Corrigendum**

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

Project status: **EC-Corrigendum**

- This is a Brownfield project proposed for manufacturing of “Synthetic Organic Chemicals” [API & API intermediates] for which was accorded Environmental Clearance vide letter no. SEIAA/GUJ/EC/5(f)/735/2021 dated: 02.06.2021.
- Now, project proponent has applied online vide proposal no. SIA/GJ/IND2/224101/2021 for EC-Corrigendum in EC letter no. SEIAA/GUJ/EC/5(f)/735/2021 dated: 02.06.2021 in typographical error in the Name of Company. The details are as under:

Sr No	Condition no. in which changes propose	As per EC	As per proposed amendment	Justification

	d.			
1	Name of the Company	EC has been issued on the Company name i.e. **M/s. Cambay Organic Pvt. Ltd.**	Name of the company needs to be corrected as **M/s. Cambay Organics Pvt. Ltd.**	There is typographical error in the Name of Company in the EC letter (File no. SEIAA/GUJ/EC/5(f)/735/2021, dated: 2nd June, 2021). We have uploaded all documents (Form-1, PFR, Cover Letter & Format) in the name of **M/s. Cambay Organics Pvt. Ltd.** on Parivesh Portal (Dated: 25th September, 2020). During 158th SEAC meeting held on 23rd February 2021, we have submitted Form-1, PFR, Undertaking for pharma sector & EC Presentation (Dated:20th February, 2021) on the same company name. But by mistake we have submitted Standard format (Dated: 20th Fabruary, 2021) in the name of **M/s. Cambay Organic Pvt. Ltd.** **In 158th minutes of meeting of SEAC held on 23rd February 2021 and in grant EC Letter** (File no. SEIAA/GUJ/EC/5(f)/735/2021) dated 2nd June, 2021, we received the name of company as **M/s. Cambay Organic Pvt. Ltd.** Hence, kindly rectify the error in the Name of Company from **M/s. Cambay Organic Pvt. Ltd.** to **M/s. Cambay Organics Pvt. Ltd.**

- During meeting dated: 06.10.2021, committee noted that there is a typographical error in the Name of Company
- The facts were verified with online application, Agenda of SEAC meeting dated: 23.02.2021 and earlier Environment Clearance vide F. No. J-11011/597/2009-IA II (I) dated: 16.11.2010.
- Committee noted that there is a typographical error in the Name of Company detail in Environment Clearance letter.
- **After detailed deliberation, Committee unanimously decided to recommend grant of EC – Corrigendum to SEIAA, Gujarat with amended in the Name of Company shall be read as M/s. Cambay Organics Pvt. Ltd. and with remaining condition unchanged in EC granted by SEIAA, Gujarat vide Letter No. SEIAA/GUJ/EC/5(f)/735/2021 dated: 02.06.2021.**

11	**SIA/GJ/IND/222332/2021**	**M/S. Shah Paper Mills Ltd. (Unit-III)** Plot No. 792, 793, 40 shed area, GIDC Estate, Vapi, Dist: Valsad.	

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

Project status: **EC-Corrigendum**

- This is a Brownfield project proposed for **'Manufacturing of Paper from Waste Paper based Mills'** for which was accorded Environmental Clearance vide letter no. SEIAA/GUJ/EC/5(f)/1247/2021 dated: 02.07.2021.
- Now, project proponent has applied online vide proposal no. SIA/GJ/IND/222332/2021 for EC-Corrigendum in EC letter no. SEIAA/GUJ/EC/5(f)/1247/2021 dated: 02.07.2021 in typographical error in EC file No., Category, Foot note & Public Consultation details mentioned in paragraph. The details are as under:

Sr. No	**Condition no. in which changes proposed.**	**As per EC**	**As per proposed amendment**	**Justification**
1	Page no. 1	File No. SEIAA/GUJ/EC/**5(f)**/1247/2021	File No. SEIAA/GUJ/EC/**5(i)/**1247/2021	Project falls under 5(i) category
2	Page no. 1	Sub: In Category **5(f)** of Schedule annexed with EIA Notification dated 14/09//2006 Para1: which falls in the Category **5(f)** of Schedule of the EIA Notification 2006	In Category **5(i)** of Schedule annexed with EIA Notification dated 14/09//2006 which falls in the Category **5(i)** of Schedule of the EIA Notification 2006	Project falls under 5(i) category
3	Page no. 1	***Foot note** is missing below the table of existing and proposed production capacity	* CTE has been obtained for 4.8 MW Co-generation power plant vide CTE No.: 102718 dated 07.08.2019.	CTE letter was uploaded with EIA report.
4	Page no. 1	The project activity is covered in **5(f)** and is of 'B' category. Since the proposed project is located in notified industrial area, **public consultation is not required** as per paragraph 7 (i) (III) (i) (b) of the Environment Impact Assessment Notification-2006	Public hearing was carried out on 08.11.2019, as the project is of "Pulp & Paper Mills", 5(i) even if located in notified industrial area.	As per MoEFCC O.M. dated 27th April 2018, sr. no. (iii), stating Exemption shall not be applicable to following Projects or activities (located within the industrial estates/parks) which

				includes **"Category 5(i), Pulp & Paper Industry"**

- During meeting dated: 06.10.2021, committee noted that there are typographical error in EC file No., Category, Foot note & Public Consultation details mentioned in paragraph.
- The facts were verified with Acknowledgement slip of EC application.
- Committee noted that there are typographical error in EC file No., Category, Foot note & Public Consultation details mentioned in paragraph. in SEAC recommendation letter which was inadvertent.
- After detailed deliberation, Committee unanimously decided to recommend grant of EC **– Corrigendum to SEIAA, Gujarat with Corrections in** EC file No., Category, Foot note & Public Consultation details mentioned in paragraph **shall be read as under and with remaining conditions unchanged in EC granted by SEIAA, Gujarat vide Letter No. SEIAA/GUJ/EC/5(f)/1247/2021 dated: 02.07.2021.**
    - File no. in page no. 1 of EC letter i.e. SEIAA/GUJ/EC/5(i)/1247/2021
    - "In Category 5(i) of Schedule annexed with EIA Notification dated 14/09//2006" mentioned in page no. 1
    - Foot note to be included as "* CTE has been obtained for 4.8 MW Co-generation power plant vide CTE No.: 102718 dated 07.08.2019." below the Table of Products in page no. 1
    - The project activity is covered in 5(i) and is of 'B' category. Although the proposed project is located in notified industrial area, public consultation is required as per Sr. No.(iii) of Office Memorandum, MOEFCC dated 27th April 2018 and Public Hearing was carried out on 08.11.2019

12	**SIA/GJ/IND2/212927/2021**	**M/s. Navin Fluorine Advanced Sciences Ltd.** Plot No. D-2/11/A, GIDC Industrial Area, Dahej, Tal: Vagra, Dist: Bharuch	

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

Project status: **EC-Corrigendum**

- This is a Brownfield project proposed for manufacturing of "Synthetic Organic Chemicals" for

which was accorded Environmental Clearance vide letter no. SEIAA/GUJ/EC/5(f)/1329/2021 dated: 12.07.2021.

- Now, project proponent has applied online vide proposal no. SIA/GJ/IND2/221927/2021 for EC-Corrigendum in EC letter no. SEIAA/GUJ/EC/5(f)/1329/2021 dated: 12.07.2021 in printing error in name of the company. The details are as under:

Sr. no.	Condition no. in which Corrigendum is proposed.	As per EC	As per proposed Corrigendum	Justification
1.	Name of the Company	EC has been issued on the name of **M/s. Navin Fluorine Advanced Science Ltd.**	Name of the company needs to be corrected as **M/s. Navin Fluorine Advanced Sciences Ltd.**	There are printing error in the name of the company.

- During meeting dated: 06.10.2021, committee noted that there is a printing error in name of the company.
- The facts were verified with online application on Parivesh Portal vide Proposal No. SIA/GJ/IND2/19194/2012 dated: 22.04.2021.
- Committee noted that there is a printing error in the name of the company detail in Environmental Clearance letter.
- **After detailed deliberation, Committee unanimously decided to recommend grant of EC – Corrigendum to SEIAA, Gujarat with amended name of the company " M/s. Navin Fluorine Advanced Sciences Ltd" and with remaining condition unchanged in EC granted by SEIAA, Gujarat vide Letter No. SEIAA/GUJ/EC/5(f)/1329/2021 dated: 12.07.2021.**

13	**SIA/GJ/IND2/221853/2021**	**M/S. Shree Satya Sai Industries** Plot No.- 7904/C, Gidc Industrial Estate, Ankleshwar, Bharuch	EC Corrigendum

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

Project status: **EC-Corrigendum**

- This is a Brownfield project proposed for manufacturing of "Synthetic Organic Chemicals" [API & API intermediates] for which was accorded Environmental Clearance vide letter no. SEIAA/GUJ/EC/5(f)/950/2021 dated 24/06/2021.
- Now, project proponent has applied online vide proposal no. SIA/GJ/IND2/221853/2021 for EC-Corrigendum in EC letter no. SEIAA/GUJ/EC/5(f)/950/2021 dated: 24.06.2021 in typographical error in process gas generation source detail. The details are as under:

<table>
<tr><th>Sr. No</th><th>Condition no. in which changes proposed.</th><th>As per EC</th><th>As per proposed amendment</th><th>Justification</th></tr>
<tr><td>1</td><td>Section A.3 Water Condition No. 39</td><td>
<table>
<tr><th>Sr. No.</th><th>Stack Attached To</th><th>Stack Height</th><th>Air Pollution Control System</th><th>Parameter</th></tr>
<tr><td>1</td><td>Process Vent - 1 (Chlorination & Sulphonation) (Product No.- 46)</td><td>11 m</td><td>Two stage Water + Alkali Scrubber</td><td>HCl
SO_2</td></tr>
<tr><td>2</td><td>Process Vent - 2 (Bromination) (Product No.- 47)</td><td>11 m</td><td>Two stage Alkali Scrubber</td><td>HBr</td></tr>
<tr><td>3</td><td>Process Vent - 3 (Ammonification) (Product No.-48)</td><td>11 m</td><td>Two stage Acid Scrubber</td><td>NH_3</td></tr>
<tr><td>4</td><td>Process Vent – 4 (Nitration) (Product No.-44)</td><td>11 m</td><td>Two stage Alkali Scrubber</td><td>NO_X</td></tr>
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<tr><td>5</td><td>Process Vent – 5 (Florination) (Product No.-48)</td><td>11 m</td><td>Two stage Alkali Scrubber</td><td>HF</td></tr>
</table>
</td><td>SEAC MOM dated: 25.03.2021</td></tr>
</table>

- During meeting dated: 06.10.2021, committee noted that there is a typographical error in process gas generation source detail.
- The facts were verified with earlier SEAC meeting MOM dated: 25.03.2021 in which the EC case was appraised.
- Committee noted that there is a typographical error in process gas generation source detail in SEAC recommendation letter which was inadvertent.
- **After detailed deliberation, Committee unanimously decided to recommend grant of EC – Corrigendum to SEIAA, Gujarat with amended process gas generation source detail shall be read as below and with remaining condition unchanged in EC granted by SEIAA, Gujarat vide Letter No. SEIAA/GUJ/EC/5(f)/950/2021 dated: 24.06.2021.**

Sr. No.	Stack Attached To	Stack Height	Air Pollution Control System	Parameter
1	Process Vent - 1 (Chlorination & Sulphonation) (Product No.- 46)	11 m	Two stage Water + Alkali Scrubber	HCl SO_2
2	Process Vent - 2 (Bromination) (Product No.- 47)	11 m	Two stage Alkali Scrubber	HBr
3	Process Vent - 3 (Ammonification)	11 m	Two stage Acid Scrubber	NH_3

	(Product No.-48)			
4	Process Vent – 4 (Nitration) (Product No.-44)	11 m	Two stage Alkali Scrubber	NO_X
5	Process Vent – 5 (Florination) (Product No.-48)	11 m	Two stage Alkali Scrubber	HF

14	**SIA/GJ/IND2/221791/2021**	**M/s. N. V. Chemtech Private Limited** Plot No. C-256/2+C-256/3, Sayakha GIDC Industrial Estate, Sayakha, Vagra, Bharuch	EC Corrigendum

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

Project status: **EC-Corrigendum**

- This is a Greenfield project proposed for manufacturing of "Synthetic Organic Chemicals" [API & API intermediates] for which was accorded Environmental Clearance vide letter no. SEIAA/GUJ/EC/5(f)/1625/2020 dated: 31-12-2020.
- Now, project proponent has applied online vide proposal no. SIA/GJ/IND2/221791/2021 for EC-Corrigendum in EC letter no. SEIAA/GUJ/EC/5(f)/1625/2020 dated: 31-12-2020 in typographical error in condition regarding effluent treatment detail. The details are as under:

Sr No	**Condition no. in which changes proposed.**	**As per EC**	**As per proposed amendment**	**Justification**
1	Page no. 3 Condition no. 19	Proper logbooks of ETP; chemical consumption in Effluent treatment; quantity & quality of effluent fed into CMEE, quantity & quality of effluent reuse from RO plant, power consumption etc. shall be maintained and shall be furnished to the GPCB from time to time.	Proper logbooks of ETP; chemical consumption in Effluent treatment; ***quantity & quality of treated effluent***, power consumption etc. shall be maintained and shall be furnished to the GPCB from time to time.	There is typographical change in EC copy obtained from the applied proposal. Hence, correction is required.

- During meeting dated: 06.10.2021, committee noted that there is a typographical error in condition regarding effluent treatment.

- The facts were verified with earlier SEAC meeting MOM dated: 20.10.2020 in which the EC case was appraised.
- Committee noted that there is a typographical error in condition regarding effluent treatment detail in SEAC recommendation letter which was inadvertent.
- **After detailed deliberation, Committee unanimously decided to recommend grant of EC – Corrigendum to SEIAA, Gujarat with amended condition regarding effluent treatment detail shall be read as "Proper logbooks of ETP; chemical consumption in Effluent treatment; *quantity & quality of treated effluent*, power consumption etc. shall be maintained and shall be furnished to the GPCB from time to time." and with remaining condition unchanged in EC granted by SEIAA, Gujarat vide Letter No. SEIAA/GUJ/EC/5(f)/1625/2020 dated: 31-12-2020.**

15	**SIA/GJ/IND2/221768/2021**	**M/s. K.A. Malle Pharmaceuticals Ltd.** Plot No. 6005 and 6006/2A, Notified GIDC Industrial Estate, Ankleshwar, Bharuch	EC Corrigendum

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

Project status: **EC-Corrigendum**

- This is a Brownfield project proposed for manufacturing of "Synthetic Organic Chemicals" [API & API intermediates] for which was accorded Environmental Clearance vide letter no. SEIAA/GUJ/EC/5(f)/1189/2021 dated: 02.07.2021.
- Now, project proponent has applied online vide proposal no. SIA/GJ/IND2/221768/2021 for EC-Corrigendum in EC letter no. SEIAA/GUJ/EC/5(f)/1189/2021 dated: 02.07.2021 in typographical error in Proposal No. The details are as under:

Sr No	**Condition no. in which changes proposed.**	**As per EC**	**As per proposed amendment**	**Justification**
1	--	Proposal No. SIA/GJ/IND2/174928/2020	Proposal No. SIA/GJ/IND2/174393/2020	Correction required in Proposal No..

- During meeting dated: 06.10.2021, committee noted that there is a typographical error in Proposal No.
- The facts were verified with Acknowledgement slip of EC Application.

- Committee noted that there is a typographical error in Proposal No. in SEAC recommendation letter which was inadvertent.
- **After detailed deliberation, Committee unanimously decided to recommend grant of EC – Corrigendum to SEIAA, Gujarat with correction in Proposal No. shall be read as Proposal No. SIA/GJ/IND2/174393/2020 and with remaining condition unchanged in EC granted by SEIAA, Gujarat vide Letter No. SEIAA/GUJ/EC/5(f)/1189/2021 dated: 02.07.2021.**

16	**SIA/GJ/IND2/221630/2021**	**M/s. Avdhoot Pigments Pvt. Ltd** Plot No. 6213 & 6213/1, Notified GIDC Industrial Estate, Ankleshwar , Bharuch	EC Corrigendum

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

Project status: **EC-Corrigendum**

- This is a Brownfield project proposed for manufacturing of "Synthetic Organic Chemicals" for which was accorded Environmental Clearance vide letter no. SEIAA/GUJ/EC/5(f)/1206/2021 dated: 02.07.2021.
- Now, project proponent has applied online vide proposal no. SIA/GJ/IND2/221630/2021 for EC-Corrigendum in EC letter no. SEIAA/GUJ/EC/5(f)/1206/2021 dated: 02.07.2021 in typographical error in Name of unit detail. The details are as under:

Sr No	**Condition no. in which changes proposed.**	**As per EC**	**As per proposed amendment**	**Justification**
1	Page no. 1	Environment Clearance to M/s. Avadhoot Pigment Pvt. Ltd for setting up of expansion in manufacturing plant of 'Synthetic Organic Chemicals' at Plot no. 6213 & 6213/1, GIDC Ankleshwar, Ta-Ankleshwar, Dist – Bharuch in category 5(f) of Schedule annexed with EIA Notification dated 14/09/2006.	Environment Clearance to ***M/s. Avdhoot Pigments Pvt. Ltd.*** for setting up of expansion in manufacturing plant of 'Synthetic Organic Chemicals' at ***Plot No.: 6213 & 6213/1, Notified GIDC Industrial Estate, Ankleshwar, Dist.: Bharuch State-Gujarat, India.*** in category 5(f) of Schedule annexed with EIA Notification dated 14/09/2006.	Typographical correction is required in the name of unit.
2	Page no. 1	The proposal is for Environmental Clearance to M/s. Avadhoot Pigment Pvt.	The proposal is for Environmental Clearance to ***M/s. Avdhoot Pigments***	

		Ltd for setting up of expansion in manufacturing plant of 'Synthetic Organic Chemicals' at Plot no. 6213 & 6213/1, GIDC Ankleshwar, Ta-Ankleshwar, Dist – Bharuch. It is an existing unit for manufacturing following products, which falls in the category – 5(f) of the schedule of the EIA notification – 2006.	***Pvt. Ltd.*** for setting up of expansion in manufacturing plant of 'Synthetic Organic Chemicals' at ***Plot No.: 6213 & 6213/1, Notified GIDC Industrial Estate, Ankleshwar, Dist.: Bharuch State-Gujarat, India.*** It is an existing unit for manufacturing following products, which falls in the category – 5(f) of the schedule of the EIA notification – 2006.	
3	Page no. 9	Issued to: Avadhoot Pigment Pvt. Ltd Plot no. 6213 & 6213/1, GIDC Ankleshwar, Ta-Ankleshwar, Dist – Bharuch	Issued to: ***Avdhoot Pigments Pvt. Ltd.*** ***Plot No.: 6213 & 6213/1,*** ***Notified GIDC Industrial Estate,*** ***Ankleshwar, Dist.: Bharuch*** ***State- Gujarat, India.***	

- During meeting dated: 06.10.2021, committee noted that there is a typographical error in Name of Unit.
- The name of the unit was incorrect in SEAC as well as SEIAA MOM. MOM Correction letter was mailed by PP to SEAC and verified the same.
- Committee noted that there is a typographical error in Name of unit in SEAC recommendation letter which was inadvertent.
- **After detailed deliberation, Committee unanimously decided to recommend grant of EC – Corrigendum to SEIAA, Gujarat with Correction in Name of unit shall be read as " Environment Clearance to *M/s. Avdhoot Pigments Pvt. Ltd.* for setting up of expansion in manufacturing plant of 'Synthetic Organic Chemicals' at *Plot No.: 6213 & 6213/1, Notified GIDC Industrial Estate, Ankleshwar, Dist.: Bharuch State- Gujarat, India.* " and with remaining condition unchanged in EC granted by SEIAA, Gujarat vide Letter No. SEIAA/GUJ/EC/5(f)/1206/2021 dated: 02.07.2021.**

17	**SIA/GJ/IND2/221604/2021**	**M/s. Eskay Iodine Private Limited** Plot No. 907/2, Jhagadia Notified GIDC	EC Corrigendum

		Industrial Estate, Bharuch	

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

Project status: **EC-Corrigendum**

- This is a Brownfield project proposed for manufacturing of "Synthetic Organic Chemicals" **[API & API Intermediates]** for which was accorded Environmental Clearance vide letter no. SEIAA/GUJ/EC/5(f)/1244/2021 dated: 02.07.2021.
- Now, project proponent has applied online vide proposal no. SIA/GJ/IND2/221604/2021 for EC-Corrigendum in EC letter no. SEIAA/GUJ/EC/5(f)/1244/2021 dated: 02.07.2021 in typographical error in Proposal No. The details are as under:

Sr No	**Condition no. in which changes proposed.**	**As per EC**	**As per proposed amendment**	**Justification**
1	Page no. 1	Proposal No. SIA/GJ/IND2/176286/2021	Proposal No. SIA/GJ/IND2/176286/***2020***	Correction required in proposal No.

- During meeting dated: 06.10.2021, committee noted that there is a typographical error in Proposal No.
- The facts were verified with Acknowledgement slip of EC application.
- Committee noted that there is a typographical error in Proposal No. in SEAC recommendation letter which was inadvertent.
- **After detailed deliberation, Committee unanimously decided to recommend grant of EC – Corrigendum to SEIAA, Gujarat with Correction in Proposal No. shall be read as " Proposal No. SIA/GJ/IND2/176286/*2020* " and with remaining condition unchanged in EC granted by SEIAA, Gujarat vide Letter No. SEIAA/GUJ/EC/5(f)/1244/2021 dated: 02.07.2021.**

18	**SIA/GJ/IND2/221586/2021**	**M/s. Shreeji Chemical Industries** Plot No. 666, Notified GIDC Industrial Estate, Panoli- 394 116, Ankleshwar, Bharuch	EC Corrigendum

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

Project status: **EC-Corrigendum**

- This is a Brownfield project proposed for manufacturing of "Synthetic Organic Chemicals" **[API & API Intermediates]** for which was accorded Environmental Clearance vide letter no. SEIAA/GUJ/EC/5(f)/613/2021 dated: 11.05.2021.

- Now, project proponent has applied online vide proposal no. SIA/GJ/IND2/221586/2021 for EC-Corrigendum in EC letter no. SEIAA/GUJ/EC/5(f)/613/2021 dated: 11.05.2021 in typographical error in Proposal No. The details are as under:

Sr No	**Condition no. in which changes proposed.**	**As per EC**	**As per proposed amendment**	**Justification**
1	Page no. 1	Proposal No. SIA/GJ/IND2/152021/2020	Proposal No. SIA/GJ/IND2/**160953**/2020	Correction required in proposal No.

- During meeting dated: 06.10.2021, committee noted that there is a typographical error in Proposal No.
- The facts were verified with Acknowledgement slip of EC application.
- Committee noted that there is a typographical error in Proposal No. in SEAC recommendation letter which was inadvertent.
- **After detailed deliberation, Committee unanimously decided to recommend grant of EC – Corrigendum to SEIAA, Gujarat with Correction in Proposal No. shall be read as " Proposal No. SIA/GJ/IND2/160953/*2020* " and with remaining condition unchanged in EC granted by SEIAA, Gujarat vide Letter No. SEIAA/GUJ/EC/5(f)/613/2021 dated: 11.05.2021.**

19	**SIA/GJ/IND2/221182/2021**	**M/s. Pearl Chem** Plot No. 2900/118, GIDC- Ankleshwar, Tal. Ankleshwar, Bharuch-393002,	EC Corrigendum

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

Project status: **EC-Corrigendum**

- This is a Greenfield project proposed for manufacturing of "Synthetic Organic Chemicals" [API & API intermediates] for which was accorded Environmental Clearance vide letter no. SEIAA/GUJ/EC/5(f)/1167/2021 dated: 02.07.2021.
- Now, project proponent has applied online vide proposal no. SIA/GJ/IND2/221182/2021 for EC-Corrigendum in EC letter no. SEIAA/GUJ/EC/5(f)/1167/2021 dated: 02.07.2021 in typographical error in development of greenbelt detail. The details are as under:

Sr No	**Condition no. in which changes proposed.**	**As per EC**	**As per proposed amendment**	**Justification**

1	A. Conditions A.1 Specific Condition. No. 9	The PP shall develop greenbelt **[3200 Sq. m (40%) of the total plot area]** as committed before the SEAC. Greenbelt shall be developed with native plant species that are significant and used for the pollution abatement as per the CPCB guidelines. It shall be implemented within 3 years of operation phase in consultation with GPCB.	The PP shall develop greenbelt **[1280 Sq. m (40%) of the total plot area]** as committed before the SEAC. Greenbelt shall be developed with native plant species that are significant and used for the pollution abatement as per the CPCB guidelines. It shall be implemented within 3 years of operation phase in consultation with GPCB.	SEAC MOM dated: 29.04.2021

- During meeting dated: 06.10.2021, committee noted that there is a typographical error in development of greenbelt.
- The facts were verified with earlier SEAC meeting MOM dated: 29.04.2021 in which the EC case was appraised.
- Committee noted that there is a typographical error in development of greenbelt detail in SEAC recommendation letter which was inadvertent.
- **After detailed deliberation, Committee unanimously decided to recommend grant of EC – Corrigendum to SEIAA, Gujarat with amended development of greenbelt detail shall be read as " The PP shall develop greenbelt [1280 Sq. m (40%) of the total plot area] as committed before the SEAC. Greenbelt shall be developed with native plant species that are significant and used for the pollution abatement as per the CPCB guidelines. It shall be implemented within 3 years of operation phase in consultation with GPCB." and with remaining condition unchanged in EC granted by SEIAA, Gujarat vide Letter No. SEIAA/GUJ/EC/5(f)/1167/2021 dated: 02.07.2021.**

20	**SIA/GJ/IND2/221096/2021**	**M/s. Hetu Industries** Plot No. 1728/1, GIDC-Panoli, Tal.: Ankleshwar-394116, Dist: Bharuch	EC Corrigendum

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

Project status: **EC-Corrigendum**

- This is a Brownfield project proposed for manufacturing of "Synthetic Organic Chemicals" [API & API intermediates] for which was accorded Environmental Clearance vide letter no. SEIAA/GUJ/EC/5(f)/991/2021 dated: 29.06.2021.
- Now, project proponent has applied online vide SIA/GJ/IND2/221096/2021 for EC-Corrigendum in EC letter no. SEIAA/GUJ/EC/5(f)/991/2021 dated: 29.06.2021 in typographical error in industrial effluent generation detail. The details are as under:

Sr No	**Condition no. in which changes proposed.**	**As per EC**	**As per proposed amendment**	**Justification**
1	A.2 WATER: Condition 24.	The industrial effluent generation from the project shall not exceed 18.6 KLD.	The industrial effluent generation from the project shall not exceed 17.0 KLD.	SEAC MOM dated:15/04/2021

- During meeting dated:06/10/2021, committee noted that there is a typographical error in industrial effluent generation.
- The facts were verified with earlier SEAC meeting MOM dated: 15/04/2021 in which the EC case was appraised.
- Committee noted that there is a typographical error in industrial effluent generation detail in SEAC recommendation letter which was inadvertent.
- **After detailed deliberation, Committee unanimously decided to recommend grant of EC – Corrigendum to SEIAA, Gujarat with amended industrial effluent generation detail shall be read as " The industrial effluent generation from the project shall not exceed 17.0 KLD." and with remaining condition unchanged in EC granted by SEIAA, Gujarat vide Letter No. SEIAA/GUJ/EC/5(f)991/2021 dated: 29.06.2021.**

21	**SIA/GJ/IND2/221078/2021**	**M/s. Medikament Pharma** Plot No. C/368, GIDC Saykha Dis:- Bharuch	**EC-Amendment**

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

Project status: **EC-Amendment**

- This is a new project for manufacturing of "Synthetic Organic Chemicals" [API & its Intermediates] for which was accorded Environmental Clearance vide letter no. SEIAA/GUJ/EC/5(f)/303/2020 Date: 06/04/2020.

- Now, project proponent has applied online vide proposal no. SIA/GJ/IND2/215589/2021 for EC-Amendment in EC letter no. **SEIAA/GUJ/EC/5(F)/1444/2020 Date: 03/12/2020** as under:

Sr. no.	Condition no. in which Amendment is proposed.	As per EC	As per proposed amendment	Justification
1	Product List	Some CAS no of products are wrong	Correction in CAS no of products	---
2	13	Total fresh water requirement for the project shall not exceed 66 KLD and it shall be met through GIDC water supply only. Prior permission from the concerned authority shall be obtained for withdrawal of water.	Total fresh water requirement for the project shall not exceed 70 KLD and it shall be met through GIDC water supply only. Prior permission from the concerned authority shall be obtained for withdrawal of water.	Increasing water consumption in domestic purpose.
3	**16**	Industrial effluent shall be segregated into two streams (1) Low Concentration Effluent (2) High Concentration Effluent and it shall be treated as below. a) Entire high COD/TDS effluent generated from process (54 KLD) shall be treated in in-house primary ETP-1 followed by stripper and treated effluent shall be subjected to MEE , condensate of MEE (53.3 KLD) will be send to ETP-2 while concentrated will be treated in ATFD and generated salt/residue will be	Industrial effluent shall be segregated into two streams (1) Low Concentration Effluent (2) High Concentration Effluent and it shall be treated as below. c) Entire high COD/TDS effluent generated from process (24 KLD) shall be treated in in-house primary ETP-1 followed by stripper and treated effluent shall be sent to CMEE of M/s. BEIL. **d)** Entre low COD effluent generated (40 KLD) from washing (5 KLD), 5 KLD domestic, 30 KLD Industrial effluent shall be treated in in-house ETP -2 consisting of primary treatment followed by secondary and tertiary treatment units shall be sent to CETP, Saykha for	Change in effluent disposal mode.

		disposed in approved TSDF. b) Entre low COD effluent generated (5 KLD) from washing (4 KLD) , boiler blow down (0.5 KLD) and cooing tower blow down (0.5 KLD) shall be treated in in-house ETP -2 consisting of primary treatment followed by secondary and tertiary treatment units along with condensate form MEE (53.3 KLD) and treated effluent (58.3 KLD) shall be sent to CETP, Saykha for further treatment and disposal after achieving CETP inlet norms.	further treatment and disposal after achieving CETP inlet norms.	
4	**17**	Domestic wastewater generation shall not exceed 1 KID and it shall be disposed off into soak pit via septic tank.	Domestic wastewater generation shall not exceed 5 KID and it shall be treated along with industrial effluent.	As unit is increasing the water consumption for domestic purpose.
5	**20**	**Change in flue gas emission condition**		The unit is increasing the capacity of boiler.

EXISTING AS PER EC

Sr. No.	Stack attached to	Stack height	Type of Fuel	Quantity of Fuel	Permissible Emission	Air Pollution Control Equipment

1.	Boiler – 600 kg/Hr – 1 No.	30 m	Coal OR Agro briquettes OR Natural Gas	3 MT/Day **OR** 3.4 MT/Day **OR** 400 m^3/day	PM SO2 NOx	Multi Cyclone Separator, Bag Filter and Scrubber
2.	Thermic Fluid Heater – 2 lacs Kcal/Hr.	30 m				
3.	D.G. Set – 200 KVA	5 m	HSD	32 Lit / Hr		Stack Height, Acoustic Enclosure

AFTER EC AMENDMENT

Sr. No.	Stack attached to	Stack height	Type of Fuel	Quantity of Fuel	Permissible Emission	Air Pollution Control Equipment
1.	Boiler – 2 TPH – 1 No.	30 m	Coal OR Agro briquettes OR Natural Gas	6 MT/Day **OR** 6.8 MT/Day **OR** 800 m^3/day	PM SO2 NOx	Multi Cyclone Separator, Bag Filter and Alkali Scrubber
2.	Thermic Fluid Heater – 2 lacs Kcal/Hr.	30 m				
3.	D.G. Set – 500 KVA	12 m	HSD	65 Lit / Hr		Stack Height, Acoustic Enclosure

*Whenever natural gas will be made available, unit will use natural gas a primary fuel.

28	Change in hazardous waste condition	Change in hazardous disposal mode

AFTER EC AMENDMENT

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.	Process residue	Process (Maximum from Group no. 1 – Product - Sitagliptin And/Or its intermediates, Maximum from Group no. 2 – Product - Valacyclovir hydrochloride And/Or its intermediates , Maximum from	28.1 (Sch. I)	1,389.71	Collection, Storage and send to Co-processing/ Incinerator for further treatment.

			Group no. 3 – Product - Varenicline tartrate And/Or its intermediates, Maximum from Group no. 4 – Product - Omeprazole And/Or its intermediates, Maximum from Group no. 5 – Product - Amlodipine And/Or its intermediates, From Group no. 6 – Product - Tamoxifen And/Or its intermediates , Zopiclone And/Or its intermediates, Cyclosporine And/Or its intermediates)			
	2.	Distillation residue	Process (Maximum from Group no. 1 – Product - Aripiprazole And/Or its intermediates, Maximum from Group no. 2 - Product - Valacyclovir hydrochloride And/Or its intermediates, Maximum from Group no. 3 – Product - Simvastatin And/Or its intermediates, Maximum from Group no. 4 – Only from product - Telmisartan And/Or its intermediates, Maximum from Group no. 5 – Product - Mirtazapine Hemihydrate And/Or its intermediates, From Group no. 6 –	20.3 (Sch. I)	1,747.34	Collection, Storage, Transportation & send to CHWIF or co-processing.

			Product - Cyclosporine And/Or its intermediates, Digoxin And/Or its intermediates)			
	3.	Spent carbon	Process (Maximum from Group no. 1 – Product – Levetiracetam And/Or its intermediates, Maximum from Group no. 2 – Product - Solifenacin And/Or its intermediates, Maximum from Group no. 3 – Product - Tadalafil And/Or its intermediates , Maximum from Group no. 5 – Product - Vildagliptin And/Or its intermediates, From Group no. 6 – Product - Tamoxifen And/Or its intermediates , Zopiclone And/Or its intermediates , Digoxin And/Or its intermediates)	28.3 (Sch. I)	516.20	Collection, Storage, Transportation & send to CHWIF or co-processing.
	4.	ETP Sludge	ETP	35.3 (Sch. I)	300.00	Collection, Storage, Transportation & Send to TSDF site.
	5.	Used Oil	Machinery	5.1 (Sch. I)	250.00 kl/Month	Collection, Storage, Transportation, Disposal by selling to GPCB/ MoEF approved recycler/ reuse as lubricant within premises.
	6.	Discarded Container/ barrels/	Raw Material Storage area and Finished product	33.1 (Sch. I)	750.00 Nos./Month	Collection, Storage, Transportation, Decontamination,

		liners	packing Material			Disposal by send to the GPCB authorized dealer.
	7.	MEE Salt	ATFD	35.3 (Sch. I)	0 (As per EC it is 1460 MT/Annum)	Collection, Storage, Transportation & send to TSDF site.
	8.	Allumina Powder	Process (Group no. 6 - only from product - Digoxin And/Or its intermediates)	28.1 (Sch. I)	1.08	Collection, Storage, Transportation & send to TSDF site.
	9.	Lanata leaves	Process (Group no. 6 - only from product - Digoxin And/Or its intermediates)	28.1 (Sch. I)	175.70	Collection, Storage and send to Incinerator for further treatment.
	10.	Spent Solvent	Process (Group no. 1 – Only from Product - N,N Dimethyl Form amide Diemthyl Acetal, Maximum from Group no. 3 – Product - Ramipril And/Or its intermediates , Group no. 5 – Only from Product - Azithromycin monohydrate And/Or its intermediates , Group no. 6 – Only from Product - Digoxin And/Or its intermediates)	20.2 (Sch. I)	1,704.00	Collection, Storage and Sold to actual users having permission of Rule – 9 from SPCB/CPCB.
			Stripper		250.00 KL/ Annum	
	11.	Ammonium Sulphate	Scrubbing Media	35.1 (Sch. I)	180.00	Collection, Storage and send into ETP.
	12.	Ammonium Chloride	Scrubbing Media	35.1 (Sch. I)	14.93	Collection, Storage and send into ETP.
	13.	Sodium sulphate	Scrubbing Media	35.1 (Sch. I)	30.00	Collection, Storage and send into ETP
			Process (Maximum	28.1 (Sch.	1,202.	Collection, Storage,

			from Group no. 1 – Product - Levetiracetam And/Or its intermediates, Group no. 3 - only from product - Quetiapine And/Or its intermediates)	I)	00	reused as raw material (Product - Levetiracetam And/Or its intermediates, Escitalopram oxalate And/Or its intermediates, Darunavir And/Or its intermediates, Solifenacin And/Or its intermediates, Apremilast And/Or its intermediates, Desloratidine And/Or its intermediates, Quetiapine And/Or its intermediates, Capecitabine And/Or its intermediates, Tamoxifen And/Or its intermediates)
	14.	Hydrogen Chloride (30%)	Scrubbing Media	35.1 (Sch. I)	38.40	Collection, Storage and send it to ETP.
			Process (Maximum from Group no. 1 – Product - Bis(2-chloroethyl)amine hydrochloride)	28.1 (Sch. I)	327.60	Collection, Storage, reused as raw material (Product - 4-Methyl Cathechol Diacetic Acid Dimethyl Ester).
	15.	Aluminium hydroxide	Process (Only from Group no. 1 – Product - Guanidine)	28.1 (Sch. I)	645.80	Collection, Storage and send it to ETP.
	16.	Potassium sulphate	Process (Group no. 1 - only from product - Trimethoprim And/Or its intermediates)	28.1 (Sch. I)	38.96	Collection, Storage and send it to ETP.
	17.	Boric acid	Process (Group no. 2 - only from product - Phenylephrine And/Or its intermediates)	28.1 (Sch. I)	16.74	Collection, Storage and send it to ETP.
	18.	Triphenyl Carbinal	Process (Group no. 1 - only from product -	28.1 (Sch. I)	180.00	Collection, Storage and send it to ETP.

			Zidovudine And/Or its intermediates)			
	19.	Piperazine Hydrochloride	Process (Group no. 3 - only from product - Ciprofloxacin HCL And/Or its intermediates)	28.1 (Sch. I)	24.80	Collection, Storage and send it to ETP.
	20.	Tert. Butyl alcohol	Process (Group no. 1 - only from product Saxagliptin And/Or its intermediates)	28.1 (Sch. I)	90.72	Collection, Storage and send it to ETP.
	21.	P - Toluene Sulfonic acid	Process (Group no. 5 - only from product - Clopidogrel Bisulphate And/Or its intermediates)	28.1 (Sch. I)	5.11	Collection, Storage and send it to ETP.
	22.	Sulphuric acid	Process (Maximum from Group no. 1 – Product - Trimethoprim And/Or its intermediates)	28.1 (Sch. I)	242.00	Collection, Storage, reused as raw material (Product 2 Bromo 4-5-Dimethoxy Benzyl Bromide, 2,3,4 Bis - o-(1 methyl)-B-D-Fructopyranose).
	23.	Sodium Nitrate	Process (Group no. 1 - only from product - Trimethoprim And/Or its intermediates)	28.1 (Sch. I)	115.90	Collection, Storage, reused as raw material (Product - 4-Iso Propyl Catechol, Apixaban And/Or its intermediates).
	24.	Potassium Carbonate	Process (Group no. 1 - only from product - Lansoprazole And/Or its intermediates)	28.1 (Sch. I)	343.80	Collection, Storage, reused as raw material (Product - 6-Chloro-5(2-Chlor Ethyl) Oxindole, Doxofylline And/Or its intermediates)
	25.	Sodium Chloride	Process (Maximum from Group no. 1 – Product - 2-Diethylaminoethane thiol , Group no. 2 - Only from product - Phenylephrine And/Or its intermediates, Maximum from	28.1 (Sch. I)	427.00	Collection, Storage, reused as raw material (Product -. Topiramate And/Or its intermediates, Sitagliptin And/Or its intermediates, Paroxetine HCl Hemihydrate And/Or its

			Group no. 3 – Product - Fluconazole And/Or its intermediates)			intermediates, Darunavir And/Or its intermediates, Zidovudine And/Or its intermediates, Fluconazole And/Or its intermediates, Capecitabine And/Or its intermediates, Vildagliptin And/Or its intermediates, Carvedilol And/Or its intermediates, Lisinopril And/Or its intermediates).
	26.	Zinc Chloride	Process (Maximum from Group no. 1 - Product - Sesamol)	28.1 (Sch. I)	594.00	Collection, Storage, reused as raw material (Product - 6-Chloro-5(2-Chlor Ethyl) Oxindole, Sesamol)
	27.	Aluminium Chloride	Process (Only from Group no. 1 - Product - 2-Methyl-4,5-Dimethoxybenzoic Acid)	28.1 (Sch. I)	475.00	Collection, Storage, reused as raw material (Product - 2-Methyl-4,5-Dimethoxybenzoic Acid , Guanidine)
	28.	Sodium Hydroxide	Process (Maximum from Group no. 1 – product - Trimethoprim And/Or its intermediates)	28.1 (Sch. I)	60.00	Collection, Storage, reused as raw material (Product 4-Iso Propyl Catechol, 2-Diethylaminoethane thiol ,Etodolac And/Or its intermediates, Naproxen And/Or its intermediates, Pregabalin And/Or its intermediates, Trimethoprim And/Or its intermediates).
	29.	Sodium Acetate	Process (Group no. 1 - only from product - Naproxen And/Or its intermediates)	28.1 (Sch. I)	9.26	Collection, Storage, reused as raw material (Product - Apixaban And/Or its intermediates).
					330.50	Collection, Storage and Sold to actual users having

						permission of Rule – 9 from SPCB/CPCB.
	30.	Ammonium acetate	Process (Group no. 1 - only from product - Trimethoprim And/Or its intermediates)	28.1 (Sch. I)	187.85	Collection, Storage, reused as raw material (Product - Lansoprazole And/Or its intermediates, Omeprazole And/Or its intermediates).
					74.23	Collection, Storage and send it to ETP.
	31.	Sodium Bisulfate	Process (Only from Group no. 1 – Product - 2-Methyl-4,5-Dimethoxybenzoic Acid)	28.1 (Sch. I)	24.90	Collection, Storage, reused as raw material (Product - Bisoprolol And/Or its intermediates, Digoxin And/Or its intermediates)
					510.10	Collection, Storage and send it to ETP.
	32.	Sodium Bromide	Process (Maximum from Group no. 1 – Product - 4-Iso Propyl Catechol , Group no. 2 - Only from Product - Phenylephrine And/Or its intermediates)	28.1 (Sch. I)	1.20	Collection, Storage, reused as raw material (Product - Silodosin And/Or its intermediates)
					701.80	Collection, Storage and Sold to actual users having permission of Rule – 9 from SPCB/CPCB

- PP was called for presentation in the SEAC meeting dated 06.10.2021.

- During the meeting dated 06.10.2021, technical presentation made during the meeting by technical expert of PP, M/s. JYOTI OM CHEMICAL RESEARCH CENTRE PVT.LTD and Project Proponent.
- PP presented that they have applied for EC-Amendment for following purposes.
  1) To correct the CAS no of granted products.
  2) To increase the boiler capacity from 1 TPH to 2 TPH.
  3) To increase the D.G.Set capacity from 200 KVA to 500 KVA.
  4) To change the effluent treatment scheme.
  5) To Change the Hazardous waste disposal scheme
- PP presented the following documents:
  - ✓ Revised product list, revised flue gas emission details, Revised ETP Scheme, Revised Water Balance diagram and Revised Hazardous waste matrix with change in disposal mode.
- Committee found submission of project proponent satisfactory.
- **After detailed deliberation, Committee unanimously decided to recommend grant of EC – Amendment to SEIAA, Gujarat with change in "Condition No. 13,15,16,17,20,28" as follows and with remaining condition unchanged in EC granted by SEIAA, Gujarat vide Letter No** SEIAA/GUJ/EC/5(f)/303/2020 Date: 06/04/2020.
- ***Condition No. 13, 15, 16, 17, 20, 28 of the environment clearance order no SEIAA/GUJ/EC/5(f)/303/2020 have been amended and shall be read as under:***

The product profile shall be read as under after EC amendment:

Sr. No	Name of the Products	CAS no. /CI no.	Quantity (MT/Month)	End-use of the products
Group 1				
1.	2 Bromo 4-5- Dimethoxy Benzyl Bromide **AND/OR**	53207-00-4	**40.00**	Pharma Intermediates
2.	2-(Diethylamino)ethyl Chloride Hydrochloride **AND/OR**	869-24-9		Amiodarone, Bietaserpine, Butetamate, Camylofin, Ciclonium bromide, Clomifene, Cloricromen, DEA Dextran, Dimazole, Etafenone, Etamiphylline, Fenoxedil, Flurazepam, Gallamine triethiodine, Imolamine, Isothipendyl, Methadone, Myrtecaine, Naftidrofuryl, Oxitefonium bromide, Penthienate

				methobromide, Phenglutarimide, Promethazine, Propoxycaine, Proxymetacaine, Tiamulin, Tibezonium iodide, Tiropramide
3.	2,3,4 Bis -o-(1 methyl)-B-D-Fructopyranose **AND/OR**	N/A		Topiramate
4.	2-Methyl-4,5-Dimethoxybenzoic Acid **AND/OR**	N/A		Fragrance Intermediate
5.	3-Methoxy Phenol **AND/OR**	150-19-6		Aroma chemical
6.	4-Iso Propyl Catechol **AND/OR**	2138-43-4		Perfumery agent
7.	4-Methyl Cathechol Diacetic Acid Dimethyl Ester **AND/OR**	52589-39-6		Fragrance Intermediate
8.	6 chloro hexanol **AND/OR**	2009-83-8		Aroma Chemical
9.	6-Chloro-5(2-Chlor Ethyl) Oxindole **AND/OR**	118289-55-7		Ziprasidone
10.	Benzaldehyde Dimethyl Acetal **AND/OR**	1125-88-8		Flavor and Compounds
11.	Bis(2-chloroethyl)amine hydrochloride **AND/OR**	821-48-7		Aripiprazole, Batoprazine, Cyclophosphamide, Eltoprazine hydrochloride, Estramustine phosphate, Ifosfamide, Itraconazole, Ketoconazole, Lensiprazine, Naluzotan, Trazodone
12.	Cetyl Pyridinium Chloride **AND/OR**	123-03-5		This is mainly used in mouthwashes, toothpastes, lozenges, throat sprays, Breathe sprays, antiseptic towels, and nasal sprays.
13.	Lasamide **AND/OR**	2736-23-4		Furosemide
14.	N,N Dimethyl Form amide Diemthyl Acetal **AND/OR**	4637-24-5		Imatinib,itraconazole
15.	Sesamol **AND/OR**	533-31-3		Paroxetine
16.	2-Diethylaminoethanethiol **AND/OR**	1942-52-5		Desvenlafaxine
17.	Guanidine **AND/OR**	50-01-1		sulfamethyldiazine, sulfamethazine and folic acid intermediates
	Analgesic			
18.	Dimethyl fumarate And/Or its intermediates **AND/OR**	624-49-7		Analgesic
19.	Etodolac And/Or its intermediates **AND/OR**	41340-25-4		Analgesic
20.	Iguratimod And/Or its intermediates **AND/OR**	123663-49-0		Analgesic

21.	Naproxen And/Or its intermediates **AND/OR**	22204-53-1		Analgesic
22.	Pregabalin And/Or its intermediates **AND/OR**	148553-50-8		Analgesic
	Anti Prostatic			
23.	Naftopidil And/Or its intermediates **AND/OR**	57149-07-2		AntiProstatic
	AntiArrhythmias			
24.	Ivabradine Hcl And/Or its intermediates **AND/OR**	148849-67-6		AntiArrhythmias
	AntiAsthmatic			
25.	Doxofylline And/Or its intermediates **AND/OR**	69975-86-6		AntiAsthmatic
	AntiBiotic			
26.	Amoxicillin And/Or its intermediates **AND/OR**	26787-78-0		Antibiotic
27.	Chloramphenicol And/Or its intermediates **AND/OR**	56-75-7		Antibiotic
28.	Doxycycline And/Or its intermediates **AND/OR**	24390-14-5		Antibiotic
29.	Erythromycin And/Or its intermediates **AND/OR**	114-07-8		Antibiotic
30.	Metronidazole And/Or its intermediates **AND/OR**	443-48-1		Antibiotic
31.	Trimethoprim And/Or its intermediates **AND/OR**	738-70-5		Antibiotic
	AntiCoagulant			
32.	Dabigatran And/Or its intermediates **AND/OR**	211914-51-1		AntiCoagulant
33.	Rivaroxaban And/Or its intermediates **AND/OR**	366789-02-8		AntiCoagulant
34.	Warfarin And/Or its intermediates **AND/OR**	81-81-2		AntiCoagulant
	AntiConvulsants			
35.	Carbamazepine And/Or its intermediates **AND/OR**	298-46-4		AntiConvulsants
36.	Levetiracetam And/Or its intermediates **AND/OR**	102767-28-2		AntiConvulsants
37.	Topiramate And/Or its intermediates **AND/OR**	97240-79-4		AntiConvulsants
	AntiDepressant			
38.	Desvenlafexine And/Or its intermediates **AND/OR**	93413-62-8		AntiDepressant
39.	Venlafaxine hydrochloride And/Or its intermediates **AND/OR**	99300-78-4		AntiDepressant
	AntiDiabetic			
40.	Gliclazide And/Or its intermediates **AND/OR**	21187-98-4		AntiDiabetic
41.	Glipizide And/Or its intermediates **AND/OR**	29094-61-9		AntiDiabetic
42.	Metformin Hydrochloride	1115-70-4		AntiDiabetic

	And/Or its intermediates **AND/OR**			
43.	Saxagliptin And/Or its intermediates **AND/OR**	709031-78-7		AntiDiabetic
44.	Sitagliptin And/Or its intermediates **AND/OR**	654671-77-9		AntiDiabetic
45.	Voglibose And/Or its intermediates **AND/OR**	83480-29-9		AntiDiabetic
	AntiHypertensive			AntiDiabetic
46.	Diltiazem hydrochloride And/Or its intermediates **AND/OR**	33286-22-5		AntiDiabetic
47.	Irbesartan And/Or its intermediates **AND/OR**	138402-11-6		AntiDiabetic
48.	Metoprolol Succinate And/Or its intermediates **AND/OR**	98418-47-4		AntiDiabetic
49.	Perindopril And/Or its intermediates **AND/OR**	82834-16-0		AntiDiabetic
50.	Valsartan And/Or its intermediates **AND/OR**	137862-53-4		AntiDiabetic
	AntiLipemic			
51.	Fenofibrate And/Or its intermediates **AND/OR**	49562-28-9		AntiLipemic
	AntiPsychotic			AntiLipemic
52.	Aripiprazole And/Or its intermediates **AND/OR**	129722-12-9		AntiLipemic
53.	Clozapine And/Or its intermediates **AND/OR**	5786-21-0		AntiLipemic
54.	Escitalopram oxalate And/Or its intermediates **AND/OR**	128196-01-0		AntiLipemic
55.	Olanzapine And/Or its intermediates **AND/OR**	132539-06-1		AntiLipemic
	Erectile Dysfunction			
56.	Sildenafil Citrate And/Or its intermediates **AND/OR**	171599-83-0		Erectile Dysfunction
	Proton Pump Inhibitors			
57.	Esomeprazole magnesium And/Or its intermediates **AND/OR**	217087-09-7		Proton Pump Inhibitors
58.	Lansoprazole And/Or its intermediates **AND/OR**	103577-45-3		Proton Pump Inhibitors
	SSRIs			
59.	Citalopram And/Or its intermediates **AND/OR**	85118-27-0		SSRIs
60.	Paroxetine HCl Hemihydrate And/Or its intermediates **AND/OR**	110429-35-1		SSRIs
61.	Sertraline And/Or its intermediates	79559-97-0		SSRIs
Group 2				
	AntiMuscarinics			
62.	Tiotropium Bromide And/Or its intermediates **AND/OR**	139404-48-1		AntiMuscarinics

	AntiOsteoporotic			
63.	Alendronate sodium And/Or its intermediates **AND/OR**	121268-17-5		AntiOsteoporotic
	AntiRetroviral		**10.00**	
64.	Darunavir And/Or its intermediates **AND/OR**	206361-99-1		AntiRetroviral
65.	Zidovudine And/Or its intermediates **AND/OR**	30516-87-1		AntiRetroviral
	AntiVirals			
66.	Valacyclovir hydrochloride And/Or its intermediates **AND/OR**	124832-27-5		AntiVirals
	Benzodiazepines			
67.	Diazepam And/Or its intermediates **AND/OR**	439-14-5		Benzodiazepines
	Chelating Agent			
68.	Deferasirox And/Or its intermediates **AND/OR**	201530-41-8		Chelating Agent
	Corticosteroids			
69.	Prednisolone sodium phosphate And/Or its intermediates **AND/OR**	50-24-8		Corticosteroids
	Hyperuricemia			
70.	Febuxostat And/Or its intermediates **AND/OR**	144060-53-7		Hyperuricemia
	Immunosuppressant			
71.	Mycophenolate Mofetill And/Or its intermediates **AND/OR**	128794-94-5		Immunosuppressant
	Iron Deficiency			
72.	Iron Sucrose Complex And/Or its intermediates **AND/OR**	8047-67-4		Iron Deficiency
	Leukotriene Receptor Antagonist			
73.	Montelukast Sodium And/Or its intermediates **AND/OR**	151767-02-1		Leukotriene Receptor Antagonist
	Overactive Bladder			
74.	Solifenacin And/Or its intermediates **AND/OR**	242478-38-2		Overactive Bladder
	Rheumatoid Arthritis			
75.	Baricitinib And/Or its intermediates **AND/OR**	1187594-09-7		Rheumatoid Arthritis
	Vasoconstrictor			
76.	Phenylephrine And/Or its intermediates **AND/OR**	61-76-7		Vasoconstrictor
	Vitamins			
77.	Folic acid And/Or its intermediates **AND/OR**	59-30-3		Vitamins
78.	Methylcobalamin And/Or its intermediates **AND/OR**	13422-55-4		Vitamins
79.	(+_)3-(Carbamoyl methyl)-5-methyl hexanoic acid	181289-33-8		Pregabaline Intermediate
Group 3				
	Alzheimer's Disease			

80.	Memantine HCL And/Or its intermediates **AND/OR**	41100-52-1	**5.00**	Alzheimer's Disease
	Analgesic			
81.	Etoricoxib And/Or its intermediates **AND/OR**	202409-33-4		Analgesic
82.	Flurbiprofen And/Or its intermediates **AND/OR**	5104-49-4		Analgesic
83.	Gabapentin And/Or its intermediates **AND/OR**	60142-96-3		Analgesic
84.	Lidocaine HCL And/Or its intermediates **AND/OR**	6108-05-0		Analgesic
	AntiArrhythmias			
85.	Amiodarone And/Or its intermediates **AND/OR**	19774-82-4		AntiArrhythmias
	AntiArthritis			
86.	Apremilast And/Or its intermediates **AND/OR**	608141-41-9		AntiArthritis
	AntiAsthmatic			
87.	Salbutamol And/Or its intermediates **AND/OR**	18559-94-9		AntiAsthmatic
	AntiBiotic			
88.	Ciprofloxacin HCL And/Or its intermediates **AND/OR**	93107-08-5		AntiBiotic
	AntiDiabetic			
89.	Teneligliptin And/Or its intermediates **AND/OR**	760937-92-6		AntiDiabetic
	AntiFungals			
90.	Fluconazole And/Or its intermediates **AND/OR**	86386-73-4		AntiFungals
91.	ketoconazole And/Or its intermediates **AND/OR**	65277-42-1		AntiFungals
	AntiHistaminic			
92.	Desloratidine And/Or its intermediates **AND/OR**	100643-71-8		AntiHistaminic
93.	Levocetirizine dihydrochloride And/Or its intermediates **AND/OR**	130018-87-0		AntiHistaminic
	AntiHypertensive			
94.	Bisoprolol And/Or its intermediates **AND/OR**	66722-44-9		AntiHypertensive
95.	Ramipril And/Or its intermediates **AND/OR**	87333-19-5		AntiHypertensive
96.	Rosuvastatin Calcium And/Or its intermediates **AND/OR**	147098-20-2		AntiHypertensive
	AntiLipemic			
97.	Niacin And/Or its intermediates **AND/OR**	59-67-6		AntiLipemic
98.	Simvastatin And/Or its intermediates **AND/OR**	79902-63-9		AntiLipemic
	AntiPsychotic			
99.	Quetiapine And/Or its intermediates **AND/OR**	111974-72-2		AntiPsychotic
	Erectile Dysfunction			

100.	Tadalafil And/Or its intermediates **AND/OR**	171596-29-5		Erectile Dysfunction
	Receptor Antagonist			
101.	Varenicline tartrate And/Or its intermediates **AND/OR**	375815-87-5		Receptor Antagonist
	Vertigo			
102.	Betahistine Dihydrochloride And/Or its intermediates	5579-84-0		Vertigo
Group 4				
	AntiHypertensive			
103.	Telmisartan And/Or its intermediates **AND/OR**	144701-48-4		AntiHypertensive
	Proton Pump Inhibitors		**2.50**	
104.	Omeprazole And/Or its intermediates **AND/OR**	73590-58-6		Proton Pump Inhibitors
105.	Pantoprazole sodium And/Or its intermediates	138786-67-1		Proton Pump Inhibitors
Group 5				
	AntiGlaucoma			
106.	Travoprost And/Or its intermediates **AND/OR**	157283-68-6		AntiGlaucoma1.00
	Alzheimer's Disease			
107.	Donepezil hydrochloride And/Or its intermediates **AND/OR**	120011-70-3		Alzheimer's Disease
	Analgesic			
108.	Celecoxib And/Or its intermediates **AND/OR**	169590-42-5		Analgesic
	AntiBiotic			
109.	Azithromycin monohydrate And/Or its intermediates **AND/OR**	83905-01-5		AntiBiotic
110.	Cefixime And/Or its intermediates **AND/OR**	79350-37-1		AntiBiotic
	AntiCancer			
111.	Capecitabine And/Or its intermediates **AND/OR**	154361-50-9	**1.00**	AntiCancer
112.	Imatinib Mesylate And/Or its intermediates **AND/OR**	220127-57-1		AntiCancer
	AntiCoagulant			
113.	Apixaban And/Or its intermediates **AND/OR**	503612-47-3		AntiCoagulant
	AntiConvulsants			
114.	Lacosamide And/Or its intermediates **AND/OR**	175481-36-4		AntiConvulsants
115.	Oxcarbamazepine And/Or its intermediates **AND/OR**	28721-07-5		AntiConvulsants
	AntiDepressant			
116.	Mirtazapine Hemihydrate And/Or its intermediates **AND/OR**	85650-52-8		AntiDepressant
	AntiDiabetic			

117.	Vildagliptin And/Or its intermediates **AND/OR**	274901-16-5		AntiDiabetic
	AntiHistaminic			
118.	Loratidine And/Or its intermediates **AND/OR**	79794-75-5		AntiHistaminic
	AntiHypertensive			
119.	Amlodipine And/Or its intermediates **AND/OR**	111470-99-6		AntiHypertensive
120.	Carvedilol And/Or its intermediates **AND/OR**	72956-09-3		AntiHypertensive
121.	Clopidogrel Bisulphate And/Or its intermediates **AND/OR**	120202-66-6		AntiHypertensive
122.	Lisinopril And/Or its intermediates **AND/OR**	83915-83-7		AntiHypertensive
123.	Losartan potassium And/Or its intermediates **AND/OR**	124750-99-8		AntiHypertensive
124.	Olmesartan medoxomil And/Or its intermediates **AND/OR**	144689-63-4		AntiHypertensive
	AntiLipemic			
125.	Atorvastatin And/Or its intermediates	134523-00-5		AntiLipemic
Group 6				
	Benign Prostatic Hyperplasia			
126.	Silodosin And/Or its intermediates	160970-54-7	**0.15**	Benign Prostatic Hyperplasia
	Hormonal Therapy			
127.	Tamoxifen And/Or its intermediates	54965-24-1	**0.08**	Hormonal Therapy
	Insomia			
128.	Zopiclone And/Or its intermediates	43200-80-2	**11.00**	Insomia
	Analgesic			
129.	Cyclosporine And/Or its intermediates	59865-13-3	**0.35**	Analgesic
	AntiArrhythmias			
130.	Digoxin And/Or its intermediates	20830-75-5	**0.02**	AntiArrhythmias
Group 7				
131.	R & D development		**0.50**	---
		Total (Group 1 to 7)	**70.60**	

Condition No 13 shall now be read as under:

13. Total fresh water requirement for the project shall not exceed 70 KLD and it shall be met through GIDC water supply only. Prior permission from the concerned authority shall be obtained for withdrawal of water.

Condition No 15 shall now be read as under:

15. The industrial effluent generation from the project shall not exceed 65 KL/day

Condition No 16 shall now be read as under:

16. The entire Industrial effluent shall be segregated steam wise as mentioned below:
    a) Entire high COD/TDS effluent generated from process (24 KLD) shall be treated in in-house primary ETP-1 followed by stripper and treated effluent shall be sent to CMEE of M/s. BEIL.
    b) Entre low COD effluent generated (40 KLD) from washing (5 KLD), 5 KLD domestic, 30 KLD Industrial effluent shall be treated in in-house ETP -2 consisting of primary treatment followed

by secondary and tertiary treatment units shall be sent to CETP, Saykha for further treatment and disposal after achieving CETP inlet norms.

c) 1 KLD Boiler blow down (0.5 KLD) & Cooling tower blow down (0.5 KLD) shall be used for coal handling and ash quenching.

Condition No 17 shall now be read as under:

17. Domestic wastewater generation shall not exceed 5 KLD and it shall be treated along with industrial effluent.

Condition No 20 shall now be read as under:

20. The unit shall not exceed fuel consumption for steam boiler, TFH and D.G.Sets as mentioned below.

Sr. No.	Stack attached to	Stack height	Type of Fuel	Quantity of Fuel	Permissible Emission	Air Pollution Control Equipment
1.	Boiler – 2 TPH – 1 No.	30 m	Coal OR Agro briquettes OR Natural Gas	6 MT/Day **OR** 6.8 MT/Day **OR** 800 m^3/day	PM SO2 NOx	Multi Cyclone Separator, Bag Filter and Alkali Scrubber
2.	Thermic Fluid Heater – 2 lacs Kcal/Hr.	30 m				
3.	D.G. Set – 500 KVA	12 m	HSD	65 Lit / Hr		Stack Height, Acoustic Enclosure

Condition No 28 shall now be read as under:

28. All the hazardous waste management shall be taken care as mentioned below:

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.	Process residue	Process (Maximum from Group no. 1 – Product - Sitagliptin And/Or its intermediates, Maximum from Group no. 2 – Product - Valacyclovir hydrochloride And/Or its intermediates , Maximum from Group no. 3 – Product - Varenicline tartrate And/Or its intermediates, Maximum from	28.1 (Sch. I)	1,389.71	Collection, Storage and send to Co-processing/ Incinerator for further treatment.

			Group no. 4 – Product - Omeprazole And/Or its intermediates, Maximum from Group no. 5 – Product - Amlodipine And/Or its intermediates, From Group no. 6 – Product - Tamoxifen And/Or its intermediates , Zopiclone And/Or its intermediates, Cyclosporine And/Or its intermediates)				
	2.	Distillation residue	Process (Maximum from Group no. 1 – Product - Aripiprazole And/Or its intermediates, Maximum from Group no. 2 - Product - Valacyclovir hydrochloride And/Or its intermediates, Maximum from Group no. 3 – Product - Simvastatin And/Or its intermediates, Maximum from Group no. 4 – Only from product - Telmisartan And/Or its intermediates, Maximum from Group no. 5 – Product - Mirtazapine Hemihydrate And/Or its intermediates, From Group no. 6 – Product - Cyclosporine And/Or its intermediates, Digoxin And/Or its intermediates)	20.3 (Sch. I)	1,747.34	Collection, Storage, Transportation & send to CHWIF or co-processing.	

	3.	Spent carbon	Process (Maximum from Group no. 1 – Product – Levetiracetam And/Or its intermediates, Maximum from Group no. 2 – Product - Solifenacin And/Or its intermediates, Maximum from Group no. 3 – Product - Tadalafil And/Or its intermediates , Maximum from Group no. 5 – Product - Vildagliptin And/Or its intermediates, From Group no. 6 – Product - Tamoxifen And/Or its intermediates , Zopiclone And/Or its intermediates , Digoxin And/Or its intermediates)	28.3 (Sch. I)	516.20	Collection, Storage, Transportation & send to CHWIF or co-processing.
	4.	ETP Sludge	ETP	35.3 (Sch. I)	300.00	Collection, Storage, Transportation & Send to TSDF site.
	5.	Used Oil	Machinery	5.1 (Sch. I)	250.00 kl/Month	Collection, Storage, Transportation, Disposal by selling to GPCB/ MoEF approved recycler/ reuse as lubricant within premises.
	6.	Discarded Container/ barrels/ liners	Raw Material Storage area and Finished product packing Material	33.1 (Sch. I)	750.00 Nos./Month	Collection, Storage, Transportation, Decontamination, Disposal by send to the GPCB authorized dealer.
	7.	MEE Salt	ATFD	35.3 (Sch. I)	0 (As per EC it is 1460 MT/Ann	Collection, Storage, Transportation & send to TSDF site.

				um)	
8.	Allumina Powder	Process (Group no. 6 - only from product - Digoxin And/Or its intermediates)	28.1 (Sch. I)	1.08	Collection, Storage, Transportation & send to TSDF site.
9.	Lanata leaves	Process (Group no. 6 - only from product - Digoxin And/Or its intermediates)	28.1 (Sch. I)	175.70	Collection, Storage and send to Incinerator for further treatment.
10.	Spent Solvent	Process (Group no. 1 – Only from Product - N,N Dimethyl Form amide Diemthyl Acetal, Maximum from Group no. 3 – Product - Ramipril And/Or its intermediates , Group no. 5 – Only from Product - Azithromycin monohydrate And/Or its intermediates , Group no. 6 – Only from Product - Digoxin And/Or its intermediates)	20.2 (Sch. I)	1,704.00	Collection, Storage and Sold to actual users having permission of Rule – 9 from SPCB/CPCB.
		Stripper		250.00 KL/ Annum	
11.	Ammonium Sulphate	Scrubbing Media	35.1 (Sch. I)	180.00	Collection, Storage and send into ETP.
12.	Ammonium Chloride	Scrubbing Media	35.1 (Sch. I)	14.93	Collection, Storage and send into ETP.
13.	Sodium sulphate	Scrubbing Media	35.1 (Sch. I)	30.00	Collection, Storage and send into ETP
		Process (Maximum from Group no. 1 – Product - Levetiracetam And/Or its intermediates, Group no. 3 - only from product - Quetiapine And/Or	28.1 (Sch. I)	1,202.00	Collection, Storage, reused as raw material (Product - Levetiracetam And/Or its intermediates, Escitalopram oxalate And/Or its intermediates,

			its intermediates)			Darunavir And/Or its intermediates, Solifenacin And/Or its intermediates, Apremilast And/Or its intermediates, Desloratidine And/Or its intermediates, Quetiapine And/Or its intermediates, Capecitabine And/Or its intermediates, Tamoxifen And/Or its intermediates)
	14.	Hydrogen Chloride (30%)	Scrubbing Media	35.1 (Sch. I)	38.40	Collection, Storage and send it to ETP.
			Process (Maximum from Group no. 1 – Product - Bis(2-chloroethyl)amine hydrochloride)	28.1 (Sch. I)	327.60	Collection, Storage, reused as raw material (Product - 4-Methyl Cathechol Diacetic Acid Dimethyl Ester).
	15.	Aluminium hydroxide	Process (Only from Group no. 1 – Product - Guanidine)	28.1 (Sch. I)	645.80	Collection, Storage and send it to ETP.
	16.	Potassium sulphate	Process (Group no. 1 - only from product - Trimethoprim And/Or its intermediates)	28.1 (Sch. I)	38.96	Collection, Storage and send it to ETP.
	17.	Boric acid	Process (Group no. 2 - only from product - Phenylephrine And/Or its intermediates)	28.1 (Sch. I)	16.74	Collection, Storage and send it to ETP.
	18.	Triphenyl Carbinal	Process (Group no. 1 - only from product - Zidovudine And/Or its intermediates)	28.1 (Sch. I)	180.00	Collection, Storage and send it to ETP.
	19.	Piperazine Hydrochloride	Process (Group no. 3 - only from product - Ciprofloxacin HCL And/Or its intermediates)	28.1 (Sch. I)	24.80	Collection, Storage and send it to ETP.

20.	Tert. Butyl alcohol	Process (Group no. 1 - only from product Saxagliptin And/Or its intermediates)	28.1 (Sch. I)	90.72	Collection, Storage and send it to ETP.	
21.	P - Toluene Sulfonic acid	Process (Group no. 5 - only from product - Clopidogrel Bisulphate And/Or its intermediates)	28.1 (Sch. I)	5.11	Collection, Storage and send it to ETP.	
22.	Sulphuric acid	Process (Maximum from Group no. 1 – Product - Trimethoprim And/Or its intermediates)	28.1 (Sch. I)	242.00	Collection, Storage, reused as raw material (Product 2 Bromo 4-5-Dimethoxy Benzyl Bromide, 2,3,4 Bis - o-(1 methyl)-B-D-Fructopyranose).	
23.	Sodium Nitrate	Process (Group no. 1 - only from product - Trimethoprim And/Or its intermediates)	28.1 (Sch. I)	115.90	Collection, Storage, reused as raw material (Product - 4-Iso Propyl Catechol, Apixaban And/Or its intermediates).	
24.	Potassium Carbonate	Process (Group no. 1 - only from product - Lansoprazole And/Or its intermediates)	28.1 (Sch. I)	343.80	Collection, Storage, reused as raw material (Product - 6-Chloro-5(2-Chlor Ethyl) Oxindole, Doxofylline And/Or its intermediates)	
25.	Sodium Chloride	Process (Maximum from Group no. 1 – Product - 2-Diethylaminoethane thiol , Group no. 2 - Only from product - Phenylephrine And/Or its intermediates, Maximum from Group no. 3 – Product - Fluconazole And/Or its intermediates)	28.1 (Sch. I)	427.00	Collection, Storage, reused as raw material (Product -. Topiramate And/Or its intermediates, Sitagliptin And/Or its intermediates, Paroxetine HCl Hemihydrate And/Or its intermediates, Darunavir And/Or its intermediates, Zidovudine And/Or its intermediates, Fluconazole And/Or its intermediates, Capecitabine And/Or its	

						intermediates, Vildagliptin And/Or its intermediates, Carvedilol And/Or its intermediates, Lisinopril And/Or its intermediates).
	26.	Zinc Chloride	Process (Maximum from Group no. 1 - Product - Sesamol)	28.1 (Sch. I)	594.00	Collection, Storage, reused as raw material (Product - 6-Chloro-5(2-Chlor Ethyl) Oxindole, Sesamol)
	27.	Aluminium Chloride	Process (Only from Group no. 1 - Product - 2-Methyl-4,5-Dimethoxybenzoic Acid)	28.1 (Sch. I)	475.00	Collection, Storage, reused as raw material (Product - 2-Methyl-4,5-Dimethoxybenzoic Acid , Guanidine)
	28.	Sodium Hydroxide	Process (Maximum from Group no. 1 – product - Trimethoprim And/Or its intermediates)	28.1 (Sch. I)	60.00	Collection, Storage, reused as raw material (Product 4-Iso Propyl Catechol, 2-Diethylaminoethane thiol ,Etodolac And/Or its intermediates, Naproxen And/Or its intermediates, Pregabalin And/Or its intermediates, Trimethoprim And/Or its intermediates).
	29.	Sodium Acetate	Process (Group no. 1 - only from product - Naproxen And/Or its intermediates)	28.1 (Sch. I)	9.26	Collection, Storage, reused as raw material (Product - Apixaban And/Or its intermediates).
					330.50	Collection, Storage and Sold to actual users having permission of Rule – 9 from SPCB/CPCB.
	30.	Ammonium acetate	Process (Group no. 1 - only from product - Trimethoprim And/Or its intermediates)	28.1 (Sch. I)	187.85	Collection, Storage, reused as raw material (Product - Lansoprazole And/Or its intermediates,

					Omeprazole And/Or its intermediates).
				74.23	Collection, Storage and send it to ETP.
31.	Sodium Bisulfate	Process (Only from Group no. 1 – Product - 2-Methyl-4,5-Dimethoxybenzoic Acid)	28.1 (Sch. I)	24.90	Collection, Storage, reused as raw material (Product - Bisoprolol And/Or its intermediates, Digoxin And/Or its intermediates)
				510.10	Collection, Storage and send it to ETP.
32.	Sodium Bromide	Process (Maximum from Group no. 1 – Product - 4-Iso Propyl Catechol , Group no. 2 - Only from Product - Phenylephrine And/Or its intermediates)	28.1 (Sch. I)	1.20	Collection, Storage, reused as raw material (Product - Silodosin And/Or its intermediates)
				701.80	Collection, Storage and Sold to actual users having permission of Rule – 9 from SPCB/CPCB

22	**SIA/GJ/IND2/218504/2021**	**M/s. Ketul Chem Pvt. Ltd.** Plot No. D2/CH/132, GIDC Estate. Dahej-II, Tal:Vagra, Dtst: Bharuch	**EC-Amendment**

- During SEAC VC meeting dated 06.10.2021, Project Proponent (PP) remained absent. PP has submitted letter via E-mail stating that they want withdrawal of their proposal for EC amendment due to some changes in their application.
- **In view of the above, Committee decided to recommend to permit project proponent for**

withdrawal of their application of Environmental Clearanceand to delist the proposal from the list of pending applications & to close the file.

23	**SIA/GJ/IND2/225785/2021**	**M/S. Yogi Fine Chem** Plot No. 12 - 13, Ghanshyam Industrial Estate, Opp. Uma Ind. Estate, Vasna (Iyava), Sanand, Ahmedabad	**EC-Amendment**

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

Project status: **EC-Amendment**

- This is an expansion project for manufacturing of "Synthetic Organic Chemicals" [API & its Intermediates] for which was accorded Environmental Clearance vide letter no. **SEIAA/GUJ/EC/5(f)/989/2021** Date: **29-06-2021**
- Now, project proponent has applied online vide proposal no. **SIA/GJ/IND2/225785/2021** for EC-Amendment in EC letter no. **SEIAA/GUJ/EC/5(f)/989/2021 Date: 29-06-2021** as under:

Sr. no.	Condition no. in which changes proposed.	As per EC	As per proposed amendment	Justification
1.	**Condition no. A.3 Air; Point No. 17**	➢ Fuel for Steam Boiler (1 TPH): Agro Briquettes ➢ APCM for Stem Boiler (1 TPH) & Steam Boiler (2 TPH) & Thermic Fluid Heater (2 Lakh Kcal/Hr): Multi Cyclone Separator + Water Scrubber	➢ Fuel for Existing Steam Boiler (1 TPH): Wood (as per CCA) ➢ APCM for Existing Steam Boiler (1 TPH): Cyclone Separator (as per CCA) And ➢ Proposed Stem Boiler (2 TPH) & Thermic Fluid Heater (2 Lakh Kcal/Hr): Multi Cyclone Separator + Bag Filter for each.	--
2.	**Condition no. A.3 Air; Point No. 19**	➢ APCM for Solvent Recovery Facility: Water Scrubber + Alkali Scrubber	➢ APCM for Solvent Recovery Facility: VOC Scrubber	--

- PP was called for presentation in the SEAC meeting dated 06.10.2021.
- During the meeting dated 06.10.2021, technical presentation made during the meeting by technical expert of PP, M/s. Watair Envisol Consultancy LLP and Project Proponent.
- PP presented that they have applied for EC-Amendment for change in Air Pollution Control Equipments.
- PP presented the following documents:
  - ✓ Revised Hazardous waste matrix with mentioning disposal of process scrubbing media as

sodium sulphite solution or sodium bisulphate solution.

- ✓ Technical expert of PP presented that unit have already obtained CCA for disposal of process scrubbing media as sodium bi sulphite solution as hazardous waste due to usage of soda ash as scrubbing media for alkali scrubber in place of earlier EC granted for scrubbing media disposal as sodium sulphite solution.

- Committee found submission of project proponent satisfactory.
- **After detailed deliberation, Committee unanimously decided to recommend grant of EC – Amendment to SEIAA, Gujarat with change in "Condition No. A.3 Air; Point No. 17 & Point No. 19" as follows and with remaining condition unchanged in EC granted by SEIAA, Gujarat vide Letter No. SEIAA/GUJ/EC/5(f)/989/2021 Date: 29-06-2021.**

Condition No. A.3 Air; Point No. 17 shall now be read as under:

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)	Remarks
1	Steam Boiler (1 TPH)	15	Agro Briquettes	0.5 MT/Day	Particulate Matter SO2 NOX	Multi Cyclone Separator + Bag Filter	Existing
2	Steam Boiler (2 TPH)	30	Agro Briquettes	6 MT/ Day		Multi Cyclone Separator + Bag Filter	Proposed
3	Thermic Fluid Heater 2 Lakh Kcal/Hr					Multi Cyclone Separator + Bag Filter	Proposed
						Adequate Stack Height	Proposed
4	D. G. Set (250 KVA)	12	Diesel	80 Liter/Hr			

Condition No. A.3 Air; Point No. 19 shall now be read as under:

Sr. No.	Stack Attached to	Stack height (m)	Air Pollution Control Equipment	Expected Pollutants Emission		Remarks
Existing Scenario:						
1	Bromination Reaction Vessel	9	Water Scrubber Alkali Scrubber	HBr	30 mg/Nm^3	Existing
				Br_2	2 mg/Nm^3	
Proposed Scenario:						
1	Attached Process Reactor*	11	Water Scrubber Alkali Scrubber	HBr	30 mg/Nm^3	Proposed
				Br_2	2 mg/Nm^3	
2	Attached Process Reactor**	11	Water Scrubber Alkali Scrubber	Cl_2	< 9 mg/Nm^3	Proposed
				HCl	< 20 mg/Nm^3	

3	Attached Process Reactor***	11	Water Scrubber Acid Scrubber	NH_3	< 30 mg/Nm^3	Proposed
4	Attached Process Reactor****	11	Water Scrubber Alkali Scrubber	SO_2	< 100 ppm	Proposed
				NO_X	< 25 mg/Nm^3	
5	Solvent Recovery Facility	11	VOC Scrubber	VOC	---	Proposed

* Attached process reactor to be used for product no. 1, 38, 39, 41 & 42.
** Attached process reactor to be used for product no. 4, 5, 8, 23 & 29.
*** Attached process reactor to be used for product no. 35.
**** Attached process reactor to be used for product no. 6, 7, 8, 9, 10, 11, 12 & 37.

Other Deliberations

- **Recommendation letters returned to SEAC by SEIAA due to mismatch on PARIVESH i.e. online proposal not showing on Portal at SEIAA**

During the SEAC meeting dated 07.10.2021, the Committee noted that there were following recommendation letters for various proposals of Industry, construction and mining sector that were returned to SEAC by SEIAA due to mismatch and technical glitch on Parivesh online portal.

Sr. No	Proposal no	Name of Industies
Industries Projects		
1	SIA/GJ/IND/174614/2020	**Century pharmaceuticals ltd** Plot No.103,104,105,106, GIDC- Halol, Panchmahal.
2	SIA/GJ/IND/33055/2017	**Jalaram industries** Plot No. C-1/412/5, Phase iI, GIDc Estate, Vatva, Ahmedabad
3	SIA/GJ/IND/204967/2021	**Stride industries** Plot No. T/103/2, Saykha Industrial Estate, Saykha,Vagra,Bharuch
4	SIA/GJ/IND/206601/2021	**Devendra manharlal sheth** Plot no. 205,206,207/5, Panoli Industrial Estate, Panoli,Bharuch
5	SIA/GJ/IND3/64013/2021	**Krishana intermediates** Plot No: C-375, GIDC Saykha Industrial Estate, Saykha,Vagra ,Bharuch
6	SIA/GJ/IND3/63966/2021	**Sodium Metal pvt ltd** Plot No. 188/2,189, GIDC, Nandesari, Vadodara
7	SIA/GJ/IND3/63901/2021	**Syahee pigments** DP - 84+85+86,Sykha,Bharuch
8	SIA/GJ/IND3/206574/2021	**Dhiraj can co pvt ltd** Plot No. 7901/A+B+C/1, GIDC estate, Ankleshwar,Bharuch
Construction Projects		

	9	SIA/GJ/MIS/213766/2021	**Royal lake view** Sur.no.301, F.P.No.16, Sub plot No.2, T.P.S.no.411 (Nana chiloda-karai), at. Chiloda(Naroda) Gandhinagarproposed
	10	SIA/GJ/MIS/210807/2021	**Torrent Pharmaceuticals Limited-Corporate Office at Thaltej** S.No.406/1,Shilaj S.No.740,741, Ahmedabad.
	11	SIA/GJ/MIS/211808/2021	**ANANTAM EXOTICA** S.P. No. :- 02, F.P. No. :- (63 + 64) [Sur. No. :- 524/1, 524/2, O. P. No. :- 63 + 64] Of T.P.S. No. :- 75 (Muthiya - Hanspura) - (Final) Naroda, Asarwa, Ahmedabad
	Mining Project		
	12	SIA/GJ/MIN/38945/2019	**Gopal Sava Dangar** Sr. No. 656 Paiky, Nadapa, Kutch
	13	SIA/GJ/MIN/61242/2021	**Ashapura Mines** Punadi,Mandvi,Kutch
	14	SIA/GJ/MIN/61834/2021	**Ashapura minechem Limited** Lakshmipar, Nakhatrana, Kutch.
	15	SIA/GJ/MIN/58904/2020	**Padali Building Limestone Quarry Area by Shree Rambhai Vikrambhai Mer** Survey No 343 Paiki, Padali Okhamandal, DevbhumiDwarka
	16	SIA/GJ/MIN/58907/2020	**Padali Building Lime Stone Quary Area by Shree Hareshbhai Karshanbhai Pithiya** Survey No 316 Paiki 1, Padali, Okhamandal, Devbhumi Dwarka
	17	SIA/GJ/MIN/60762/2021	**M/s. Brijesh Enterprise C/o Bhupatray Savani** VAGHPUR ORDINARY SAND BLOCK NO. 14 Survey No.: 344 ne lagu Sabarmati Riverbed Vaghpur, Prantij, Sabarkantha
	18	SIA/GJ/MIN/58191/2020	**SHRI. ASHAPURA STONE CRUSHER** Survey No 17 Paiki, Block- B Vinzalpar, Khambhaliya Devbhumi Dwarka

19	SIA/GJ/MIN/58196/2020	**Vinjalpar Black Trap Stone Mine by Shri . Vajshibhai Pababhai Bandhiya** Survey No 17 Paiki, Vinzalpar, Khambhaliya Devbhumi Dwarka
20	SIA/GJ/MIN/61790/2021	**Shri Surtansinh Malubha Jadeja & Bhupatsinh Chatursinh Jadeja** Punadi, Mandvi, Kutch
21	SIA/GJ/MIN/60752/2021	**VAGHPUR ORDINARY SAND BLOCK NO. 7** Survey No.: 344 ne lagu Sabarmati Riverbed Vaghpur, Prantij, Sabarkantha
22	SIA/GJ/MIN/60598/2021	**Shri Vekariya Laljibhai Kurjibhai & Shri Thummar Babubhai Mohanbhai & Shri Jamnadas Ravjibhai Savaliya** Survey No.:Private Sr.No. 658/2 Paiky Lunsar, Wankaner,Morbi
23	SIA/GJ/MIN/55315/2020	**Jitendrakumar Shankarlal Jobanputra** Survey No.:Govt. Sr. No.151 Paiky Aluwas, Santalpur,Patan
24	SIA/GJ/MIN/62375/2021	**M/S SHAKTI TRADERS C/O UMESHKUMAR PRABHATSINH CHAUHAN** Survey No. 186,187,188 ne lagu goma riverbed Paiki, Paruna, Kaol, Panchmahal,
25	SIA/GJ/MIN/62296/2021	**SURAJ SINGH RAJENDER SINGH** Survey No.982 Paiki, Vallavpur, Shehera, Panchmahal.
26	SIA/GJ/MIN/212644/2021	**Shri Dineshbhai Atubhai Nakum (Old – Shri Dineshbhai Atulbhai Nakum)** Survey No. 238, 239 & 240 Dhatarwadi Nadi Patt Paiki (Block C), Vad, Rajula, Amreli

The Committee also recalled that there were sector specific observations and suggestions conveyed from SEIAA that were to be provided into the respective sector specific recommendation letters. The Committee deliberated on the matter and decided that the SEAC meeting minutes that are already approved and uploaded on the website would remain unchanged. However, clarifications/ additional information sought along with the sector specific suggestions made by SEIAA recently are provided so as to update the above recommendation letters accordingly and are then to be re-sent to SEIAA.

In view of the above, after detailed discussion, Committee unanimously decided to re-send the

above listed updated recommendation letters to SEIAA, Gujarat for further approval as recommended.

The meeting ended with a vote of thanks to the chair.

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Minutes approved by:

1.	Shri Akshay Kumar Saxena, Chairman, SEAC	
2.	Dr. S. C. Pant, Vice Chairman, SEAC	
3.	Dr. M. N. Patel, Member, SEAC	
4.	Shri D. C. Chaudhari, Member, SEAC	
5.	Shri J. K. Vyas, Member, SEAC	
6.	Shri Anand Zinzala, Member, SEAC	
7.	Shri B. M. Tailor, Member, SEAC	
8	Shri A. V. Shah, Secretary, SEAC	

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