

Minutes of the 356th meeting of the State Level Expert Appraisal Committee held on 03rd February 2022 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 03/02/2022 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. The applicants made presentations on the activities to be carried out along with other details furnished in the Form-1, PFR, EIA-EMP reports and other reports.

01	SIA/GJ/IND3/246473/2021	M/s. Tattva Bio Pharma Private Limited Survey No. 1797 (Old Survey No. 814/P7), At. Indrad, Ta. Kadi, Dist. Mehsana, Gujarat.	EC		
<p>Category of the unit: 5 (f) Project status: Expansion</p> <p>In context to above subject matter find below the recommendation of SEAC for your perusal.</p> <p>1) Details of Application:</p> <table border="1" data-bbox="220 1957 1422 2018"> <tr> <td>1.1. Type of application:</td> <td>EC-Expansion</td> </tr> </table>				1.1. Type of application:	EC-Expansion
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1.2. Proposal no.	<u>SIA/GJ/IND3/246473/2021</u>
1.3. Category of Project :	5 (f) – B2
1.4. Date of application :	21.12.2021
1.5. Documents Submitted by Project Proponent(PP)	Form -1, Pre-feasibility Report, EMP
1.6. TOR No. &Date :	Not applicable as project is categorized as B2
1.7. Technical expert / Environmental Consultant :	M/s. Tradestone Enviro
1.8. SEAC Meeting No. and Date:	356 th meeting dated 03.02.2022 Earlier SEAC meeting dates (If any)
1.9. Compliance of Existing EC & CCA	EC-CCA no. date of issue & Validity Not Applicable (if New) Applied for CTE Fresh application for inorganic products and have obtained CTE-Provisional Order from GPCB. CTE-117236 Valid up to: 17/01/2029

2) This is a new project proposed for manufacturing of synthetic organic chemicals [API and API Intermediates] as tabulated below;

Sr. No.	Name of the Products	Quantity	CAS no.	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)	
Existing - Inorganic Products								
1.	Sodium Chloride BP/USP	2.0	7647-14-5	---	---	---	---	Use as API in pharmaceutical injection or formulation preparation.

2.	Calcium Acetate BP/USP	2.0	62-54-4	---	---	---	---	Is use to prevent high blood phosphate level in present who are on dialysis due to severe kidney disease.
3.	Calcium Chloride BP/USP	2.0	10035-04-8	---	---	---	---	Is indicated for the treatment of hypo calcemia.
Total Existing Product		6.0						
Proposed – API & Intermediates Products								
1.	Fmoc-Gly-OH /Fmoc-glycine	8.5 MT/M onth	29022-11-5	Intermed iates	n-2	Liragluti de	204656 -20-2	Liraglutide is used to treat type 2 DM.
2.	Fmoc-Pro-OH/Fmoc-Proline		71989-31-6	Intermed iates	n-3	Eptifiba tide	188627 -80-7	Eptifibatide is used to treat myocardial infarction.
3.	Fmoc-Ala-OH/Fmoc Alanine		35661-39-3	Intermed iates	n-3	Liragluti de	204656 -20-2	Liraglutide is used to treat type 2 DM.
4.	Fmoc-Pheal-OH/Fmoc Phenylalanine		35661-40-6	Intermed iates	n-2	Eptifiba tide	188627 -80-7	Eptifibatide is used to treat myocardial infarction.
5.	Fmoc-Val-OH/Fmoc-L-Valine		68858-20-8	Intermed iates	n-3	Liragluti de	204656 -20-2	Liraglutide is used to treat type 2 DM.
6.	Fmoc-Leu-OH/Fmoc-L-Leucine		35661-60-0	Intermed iates	n-3	Liragluti de,	204656 -20-2	Liraglutide is used to treat type 2 DM.
7.	Fmoc-Isole-OH/Fmoc-L-Isoleucine		71989-23-6	Intermed iates	n-3	Eptifiba tide	188627 -80-7	Eptifibatide is used to treat myocardial infarction.
8.	Fmoc-D-Tic-OH/(R)-N-Fmoc-1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid		130309-33-0	Intermed iates	n-3	Liragluti de,	204656 -20-2	Liraglutide is used to treat type 2 DM.
9.	Fmoc-Oic-OH/ N-Fmoc-L-octahydroindole-2-carboxylic acid		130309-37-4	Intermed iates	n-2	Eptifiba tide	188627 -80-7	Eptifibatide is used to treat myocardial infarction.
10.	Fmoc-Hyp-OH/Fmoc-L-hydroxyproline		122996-47-8	Intermed iates	n-2	Liragluti de,	204656 -20-2	Liraglutide is used to treat type 2 DM.
11.	Fmoc-Asp-OH/Fmoc-L-Asperagine		119062-05-4	Intermed iates	n-3	Eptifiba tide	188627 -80-7	Eptifibatide is used to treat myocardial infarction.
12.	Fmoc-Glu-OH/Fmoc-L-Glutamine		71989-18-9	Intermed iates	n-3	Liragluti de,	204656 -20-2	Liraglutide is used to treat type 2 DM.
13.	Fmoc-THI-OH/Fmoc-L-Thi		130309-35-2	Intermed iates	n-3	Eptifiba tide	188627 -80-7	Eptifibatide is used to treat myocardial infarction.
14.	L-Prolinamide		7531-52-4	Intermed iates	n-3	Vildagli ptin	274901 -16-5	Vildagliptin is used to treat type 2 DM.
15.	L-Valine Methyl		6306-	Intermed	n-3	Valsart	137862	Valsartan is used to

	ester hydrochloride		52-1	iates		an	-53-4	treat high blood pressure.
16.	N-Benzyloxy carbonyl-L-Valine		1149-26-4	Intermediates	n-3	Valsartan	137862-53-4	Valsartan is used to treat high blood pressure.
17.	PALM-GLU(OSU)-OTBU/ N-alpha-Palmitoyl-L-glutamic-acid alpha-t-butyl-gamma-succinimidyl ester		204521-63-1	Intermediates	n-3	Teduglutide	197922-42-2	Teduglutide is used for the treatment of short bowel syndrome
18.	Fmoc-Lys (Palmitoyl-Glu-OtBu)-OH		1491158-62-3	Intermediates	n-2	Liraglutide	204656-20-2	Liraglutide is used to treat type 2 DM
19.	Palmitoyl-Glu-OtBu/ N-(1-Oxohexadecyl)-L-glutamic Acid tert-Butyl Ester		204521-63-1	Intermediates	n-2	Liraglutide	204656-20-2	Liraglutide is used to treat type 2 DM.
20.	Fmoc-4AMB-OH/ 4- (Fmoc-Amino methyl) benzoic acid		164470-64-8	Intermediates	n-2	Trastuzumab	180288-69-1	Trastuzumab is used to treat breast cancer and stomach cancer.
21.	Fmoc-4AMC-OH/FMoc-Tranexamic acid		167690-53-1	Intermediates	n-2	Trastuzumab	180288-69-1	Trastuzumab is used to treat breast cancer and stomach cancer.
22.	Boc-HIS-OH		31687-58-8	Intermediates	n-1	Liraglutide	204656-20-2	Liraglutide is used to treat type 2 DM.
23.	Boc-L-Tryptophan		13139-14-5	Intermediates	n-1	Semaglutide	910463-68-2	Semaglutide is used to treat type 2 DM
24.	Boc-L-Phenylalanine		13734-34-4	Intermediates	n-1	Icatibant	138614-30-9	Icatibant is a medication for the symptomatic treatment of acute attacks of hereditary angioedema
25.	Boc-L-Glutamic acid		2419-94-5	Intermediates	n-1	Lanreotide	108736-35-2	Lanreotide is a medication used in the management of acromegaly
26.	Boc-L-Glutamine		13726-85-7	Intermediates	n-1	Eptifibatide	188627-80-7	Eptifibatide is used to treat myocardial infarction.
27.	Boc-L-Isoleucine		13139-16-7	Intermediates	n-1	Genirelix	124904-93-4	Ganirelix is used as a fertility treatment
28.	Boc-L-Lysine		13734-28-6	Intermediates	n-1	Liraglutide	204656-20-2	Liraglutide is used to treat type 2 DM.
29.	Boc-L-Proline		15761-39-4	Intermediates	n-1	Semaglutide	910463-68-2	Semaglutide is used to treat type 2 DM
30.	Boc-L-Alanine		15761-38-3	Intermediates	n-1	Linaclotide	851199-59-2	Linaclotide is used to treat irritable bowel syndrome, constipation

31.	Boc-L-Serine		3262-72-4	Intermediates	n-1	Lanreotide	108736-35-2	Lanreotide is a medication used in the management of acromegaly
32.	Boc-L-Asparagine		7536-55-2	Intermediates	n-1	Eptifibatide	188627-80-7	Eptifibatide is used to treat myocardial infarction.
33.	Boc-L-Tyrosine		3978-80-1	Intermediates	n-1	Genirelix	124904-93-4	Ganirelix is used as a fertility treatment
34.	4-Aminomethyl benzoic acid		56-91-7	Intermediates	n-2	Tranexamic acid	1197-18-8	Tranexamic acid is a medication used to treat or prevent excessive blood loss from major trauma
35.	6-Hydroxy-3,4-dihydro-2(1H)-quinolinone		54197-66-9	Intermediates	n-2	Cilostazol	73963-72-1	Cilostazol is an antiplatelet drug and a vasodilator
36.	7-Hydroxy-3,4-dihydro-2(1H)-quinolinone		22246-18-0	Intermediates	n-2	Aripiprazole	129722-12-9	Aripiprazole is used in the treatment of schizophrenia and bipolar disorder.
37.	1-(2,3-Dichlorophenyl) piperazine		119532-26-2	Intermediates	n-2	Cariprazine	839712-12-8	Cariprazine is used in the treatment of schizophrenia and bipolar disorder.
38.	1-(3-Chlorophenyl) piperazine		13078-15-4	Intermediates	n-2	Trazodone	19794-93-5	Trazodone is used to treat depression
39.	2-(Diethylamino)-N-(2,6-dimethylphenyl) acetamide/ Lidocaine		137-58-6	API	--	--	--	Lidocaine is used as a local anesthesia.
40.	2-(propyl amino)-N-(o-tolyl)propenamide/ Prilocaine		721-50-6	API	--	--	--	Prilocaine is a local anesthetic.
41.	N-Benzyl-2-(2,6-dimethylanilino)-N,N-diethyl-2-oxoethan-1-aminium Benzoate		3734-33-6	API	--	--	--	Excipient to make bitter
42.	7-(4-(4-(2,3-dichlorophenyl) piperazin-1-yl) butoxy)-3,4-dihydroquinolin-2(1H)-one/ Aripiprazole		129722-12-9	API	--	--	--	Aripiprazole is used in the treatment of schizophrenia
43.	5-methyl-1-phenylpyridin-2(1H)-one/ Pirfenidone		53179-13-8	API	--	--	--	Pirfenidone is used for the treatment of idiopathic pulmonary fibrosis.
44.	2-(acetoxymethyl)-		13242-	Intermed	n-2	Remogl	442201	Anti-diabetic drug

	6-bromotetrahydro-2H-pyran-3,4,5-triyl triacetate		53-0	iate		iflozin etabonate	-24-3	
45.	Tetra-O-pivaloyl-alpha-D-glucopyranosyl bromide		81058-27-7	Intermediate	n-2	Remogliflozin etabonate	442201-24-3	Anti-diabetic drug
46.	1-(2-Bromoethoxy)-4-nitrobenzene		13288-06-7	Intermediate	n-1	Dofetilide	115256-11-6	Dofetilide is an anti-arrhythmic drug.
47.	Diethyl acetamidomalonnate		1068-90-2	Intermediate	n-1	Fingolimod	162359-55-9	Fingolimod is used for treating multiple sclerosis
48.	3-(Dimethylamino)-1-(pyridin-3-yl) Pro-2-en-1-one		66521-54-8	Intermediate	n-2	Nilotinib Hydrochloride	923288-95-3	Nilotinib Hcl is used to treat chronic myelogenous leukemia
49.	Febuxostat		144060-53-7	API	--	--	--	Febuxostat is used to lower uric acid level.
50.	Teneligliptin		1572583-29-9	API	--	--	--	Vildagliptin is used to treat type 2 DM
51.	Luliconazole		187164-19-8	API	--	--	--	Luliconazole is used to treat tinea pedis.
52.	Vildagliptin		274901-16-5	API	--	--	--	Vildagliptin is used to treat type 2 DM
53.	Methoxy amine hydrochloride		593-56-6	Intermediate	n-1	Vildagliptin	274901-16-5	Vildagliptin is used to treat type 2 DM
54.	3-(4-amino-1-oxoisoindolin-2-yl)piperidine-2,6-dione/ Lenalidomide		191732-72-6	API	--	--	--	Lenalidomide is used to treat multiple myeloma and myelodysplastic syndromes.
55.	10-oxo-10,11-dihydro-5H-dibenzo[b,f]azepine-5-carboxamide/ Oxcarbazepine		28721-07-5	API	--	--	--	Oxcarbazepine is used to treat epilepsy and bipolar disorder
56.	5H-dibenzo [b, f] azepine-5-carboxamide / Carbamazepine		298-46-4	API	--	--	--	Carbamazepine is used in treatment of epilepsy and neuropathic pain.
57.	2-(2,6-dioxopiperidin-3-yl) isoindoline-1,3-dione/ Thalidomide		50-35-1	API	--	--	--	Thalidomide used to treat cancers, graft-versus-host disease.
58.	N-Acetyl-4-hydroxy-L-proline/ Oxaceprol		33996-33-7	API	--	--	--	Oxaceprol is used in the treatment of osteoarthritis
59.	8-(4-(4-(pyrimidin-2-yl) piperazin-1-yl) butyl)-8-azaspiro [4.5]		33386-08-2	API	--	--	--	Buspirone Hydrochloride is used to treat anxiety

	decane-7,9-dione hydrochloride/ Buspirone Hydrochloride							
60.	8-(2-pyrimidinyl)-8-aza-5-azoniaspiro [4,5] decane bromide	81461-73-6	Intermediate	n-2	Buspirone Hydrochloride	33386-08-2	Buspirone Hcl is used to treat anxiety	
61.	Cis Bromobenzoate	61397-56-6	Intermediate	n-1	Itraconazole	84625-61-6	Itraconazole is an antifungal medication	
62.	Etoricoxib	202409-33-4	API	--	--	--	Etoricoxib is used to post-surgical dental pain, inflammatory.	
63.	Finofibric acid	42017-89-0	Intermediate	n-1	Choline Fenofibrate	856676-23-8	Choline Fenofibrate used in severe hypertriglyceridemia	
64.	Fluoxetine Hcl	56296-78-7	API	--	--	--	Fluoxetine is used to treat depression, panic attack.	
65.	Mannich HCl	15409-60-6	Intermediate	n-2	Tramadol	27203-92-5	Tramadol is used to treat moderate to moderately severe pain.	
66.	Rivaroxaban	366789-02-8	API	--	--	--	Rivaroxaban is used to treat and prevent blood clots.	
67.	2-(2-methoxy-Phenoxy methyl)-oxirane	2210-74-4	Intermediate	n-2	Ranolazine Hcl	95635-56-6	Ranolazine is used to treat heart related chest pain	
68.	1-(2-Methoxy Phenoxy)-2-epoxypropen	56718-70-8	Intermediate	n-2	Ranolazine Hcl	95635-56-6	Ranolazine is used to treat heart related chest pain	
69.	Ranolazine hydrochloride	95635-56-6	API	--	--	--	Ranolazine HCl is used in the treatment of angina pectoris.	
70.	(1-Hydroxy cyclohexyl) -(4-methoxy phenyl) acetonitrile	93413-76-4	Intermediate	n-2	Venlafaxine	93413-69-5	Venlafaxine is used to treat depression	
71.	Gliclazide	21187-98-4	API	--	---	---	Gliclazide is a medicine used to treat type 2 diabetes.	
72.	4'-Methyl-2-cyanobiphenyl (OTBN)	114772-53-1	Intermediate	n-2	Losartan	114798-26-4	Losartan used to treat high blood pressure.	
73.	Linagliptin	668270-12-0	API	--	--	--	Vildagliptin is used to treat type 2 DM	
74.	Levosulpride	23672-07-3	API	--	--	--	Levosulpride is used to treat depression, indigestion	
75.	Amisulpride	53583-79-2	API	--	--	--	Amisulpride is used in the treatment of acute and chronic	

								schizophrenia
76.	3-Amino-1-admantanol	702-82-9	Intermediate	n-2	Vildagliptin	274901-16-5		Vildagliptin is used to treat type 2 DM
77.	10-Methoxyiminostilbene	4698-11-7	Intermediate	n-3	Oxcarbazepine	28721-07-5		Oxcarbazepine used to treat epilepsy and bipolar disorder.
78.	2-cyano-4'-bromomethyl-1,1'-biphenyl (Bromo OTBN)	114772-54-2	Intermediate	n-3	Azilsartan	147403-03-0		Azilsartan used to treat high blood pressure.
79.	5-Amino-2,4-ditert-butylphenol	873055-58-4	Intermediate	n-2	Ivacaftor	873054-44-5		Ivacaftor is a drug used to treat cystic fibrosis
80.	(S)-methyl 2-(2-chlorophenyl)-2-(6,7-dihydrothieno[3,2-c]pyridin-5(4H)-yl)acetate sulfate/ Clopidogrel bisulphate	120202-66-6	API	--	--	--		Treat the symptoms of acute coronary syndrome such as a stroke, blood clot.
81.	(2-hydroxyethyl) trimethylazanium-2- [4-(4-chloro benzoyl) phenoxy]-2-methylpropanoate / Choline Fenofibrate	856676-23-8	API	--	--	--		Treat reduce symptoms of cholesterol and triglycerides in the blood
82.	1(±)-1(Carbazol-4-yloxy)-3- [[2-(o-methoxy phenoxy) ethyl] amino]-2-propanol/ Carvedilol	72956-09-3	API	--	--	--		Used to treat the symptoms of heart failure, hypertension.
83.	3-Bromoanisole	2398-37-0	Intermediate	n-1	Tramadol	27203-92-5		Tramadolis used to treat moderate to moderately severe pain.
84.	4,6 Di chloro 5 amino 2 (propylthio)pyrimidine	145783-15-9	Intermediate	n-2	Ticagrelor	274693-27-5		Ticagrelor is used for the prevention of stroke, heart attack
85.	2-Chloromethyl-4-methylquinazoline	109113-72-6	Intermediate	n-1	Linagliptin	668270-12-0		Vildagliptin is used to treat type 2 DM
86.	6-chloro-2 H-1,2,4-benzothiadiazine-7-sulfonamide 1,1-dioxid/ Chlorothiazide	58-94-6	API	--	--	--		Chlorothiazide is used to treat the Edema and High BP.
87.	1-(4-ethylphenyl)-2-methyl-3-(1-piperidiny)-1-	56839-43-1	API	--	--	--		Eperisone hydrochloride is Relaxing both

	propanone hydrochloride/ Eperisone hydrochloride							skeletal muscles and vascular smooth muscles.
88.	2,4'-Dimethyl-3-piperidinopropiophenone hydrochlorides/ Tolperisone Hcl	3644-61-9	API	--	--	--		Tolperisone Hcl is a muscle relaxant
89.	4-[(4-Methyl-1-piperazinyl)methyl]-N-[4-methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-phenyl]benzamide methane sulfonate/ Imatinib Mesylate	152459-95-5	API	--	--	--		Imatinib is used to treat cancer.
90.	2,4-Dichloro-5-sulfamoylbenzoic acid /Lasamide	2736-23-4	Intermediate	n-2	Furosemide	54-31-9		Furosemide is a loop diuretic medication.
91.	4-Methyl-N-[3-(4-methyl-1H-imidazol-1-yl)-5-(trifluoromethyl)phenyl]-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-benzamide, monohydrochloride, monohydrate/ Nilotinib HCl	641571-10-0	API	--	--	--		Nilotinib is used to treat chronic myelogenous leukaemia.
92.	(±) 1, 2, 3, 9-tetrahydro-9-methyl-3-[(2-methyl-1H-imidazol-1-yl)methyl]-4H-carbazol-4-one, monohydrochloride, dihydrate /Ondansetron HCl	103639-04-9	API	--	--	--		Ondansetron HCl is Used to treatment of nausea and vomiting.
93.	(3-oxo-1, 3-dihydro-isobenzofuran-1-yl) phosphonic acid dimethyl ester	61260-15-9	Intermediate	n-3	Olaparib	763113-22-0		Olaparib is used to treat ovarian cancer, metastatic breast cancer.
94.	2-Propanol, 1-[(1-methylethyl)amino]-3-(1-	318-98-9	API	--	--	--		Propranolol Hcl used to treat high blood pressure, irregular

	naphthalenyloxy)-, hydrochloride, (±)-/Propranolol Hydrochloride/ Propranolol Hydrochloride						heartbeats
95.	Roflumilast/ N-(3,5-dichloropyridin-4-yl)-3-cyclopropylmethoxy-4-difluoromethoxybenzamide	162401-32-	API	--	--	--	Roflumilast is used in severe chronic obstructive pulmonary disease.
96.	4-(3,4-dichlorophenyl)-3,4-dihydronaphthalen-1(2H)-One	79560-19-3	Intermediate	n-1	Sertraline hydrochloride	79617-96-2	Sertraline is used to treat depression
97.	Bisacodyl/(Pyridin-2-ylmethylene) bis(4,1-phenylene) diacetate	603-50-9	API	--	--	--	Bisacodyl is Used to treat constipation.
98.	Furosemide/4-chloro-N-furfuryl-5-sulfamoylanthranilic acid	54-31-9	API	--	--	--	Furosemide is Used to treat the symptoms of fluid retention (edema).
99.	Hydrochlorothiazide/6-chloro-3,4-dihydro-2H-1,2,4-benzothiadiazine-7-sulfonamide 1,1-dioxide	58-93-5	API	--	--	--	Hydrochlorothiazide is Used to treat the symptoms of high blood pressure and Swelling.
100.	Mesalamine / 5-amino-2-hydroxybenzoic acid	58-93-5	API	--	--	--	Mesalamine is used to treat ulcerative colitis
101.	Brexpiprazole / 7-{4-[4-(1-Benzothiophen-4-yl)piperazin-1-yl]butoxy}quinolin-2(1H)-one acid	913611-97-9	API	--	--	--	Brexpiprazole is used to treat Schizophrenia depression
102.	Dapagliflozin/ (1S)-1,5-anhydro-1-C-[4-chloro-3-[(4-ethoxyphenyl)methyl] phenyl]	461432-26-8	API	--	--	--	Dapagliflozin is used to treat type 2 DM.
103.	2-(4-(1-Hydroxy-4-(4-(hydroxydiphenylmethyl) piperidin-	153439-40-8	API	--	--	--	Fexofenadine is used in the treatment of allergy symptoms.

	1-yl) butyl) phenyl)-2-methylpropanoic acid hydrochloride /Fexofenadine Hydrochloride							
104	Sacubitril /4-(((2S,4R)-1-([1,1'-biphenyl]-4-yl)-5-ethoxy-4-methyl-5-oxopentan-2-yl) amino)-4-oxobutanoic acid	149690-05-1	API	--	--	--		Sacubitril is Used to treat the symptoms of Heart Failure.
105	Riluzole /2-amino-6-(trifluoromethoxy) benzothiazole	1744-22-5	API	--	--	--		Riluzole is used to treat amyotrophic lateral sclerosis.
106	Fluvoxamine Maleate / 5-methoxy-4'-(trifluoromethyl)valerophenone-(E)-O-(2-aminoethyl) oxime maleate	61718-82-9	API	--	--	--		Fluvoxamine Maleate is Used to treat the symptoms of obsessive-compulsive disorder.
107	N, N-Dimethyl-3-hydroxy-3-(2-thienyl)-1-propylamide	132335-44-5	Intermediate	n-2	Duloxetine Hydrochloride	136434-34-9		Duloxetine is used to treat depression and anxiety.
108	2-Amino-5-methylthiazole	7305-71-7	Intermediate	n-2	Meloxicam	71125-38-7		Meloxicam is used to treat arthritis.
109	2-chloro-5-(1-hydroxy-3-oxo-1-isoindoliny) benzene sulfonamide/ Chlorthalidone	77-36-1	API	--	--	--		chlorthalidone is used to treat high blood pressure.
110	Clomipramine Hydrochloride/ 3-(3-chloro-10,11-dihydro-5H-dibenzo [b, f] azepin-5-yl)-N, N-dimethylpropan-1-amine hydrochloride	17321-77-6	API	--	--	--		Used to treat symptoms of obsessive-compulsive disorder.
111	Nitazoxanide/2-acetyloxy- N- (5-nitro-2-thiazolyl) benzamide	55981-09-4	API	--	--	--		Nitazoxanide is antiviral medication.
112	Pregabalin/ (S)-3-(amino methyl)-5-methylhexanoic	148553-50-8	API	--	--	--		Pregabalin is used to treat epilepsy, neuropathic pain.

	acid						
113	Divalproex Sodium/sodium hydrogen bis(2-propylpentanoate)	76584-70-8	API	--	--	--	Used to treat the symptoms of mania, epilepsy, and migraine.
114	Amlodipine Besylate/3-Ethyl-5-methyl (±)-2-[(2-aminoethoxy)methyl]-4-(2-chlorophenyl)-1,4-dihydro-6-methyl-3,5-pyridinedicarboxylate, mono benzene sulphonates	88150-42-9	API	--	--	--	Amlodipine is used to treat high BP.
115	4-[(4-Methylpiperazin-1-yl)methyl] benzoic acid di HCl	106261-49-8	Intermediate	n-2	Imatinib Mesylate	152459-95-5	Imatinib Mesylate is used to treat cancer
116	Sodium stearyl fumarate	4070-80-8	API	--	--	--	Lubricant for Tablet, Capsules.
117	Isopropyl myristate	110-27-0	API	--	--	--	An excipient for topical pharmaceutical preparations
118	Cetyl Palmitate	540-10-3	API	--	--	--	An Excipient & emollient that lubricants and conditions the skin's surface
119	Melitracen hydrochloride	10563-70-9	API	--	--	--	Melitracen hydrochloride is Used for the treatment of depression and anxiety.
120	Vonoprazan fumarate	126014-1-27-2	API	--	--	--	Vonoprazan fumarate is Used for the treatment of gastroduodenal ulcer.
121	Dopamine hydrochloride	62-31-7	API	--	--	--	Dopamine Hcl is used to treat the symptoms of low blood pressure, low cardiac output and improves blood flow to the kidneys.
122	Aspirin	50-78-2	API	--	--	--	Aspirin used to reduce pain, fever, inflammation.
123	Quetiapine Fumarate	4070-80-8	API	--	--	--	Quetiapine Fumarate is used to treat certain mental/mood

								conditions (schizophrenia)
124	8-chloro-11-(piperidin-4-ylidene)-6,11-dihydro-5H-benzo [5,6] cyclohepta [1,2-b] pyridine /Desloratadine		100643-71-8	API	--	--	--	Desloratadine is used to treat allergies.
125	Telmisartan		144701-48-4	API	--	--	--	Telmisartan is used to treat high BP
126	Valsartan		137862-53-4	API	--	--	--	Valsartan is used to treat high BP
127	Losartan Potassium		124750-99-8	API	--	--	--	Losartan is used to treat high BP
128	Glimepiride		93479-97-1	API	--	--	--	Glimepiride is a medicine used to treat type 2 DM
129	Rosuvastatin Calcium		147098-20-2	API	--	--	--	Rosuvastatin is use to lipid-lowering treatments.
130	Sitagliptin Phosphate Monohydrate		486460-32-6	API	--	--	--	Sitagliptin is used to treat type 2 DM
131	Saxagliptin		361442-04-8	API	--	--	--	Saxagliptin is used to treat type 2 DM
132	Nicardipine Hcl		55985-32-5	API	--	--	--	Nicardipine hydrochloride is antihypertensive. for treatment of angina and coronary spasms.
133	Nifedipine		55985-32-5	API	--	--	--	Nifedipine is used to treat high BP
134	Niacinamide		98-92-0	API	--	--	--	Niacinamide is a form of vitamin used as a dietary supplement and medication.
135	Methyl (R)-3-hydroxybutyrate		3976-69-0	Intermediate	n-1	Imipenem	74431-23-5	It is used for pneumonia, sepsis, joint infections, intra-abdominal infections, and urinary tract infections
136	(+) S-2-Octanol		6169-06-8	Intermediate	n-1	Monoclonal	7732-18-5	Intermediate of Monoclonal antibodies.
137	1,4-Benzodioxane Methanol		3663-82-9	Intermediate	n-1	doxazocin	74191-85-8	Use in High blood pressure treatment.
138	R&D Products	0.1 MT/Month	--	--	--	--	--	--
TOTAL EXISTING		6.0						
TOTAL PROPOSED		8.60						

TOTAL EXISTING + PROPOSED	14.60 MT/M Either Or	
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- 3) 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.
- 4) The proposal was considered in the SEAC video conference meeting dated 03.02.2022.
- 5) Project proponent (PP) and their Technical Expert remain present during video conference meeting.
- 6) Committee deliberated on Product profile, siting criteria and status of existing activities.
- 7) Committee noted that aerial distance shown for the residential area in presentation (Indrad Village @ 1.25 Km) , Format (Indrad Village @ 2 Km) and satellite image (Indrad Village @ 1.76 Km) are different. Upon asking regarding the exact distance, PP could not reply satisfactory.
- 8) While discussion on Product profile, Committee noted that justification is required for the proposed products 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 which could not be provided by PP during presentation

After deliberation, SEAC unanimously decided to defer the proposal and consider the same in one of the upcoming meeting of SEAC after submission of revised product proposal which 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 and subsequent changes in PFR, form-1, EMP and EMS details and complete and adequate information for siting criteria with exact aerial distances as per the prevailing guidelines.

02	SIA/GJ/IND3/246595/2021	M/s: Suresh Sutariya (Unit-I) Old Block No.157, Sr. no. 154, Type-F, Village : Nana Borsara, Ta.: Mangrol, Dist.: Surat.	EC
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Project Proponent (PP) remained absent during the meeting.

After deliberation, SEAC unanimously decided to defer the proposal and consider the same in one of the upcoming meeting of SEAC.

- During SEAC VC meeting on dated 03.02.2022, Project Proponent and their technical expert remain absent. PP has submitted letter via Email stating that they would remain absent during meeting due to unavailability of their technical expert. . PP also requested to schedule the project in any

upcoming SEAC meeting.

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

03	SIA/GJ/IND2/66264/2021	M/s. Indian Huechem Plot No. C-224+225/1, Saykha Industrial Estate Dist. Bharuch	EC
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Category of the unit: **5 (f)**

Project status: **New**

In context to above subject matter find below the recommendation of SEAC for your perusal.

1) DETAILS OF APPLICATION:

1.1. Type of application:	EC-New
1.1. Proposal no.	SIA/GJ/IND2/66264/2021
1.2. Category of Project :	5 (f) – B1
1.3. Date of application :	22/12/2021.
1.4. Documents Submitted by Project Proponent(PP)	EIA Report
1.5. TOR No. & Date :	SIA/GJ/164009/2021 dated 3rd Sep, 2021
1.6. Technical expert / Environmental Consultant :	M/s. Jyoti Om Chemical Research Centre Pvt. Ltd.
1.7. SEAC Meeting No. and Date:	356 th and 03/02/2022.
1.8. Compliance of Existing EC & CCA	Not Applicable, Unit is new.

2) Project proponent has submitted EIA Report prepared by M/s. JYOTI OM CHEMICAL RESEARCH CENTRE PVT. LTD. based on the TOR issued by SEIAA.

3) This is an new unit for manufacturing of synthetic organic chemicals as mentioned below:

-Product Table

Sr. No.	Name of Product	CI/CAS No	Quantity MT/ Month	*End use of product
AZO PIGMENTS / AZO DYES				

1.	Azo Pigments AND/OR Azo Dyes	---	300	Coloring agent for plastic and polymers. Also used in paints and inks / Coloring of wool, Nylon, Leather, paper, acrylics, cotton
COUPLERS				
2.	Naphthol ASE AND/OR	37510 / 92-78-4	100	Intermediates of Pigments
	Naphthol AS AND/OR	37558 / 92-77-3		
	Naphthol ASD AND/OR	37610 / 135-61-5		
	Naphthol ASBO AND/OR	132-68-3		
	Naphthol ASOL AND/OR	135-62-6		
	Naphthol ASBS AND/OR	132-65-9		
	Naphthol ASCL AND/OR	132-65-9		
	Naphthol ASKB	135-63-7		
3	1-phenyl-3-methyl-5-pyrazolone structure (PMP) AND/OR	89-25-8	40	
	2,5- Dichloro SPMP AND/OR	84-57-1		
	Ortho Chloro SPMP AND/OR	88-76-6		
	1,3 SPMP AND/OR	119-17-5		
	1,4 SPMP	89-36-1		
FAST COLOR BASES				
4.	2 B Acid	88-51-7	30	Intermediates of Pigments
5.	4 B Acid	88-44-8	40	
6.	Fast Bordeaux GP Base AND/OR	96-96-8	40	
	Fast Red B Base AND/OR	97-52-9		
	Fast Red RC Base AND/OR	93-34-5		
	Fast Red TR AND/OR	51503-28-7		
	Fast Scarlet RC AND/OR	99-59-2		
	Fast Blue B AND/OR	14263-94-6		
	Garnet G BC AND/OR	95-46-5		
	Fast Scarlet R Base AND/OR	99-59-2		
	Fast Scarlet G Base	99-55-8		
TOTAL			550	
REPRESENTATIVE OF AZO PIGMETNS				
Sr. No.	AZO PIGMENTS	CAS NO.	C.I. No	
ORGANIC YELLOW PIGMENTS				

1.	Pigment Yellow 1	2512-29-0	11680
2.	Pigment Yellow 3	6486-23-3	11710
3.	Pigment Yellow 13	5102-83-0	21100
4.	Pigment Yellow 14	5468-75-7	21095
5.	Pigment Yellow 65	6528-34-3	11740
6.	Pigment Yellow 12	6358-85-6	21090
7.	Pigment Yellow 17	4531-49-1	21105
8.	Pigment Yellow 74	6358-31-2	11741
9.	Pigment Yellow 83	5567-15-7	21108
10.	Pigment Yellow 139	36888-99-0	56298
11.	Pigment Yellow 151	61036-28-0	13980
12.	Pigment Yellow 155	68 516-73-4	200310
13.	Pigment Yellow 62	12 286-66-7	13940
14.	Pigment Yellow 168	71832-85-4	13960
15.	Pigment Yellow 169	73385-03-2	13955
16.	Pigment Yellow 180	77804-81-0	21290
17.	Pigment Yellow 183	65212-77-3	18792
18.	Pigment Yellow 191:1	154946-66-4	18795:1
19.	Pigment Yellow 17	4531-49-1	21105
ORGANICS RED PIGMENTS			
1.	Pigment Red 2	6041-94-7	12310
2.	Pigment Red 8	6410-30-6	12335
3.	Pigment Red 12	6410-32-8	12385
4.	Pigment Red 31	6448-96-0	12360
5.	Pigment Red 32	6410-29-3	12320
6.	Pigment Red 112	6535-46-2	12370
7.	Pigment Red 122	980-26-7	73915
8.	Pigment Red 146	5280-68-2	12485
9.	Pigment Red 170 F3rk	2786-76-7	12475
10.	Pigment Red 170 F5rk	2786-76-7	12475
11.	Pigment Red 210	61932-63-6	12477
12.	Pigment Red 3	2425-85-6	12120
13.	Pigment Red 48 :1/ 48:2	7023-61-2	15865:2
14.	Pigment Red 48 :3	15782-05-5	15865:3
15.	Pigment Red 57:1	5281-04-9	15850:1
16.	Pigment Red 53 1	5160-02-1	15585:1
17.	Pigment Red 254	84632-65-5	56110
ORGANIC ORANGE PIGMENTS			
1.	Pigment Orange 13	3520-72-7	21110
2.	Pigment Orange 34	15793-73-4	21115
3.	Pigment Orange 64	72102-84-2	12760
4.	Pigment Orange 5	3468-63-1	12075
5.	Pigment Orange 36	12236-62-3	11780
ORGANIC VIOLET PIGMENTS			
1.	Pigment Violet 19	1047-16-1	73900

REPRESENTATIVE OF AZO DYES

SR. NO.	NAME OF PRODUCT	CI NO. / CAS NO.

ACID DYES (AZO)

1	Acid Yellow 11	18820
2	Acid Yellow 17	18965
3	Acid Yellow 24	10315
4	Acid Yellow 29	6359-91-7
5	Acid Yellow 42	22910
6	Acid Yellow 54	19010
7	Acid Yellow 59	18690
8	Acid Yellow 99	13900
9	Acid Orange 3	6373-74-6
10	Acid Orange 19	14690
11	Acid Orange 51	26550
12	Acid Orange 67	14172
13	Acid Orange 148	18746
14	Acid Red 1	18050
15	Acid Red 37	17045
16	Acid Red 57	17053
17	Acid Red 114	23653
18	Acid Red 119	12220-20-1
19	Acid Red 138	18073
20	Acid Red 249	18134
21	Acid Blue 92	13390
22	Acid Blue 113	26360
23	Acid Black 10	--
24	Acid Black 210	99576-15-5
25	Acid Black 60	18165
26	Acid Violet 7	18055
27	Acid Violet 43	60730
28	Acid Violet 58	16260
29	Acid Violet 78	12205

BASIC DYES (AZO)

1	Basic Yellow 2	41000
2	Basic Yellow 51	83949-75-1
3	Basic Orange 2	11270
4	Basic Orange 14	10127-02-3
5	Basic Red 1	989-38-8
6	Basic Red 2	477-73-6
7	Basic Red 9	569-61-9
8	Basic Blue 7	2390-60-5
9	Basic Blue 9	52015
10	Basic Blue 11	2185-86-6
11	Basic Blue 17	92-32-9
13	Basic Blue 26	53126
14	Basic Blue 54	15000-59-6
15	Basic Violet 1	42535
16	Basic Violet 3	42555
17	Basic Violet 2	42520
18	Basic Violet 10	45170
19	Basic Violet 11	2390-63-8
20	Basic Violet 26	--
21	Basic Green 1	42040
22	Basic Green 4	42000

23	Basic Green 5	224967-52-6
24	Basic Brown 1	10114-58-6
25	Basic Brown 4	21010
DISPERSE DYES (AZO)		
1	Disperse Yellow 3	11855
2	Disperse Yellow 5	12790
3	Disperse Yellow 7	26090
4	Disperse Yellow 10	12795
5	Disperse Yellow 23	26070
6	Disperse Yellow 56	54077-16-6
7	Disperse Yellow 103	61968-65-8
8	Disperse Yellow 114	61968-66-9
9	Disperse Yellow 119	57308-41-5
10	Disperse Yellow 163	67923-43-7
11	Disperse Yellow 229	136959-03-0
12	Disperse Yellow 231	143067-35-0
13	Disperse Orange 1	11080
14	Disperse Orange 3	11005
15	Disperse Orange 5	11100
16	Disperse Orange 7	11240
17	Disperse Orange 13	26080
18	Disperse Orange 29	26070
19	Disperse Orange 30	11119
20	Disperse Orange 31	61968-38-5
21	Disperse Orange 37	11132
22	Disperse Orange 42	12223-35-5
23	Disperse Orange 57	12223-32-4
24	Disperse Orange 61	12270-45-0
25	Disperse Orange 73	40690-89-9
26	Disperse Orange 288	--
27	Disperse Red 1	11110
28	Disperse Red 5	11215
29	Disperse Red 13	11115
30	Disperse Red 16	11225
31	Disperse Red 17	11210
32	Disperse Red 19	11130
33	Disperse Red 41	11040
34	Disperse Red 50	11226
35	Disperse Red 52	--
36	Disperse Red 72	11114
37	Disperse Red 73	11116
38	Disperse Red 74	61703-11-5
39	Disperse Red 82	11140
40	Disperse Red 114	--
41	Disperse Red 118	11152
42	Disperse Red 152	78564-86-0
43	Disperse Red 153	78564-87-1
44	Disperse Red 177	11122
45	Disperse Red 279	72827-94-2
46	Disperse Red 311	77907-28-9
47	Disperse Red 338	87714-25-8
48	Disperse Red 343	99031-78-6

49	Disperse Red 362	158129-94-3
50	Disperse Brown 1	23355-64-8
51	Disperse Brown 3	11190
52	Disperse Brown 19	71872-49-6
53	Disperse Violet 7	11410
54	Disperse Violet 24	11200
55	Disperse Violet 58	11340
56	Disperse Violet 43	12223-81-3
57	Disperse Violet 77	77538-14-8
58	Disperse Violet 93	52697-38-8
59	Disperse Blue 79	11345
60	Disperse Blue 85	11370
61	Disperse Blue 90	12222-88-7
62	Disperse Blue 94	12235-96-0
63	Disperse Blue 106	12223-01-7
64	Disperse Blue 148	11124
65	Disperse Blue 183	11078
66	Disperse Blue 281	22578-86-5
67	Disperse Blue 284	71872-43-0
68	Disperse Blue 291	56548-64-2
REACTIVE DYES (AZO)		
1	Reactive Yellow 42	12226-63-0
2	Reactive Yellow 44	12270-91-6
3	Reactive Yellow 81	59112-78-6
4	Reactive Yellow 84	61951-85-7
5	Reactive Yellow 135	24925
6	Reactive Yellow 145	93050-80-7
7	Reactive Orange 4	18260
8	Reactive Orange 13	18270
9	Reactive Orange 16	17757
10	Reactive Orange 122	12220-12-1
11	Reactive Red 35	12226-12-9
12	Reactive Red 141	61931-52-0
13	Reactive Red 152	71870-80-5
14	Reactive Red 195	93050-79-4
15	Reactive Red 198	18221
16	Reactive Blue 13	12236-84-9
17	Reactive Blue 20	12225-40-0
18	Reactive Blue 40	12225-54-6
19	Reactive Blue 109	61951-76-6
20	Reactive Blue 171	77907-32-5
21	Reactive Black 5	14095-24-8
22	Reactive Black WNN	--

- 4) The project falls under B1 category of project activity 5(f) as per the schedule of EIA Notification 2006.
- 5) The proposal was considered in the SEAC video conference meeting dated 03.02.2022.
- 6) Project proponent (PP) and their Technical Expert remain present during video conference meeting.
- 7) 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.

- 8) The baseline environmental quality has been assessed for various components of the environment viz. air, noise, water, biological and socioeconomic aspect. The baseline environmental study has been conducted for the study area of 10 km radial distance from project site for the period December-2019 to February-2020. Ambient Air Quality monitoring was carried out PM10, PM2.5, SO_x, NO_x, HCl, VOCs and HC at Eight locations, including the project site. Values conform to the prescribed standards for Ambient Air Quality. The incremental Ground Level Concentration (GLC) has been computed using "AERMOD". 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).
- 9) 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.
- 10) 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.
- 11) Since, the unit located within the GIDC- Saykha, the public consultation is not applicable as per paragraph 7(i) III (i) (b) of the Environment Impact Assessment Notification-2006.
- 12) Committee has asked to justify cost bifurcation for the Safety Equipment
- 13) Later on PP has submitted cost bifurcation for the Safety Equipment through email.
- 14) They have proposed total 45 Lacs cost for the safety equipment. Bifurcation for the same is submitted as below:

1. Capital Cost for the Fire Hydrant System. (26 Lacs)		
A	Cost for Fire Hydrant Line: - 15 Lacs	
B	Cost of Jockey Pump: - 2 Lacs	
C	Cost of Main Pump: - 3 Lacs	
D	Cost of DG Pump: - 6 Lacs	
2. Capital Cost for Fire Extinguisher (2 Lacs)		
A	Foam Type Extinguisher	1. 7 Nos. (9 Lit) x 1100 =7,700/- 2. 5 Nos. (50 Lit) x 8620 =43,100/-
B	DCP Type Extinguisher	1. 5 Nos. (5 kg) x 3750/- = 18,750/-
C	CO2 Type Extinguisher	1. 10 Nos. (10 kg) x 9000 = 90,000/-
D	ABC Type Extinguisher	1. 10 Nos. (5 kg) x 1000 =10,000/-
E	Sand Bucket	1. 20 Nos. x 1500 = 30,000/-
3. Capital cost for PPEs, Smoke Detector and Water Sprinkler (2 Lacs)		
A	Helmet: - 70 Nos. x 200 = 14,000/-	
B	Shoes: - 70 Nos. x 500 = 35,000/-	
C	Googols: - 70 Nos. x 25 = 1750/-	
D	Shower: - 5 Nos. x 4500 = 22,500/-	

E	Gloves: - 70 Nos. x 20 = 1,400/-
F	Mask: -100 Nos. x 10 =1,000/-
G	Apron: - 70 Nos. x 100 = 7,000/-
H	Safety Belt: - 5 Nos. x 500 =2500/-
I	SCBA Set: - 2 Nos. x 25000= 50,000/-
J	Gum Boot:- 30 Nos. x 500 = 15,000/-
K	Fire Proximity Suit: - 2 Nos. x 10,000 = 20,000/-
L	Smoke Detector (5 Nos.) x 3000/- = 15,000/-
M	Water Sprinkler (10 Nos.) x 3000/- = 30,000/-
4. PLC System for Hazardous Process (15 Lacs)	

Sr. No.	Particulate	Cost
1	Capital Cost for the Fire Hydrant System	26 Lacs
2	Capital Cost for Fire Extinguisher	2 Lacs
3	Capital cost for PPEs, Smoke Detector and Water Sprinkler	2 Lacs
4	PLC System for Hazardous Process	15 Lacs
Total		45 Lacs

15) Compliance of ToR found satisfactory.

16) PP presented 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 Rs. 10 Crores															
	Break-up of proposed project Cost:															
	<table border="1"> <thead> <tr> <th>Details</th> <th>Project Cost (Rs. In Crores)</th> </tr> </thead> <tbody> <tr> <td>Land</td> <td>1.5</td> </tr> <tr> <td>Building</td> <td>2.0</td> </tr> <tr> <td>Machinery</td> <td>4.8</td> </tr> <tr> <td>Env. & Safety</td> <td>1.6</td> </tr> <tr> <td>Miscellaneous</td> <td>0.1</td> </tr> <tr> <td>Total</td> <td>10</td> </tr> </tbody> </table>	Details	Project Cost (Rs. In Crores)	Land	1.5	Building	2.0	Machinery	4.8	Env. & Safety	1.6	Miscellaneous	0.1	Total	10	
Details	Project Cost (Rs. In Crores)															
Land	1.5															
Building	2.0															
Machinery	4.8															
Env. & Safety	1.6															
Miscellaneous	0.1															
Total	10															
A-2	Details of Environmental Management Plan (EMP)	As below:														
	<table border="1"> <thead> <tr> <th>Sr.</th> <th>Particulars</th> <th>Detail</th> <th>Capital</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Sr.	Particulars	Detail	Capital	Total										
Sr.	Particulars	Detail	Capital	Total												

No			Cost (Rs. In Crores)	Recurring Cost (Rs. In Crores)
1	Waste Water	Installation of ETP and RO.	0.50	1.66
2	Air	Scrubbers, Stacks, monitoring platforms on stacks etc.	0.20	0.20
3	Hazardous Management	Landfill and Co-processing of waste	0.10	0.54
4	Fire & Safety	PPE, fire extinguishers, First Aid Kit, Smoke detector, Ventilation, Fire Hydrant System, Fire Proximity Suit, Water Sprinkler, PLC System for manufacturing process, Scrubber and solvent recovery.	0.45	0.15
5	Environment Monitoring	---	00	0.10
6	Green Belt Development	Green belt development	0.05	0.02
7	Occupational Health	Construction of OHC, First Aid Kits, PPE Kit, Hiring of panel doctors, medical examiners and expenses etc.	0.05	0.03
8	Noise Control	Acoustic enclosure for Boiler, DG Set	0.05	0.025
9	CER Funds	CER Activities within study area	0.10	0.10
Total			1.50	2.825

Comments:

The overall environment management plan (EMP) provided for capital and recurrent cost for wastewater treatment, air emission control, noise control, hazardous waste disposal, fire safety, occupational health, green belt and corporate social responsibility was deliberated and found satisfactory.

A-3 | **Details of CER -**

PP shall carry out CER activities as below:

- ✓ To Provide Solar Panel for power generation in Primary health centre & Primary School and also provide solar street light in saykha village.

B	<p>Land / Plot ownership details:</p> <p>Plot is already attoted to INDIAN HUECHEM vide GIDC/RM/ANK/TRF/FTO/SAY1/86 dated 10/05/2021.</p>																																																																																																		
B-1	<p>Plot area</p> <table border="1" data-bbox="352 443 1326 517"> <tr> <td style="text-align: center;">Total Plot area</td> </tr> <tr> <td style="text-align: center;">5386.88 Sq. m.</td> </tr> </table>	Total Plot area	5386.88 Sq. m.																																																																																																
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B-2	<p>Area adequacy</p> <ul style="list-style-type: none"> ➤ Total plot area of the unit is 5386.88 Sq.mt. ➤ Total production capacity will be 550 MT/Month. ➤ The unit will develop total 2 Nos. of manufacturing facilities of total area 1128.05 Sq.mt. on ground floor. ➤ Unit has allotted total 254.25 Sq. mt area for Raw Material Storage (Solid + Liquid). ➤ Unit has allotted total 250 Sq. mt area for Finished Goods on ground Floor. ➤ ETP & HWSA area will be 211.70 Sq.mt. ➤ Utility area will be 211.70 Sq.mt. ➤ Manufacturing facility will be G+3 facility. <p>Goods Carrier Movement</p> <ul style="list-style-type: none"> ➤ Unit has proposed 6 m wide road and two gates for easily Goods Carrier Movement. <p style="text-align: center;">AREA TABLE</p> <table border="1" data-bbox="371 1279 1369 1787"> <thead> <tr> <th>SR NO</th> <th>LAND BREAK UP FOR</th> <th>GROUND FLOOR (SQ.MT)</th> <th>FIRST FLOOR (SQ.MT)</th> <th>SECOND FLOOR (SQ.MT)</th> <th>THIRD FLOOR (SQ.MT)</th> <th>AREA (SQ.MT)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>PRODUCTION AREA</td> <td>873.80</td> <td>873.80</td> <td>873.80</td> <td>873.80</td> <td>3495.20</td> </tr> <tr> <td>2</td> <td>OFFICE & LAB AREA</td> <td>134.21</td> <td>-</td> <td>-</td> <td>-</td> <td>134.21</td> </tr> <tr> <td>3</td> <td>FINISHED GOODS STORAGE</td> <td>250.00</td> <td>254.25</td> <td>-</td> <td>-</td> <td>504.25</td> </tr> <tr> <td>4</td> <td>RAW MATERIAL STORAGE (SOLID + LIQUID)</td> <td>254.25</td> <td>-</td> <td>254.25</td> <td>-</td> <td>508.50</td> </tr> <tr> <td>5</td> <td>PRODUCTION PLANT - I</td> <td>254.25</td> <td>-</td> <td>-</td> <td>-</td> <td>254.25</td> </tr> <tr> <td>6</td> <td>ETP & HWSA</td> <td>211.70</td> <td>-</td> <td>-</td> <td>-</td> <td>211.70</td> </tr> <tr> <td>7</td> <td>UTILITY (BOILER)</td> <td>211.70</td> <td>-</td> <td>-</td> <td>-</td> <td>211.70</td> </tr> <tr> <td>8</td> <td>OHC</td> <td>15.00</td> <td>-</td> <td>-</td> <td>-</td> <td>15.00</td> </tr> <tr> <td>9</td> <td>SECURITY CABIN</td> <td>15.60</td> <td>-</td> <td>-</td> <td>-</td> <td>15.60</td> </tr> <tr> <td>10</td> <td>TANK FARM</td> <td>328.10</td> <td>-</td> <td>-</td> <td>-</td> <td>328.10</td> </tr> <tr> <td>11</td> <td>GREEN BELT</td> <td>1777.60</td> <td>-</td> <td>-</td> <td>-</td> <td>1777.60</td> </tr> <tr> <td>12</td> <td>OPEN AREA (ROADS)</td> <td>1060.67</td> <td>-</td> <td>-</td> <td>-</td> <td>1060.67</td> </tr> <tr> <td></td> <td>TOTAL (SQ.MT)</td> <td>5386.88</td> <td>1128.05</td> <td>1128.05</td> <td>873.80</td> <td>8516.78</td> </tr> </tbody> </table> <p>➤ Hence, adequate area is available for proposed new Facility.</p> <p>Comments:</p> <p>SEAC has examined it w.r.t.to total monthly production, maximum products, manufactured per month, the total raw material required, weekly storage requirement of each raw material, their mode of storage,</p>	SR NO	LAND BREAK UP FOR	GROUND FLOOR (SQ.MT)	FIRST FLOOR (SQ.MT)	SECOND FLOOR (SQ.MT)	THIRD FLOOR (SQ.MT)	AREA (SQ.MT)	1	PRODUCTION AREA	873.80	873.80	873.80	873.80	3495.20	2	OFFICE & LAB AREA	134.21	-	-	-	134.21	3	FINISHED GOODS STORAGE	250.00	254.25	-	-	504.25	4	RAW MATERIAL STORAGE (SOLID + LIQUID)	254.25	-	254.25	-	508.50	5	PRODUCTION PLANT - I	254.25	-	-	-	254.25	6	ETP & HWSA	211.70	-	-	-	211.70	7	UTILITY (BOILER)	211.70	-	-	-	211.70	8	OHC	15.00	-	-	-	15.00	9	SECURITY CABIN	15.60	-	-	-	15.60	10	TANK FARM	328.10	-	-	-	328.10	11	GREEN BELT	1777.60	-	-	-	1777.60	12	OPEN AREA (ROADS)	1060.67	-	-	-	1060.67		TOTAL (SQ.MT)	5386.88	1128.05	1128.05	873.80	8516.78
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	<p>their compatibility (flammability, corrosive, toxic), area needed by each raw material, one week storage of finished goods. Area adequacy, from overall safety perspective, has been provided in proposal and is satisfactory.</p>																		
B-3	<p>Green belt area</p> <table border="1"> <tr> <td></td> <td>Total (Sq. meter)</td> </tr> <tr> <td>Area in Sq. meter</td> <td>1777.60 (Within Premises)</td> </tr> <tr> <td>% of total area</td> <td>33% (Within Premises)</td> </tr> </table> <p>Comments:</p> <p>The condition shall be given that -</p> <p>The PP shall develop green belt (1777.60 Sq. m 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.</p>		Total (Sq. meter)	Area in Sq. meter	1777.60 (Within Premises)	% of total area	33% (Within Premises)												
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	50																		
D	WATER																		
D-1	<p>Source of Water Supply</p> <ul style="list-style-type: none"> ➤ Saykha GIDC Water Supply. ➤ Unit has obtained water assurance letter from GIDC Saykha of 200 KLD vide letter no. GIDC/DEE/WS/BRH/1100 dated 24/11/2021. <p>Comments:</p> <ul style="list-style-type: none"> ➤ Prior permission from concerned authority shall be obtained for withdrawal of water. 																		
D-2	<p>Water consumption (KLD)</p> <table border="1"> <tr> <td colspan="2">-</td> </tr> <tr> <td>Category</td> <td>Quantity KLD</td> </tr> <tr> <td>(A) Domestic</td> <td>10</td> </tr> <tr> <td>(B) Gardening</td> <td>5</td> </tr> <tr> <td>(C) Industrial</td> <td></td> </tr> <tr> <td> Process</td> <td>210</td> </tr> <tr> <td> Washing</td> <td>20</td> </tr> <tr> <td> Boiler</td> <td>5</td> </tr> <tr> <td> Cooling</td> <td>40</td> </tr> </table>	-		Category	Quantity KLD	(A) Domestic	10	(B) Gardening	5	(C) Industrial		Process	210	Washing	20	Boiler	5	Cooling	40
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D-3	Waste water generation (KLD)																							
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D-4	Break-up of waste water disposal & facility (For Domestic)																							
	<p>10 KLD Domestic Waste Water will be treated in ETP & treated wastewater will be sent to ETP followed by RO.</p>																							
	<u>Comments:</u>																							
	Domestic wastewater generation shall not exceed 10 KL/day for proposed project and it shall be treated in ETP. It shall not be disposed off through soak pit/ septic tank.																							

D-5		Break-up of waste water disposal & facility (For Industrial)	
Sr. no.	Quantity	Facility	
1	140 (low TDS effluent)	Primary + Tertiary treatment	
2	6 KLD	3 KLD blow down, 2 KLD For ash quenching and 1 KLD Loss	
3	100 (High COD & TDS effluent)	Fenton Treatment	
Total	246		
Membership Certificate no. & Date (For CETP/CMEE/CSD etc.)			
Membership certificate of CETP-Saykha vide no. Ref. GIDDC/BRH/DEE/DRG/715 dated 24.11.2021			
Comments:			
<p>1. Management of Industrial effluent shall be as under:</p> <ul style="list-style-type: none"> ✓ <u>Concentrated Stream (100 KLD)</u> <ul style="list-style-type: none"> ➤ 100 KLD, High TDS & High COD stream, shall be collected in collection tank. Then, effluent shall be sent for Fenton Treatment. After clarifier, Filtrate shall be sent to Tertiary treatment (Sand filter and activated carbon filter). ✓ <u>Dilute Stream (146 KLD):</u> <ul style="list-style-type: none"> ➤ 140 KLD industrial effluent from process, cooling tower, scrubber, washing shall be treated into Effluent Treatment Plant-1 followed by primary, tertiary treatment and RO, then RO permeate 100 KLD shall be reused within plant and 50 KLD RO rejected shall be further treated into Effluent Treatment Plant-2 along with 100 KLD concentrated stream. ➤ 3 KLD industrial effluent generated from boiler blow down shall be reused and another 3 KLD effluent generated from boiler scrubber shall be reused for ash quenching and coal handling. ➤ Treated wastewater shall be sent to CETP of Saykha only after complying with the inlet norms of CETP prescribed by GPCB to ensure no adverse impact on Human Health and Environment. <p>2. Unit shall provide ETP with adequate capacity.</p> <p>3. The PP shall ensure to dispose off Waste water to the Common Facilities having valid CTO of GPCB.</p>			

E	AIR					
E-1	Power (Electricity) requirement : 125 KVA					
E-2	Flue gas emission details					
-						
Sr No.	Source of emission With Capacity	Stack Height (meter)	Type of Fuel	Quantity of Fuel MT/ Day	Type of emissions i.e. Air Pollutants	Air Pollution Control Measures (APCM)
1.	Steam Boiler 4 TPH	30	Imported Coal	14.5 MT/Day	PM SO ₂ NO _x	Multi Cyclone Separator + Bag filter + water scrubber
2.	DG Set 250 KVA	11	Diesel	35 Lit/ Hr.		Adequate Stack Height
-						
E-3	Process gas					
-						
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 Vessels-I	HCl NO _x SO ₂	22	Two stage Water Scrubber followed by Alkali Scrubber		
2	Tray Dryer	PM	30	Bag Filter		
-						
E-4	Fugitive emission details with its mitigation measures.					
<ul style="list-style-type: none"> - For Fugitive emission such as VOCs, VOC detectors will be installed. - Leak Detection and Repair (LDAR) program shall be implemented to comply with environmental regulations for reducing the fugitive emissions of targeted chemicals into the environment. - To control fugitive emission from process / reaction, all reactor condensers shall be connected to a scrubber to minimize loss of solvents / fugitive emission in to the atmosphere. 						
<u>Comments for E2, E3 & E4:</u>						
<ul style="list-style-type: none"> ✓ The fuel to be used is approved fuel for the requirement of the heat energy and has been proposed the Air pollution Control measures so as to achieve the emission norms prescribed by the competent authorities. ✓ The air pollution control measures, has been proposed by PP for checking 						

flue gas emission, Process gas emission, fugitive gas emission, with adequate systems of reaction/ reaction condensers, thermic fluid heaters, boilers, and scrubbing systems as per the requirements, to achieve the emission norms prescribed by the competent authorities.

F Hazardous waste

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 Waste	From ETP plant	35.3	1460	Collection, Storage, Transportation, Disposal at TSDF site.
2.	Used Oil	From Lubrication	5.1	5	Collection, Storage & Reused within the premises.
3.	Discarded Drums/Empty Barrels/ Containers / Bag/Liners	Packing of raw materials.	33.1	50	Collection, storage, decontamination & disposal by selling to GPCB authorized recycler
4.	Spent Caron	From ETP & Solvent recovery	28.3	50	Collection, Storage, Transportation & send to Co-processing.
5.	RO Membrane from RO Plant	From RO Plant	---	2	Collection, Storage, Transportation, Disposal at TSDF Site.
6.	Recoverable Solvent	From distillation unit.	28.6	6300	Collection, Storage, and reused within process.
7.	Distillation Residue	From Solvent Recovery Unit	28.1	125	Collection, storage, Transportation & Send to Co-processing unit.
8.	Scrubber Solution	From Process Scrubber	B15	3650	Collection, storage, and send to ETP.
9.	Product dust	From Process-Drying	---	12	Collection, storage and reused within plant premises in manufacturing process.

Comments:

- ✓ Waste management includes hazardous waste management and other solid waste management. Hazardous waste-management comprises of collection, storage, transportation, disposal, incineration, and recycle of waste. SEAC examined the details provided and found it as per requirement.
- ✓ The project proponent has to obtain membership of TSDF site & CHWIF before obtaining CTO of GPCB.

F-2

Non- Hazardous waste management matrix

- ✓ Fly Ash generation will be 540 MTPA.

Comments:

- ✓ Management of fly ash shall be as per the Fly ash Notification 2009 & its amendment time to time and it shall be ensured that there is 100% utilization of fly ash to be generated from the unit.

G**Solvent management, VOC emissions etc.****G-1**

Types of solvents, Details of Solvent recovery, % recovery, reuse of recovered Solvents etc.

S r. N o.	Nam e of The Prod uct	Nam e of the Raw Mate rial	Total Solve nt	Recov er Solve nt	Percent age Recove ry in %	Percent age of loss in Air	Percent age of loss in water	Percen tage of loss in Residu e
			MT/Mo nth	MT/Mo nth				
1	Napht hol ASE	Tolue ne / Xylen e	150	148.5	99	0.001	0.999	00
2	2B Acid	ODC B	132	126.7	96	0.002	0.100	3.898
3	4B Acid	ODC B	132	126.7	96	0.002	0.100	3.898
4	Fast Color Base	Aceti c Acid	32	31.7	99	0.001	0.997	00
		MDC	92.3	91.4	99	0.003	0.997	00

G-2**VOC emission** sources and its mitigation measures

Measures for achieving maximum solvent recovery and minimize VOC generation:

- The entire manufacturing activities & distillation process will be carried out in a totally

	<p>closed system.</p> <ul style="list-style-type: none"> • Maintenance of the pipeline and valves & fittings will be carried out regularly to avoid any leakages. • Reactor will be connected with two numbers of condensers where in the first condenser chilled water will be used whereas in second condenser brine solution will be used as media and it will be also equipped with vacuum system as per requirement. • The condenser will be provided with sufficient HTA and residence time to achieve more than 90% recovery. • All the Flange joints of the pipe lines which carry solvents will be covered with flange guards. • VOC detectors will be installed at various places to identify any fugitive emissions. • Minimum number of flanges, joints and valves in pipelines shall be provided. - 	
G-3	LDAR proposed:	
	<p>Leak Definition</p> <ul style="list-style-type: none"> • A leak is detected whenever the measured concentration exceeds the threshold standard (i.e., leak definition) for the applicable regulation. • Leak definitions vary by regulation, component type, service (e.g., light liquid, heavy liquid, gas/vapor), and monitoring interval. • Many equipment leak regulations also define a leak based on visual inspections and observations (such as fluids dripping, spraying, misting or clouding from or around components), sound (such as hissing), and smell. <p>Following steps shall be followed for effective implementation of LDAR Program:</p> <ol style="list-style-type: none"> 1. Process Controls 2. Emissions control program 3. Selection of appropriate method for leak detection 4. Scheduling and checklist for Leak Detection 5. Methods for rectification of identified leaks 6. Frequency of Monitoring 7. Record keeping of LDAR Program <p>-</p> <p>-</p>	
	<p>Comments:</p> <ul style="list-style-type: none"> ✓ Measures for achieving maximum solvent recovery and minimize VOC generation, inclusive of VOC detectors, pumps, maintenance of pipelines, proper ventilation etc., provided are as per requirement. ✓ Spent solvents shall be recovered by in-house distillation in such a manner that recovery shall not be achieved to the maximum extent and recovered solvent shall be reused in the process. Solvent recovery system with adequate reflux condensers shall be provided for controlling escape of low boiling solvents (VOCs). 	
H	SAFETY details	
H-1	Details regarding storage of Hazardous chemicals	

Sr. No.	Name of solvent used	Mode of storage (HDPE Drum, Ms Drum/Barrels/Tank, Bottle)	Storage Quantity per container	Maximum Storage Capacity Fresh + Recoverable (in KL)	State	Possible type of hazards
1	Toluene	MS Tank	10 KL	30 KL	Liquid	Flammable
2	Xylene	MS Drum	0.2 KL	5 KL	Liquid	Flammable
3	ODCB	HDPE Drum	0.2 KL	3 KL	Liquid	Flammable
4	Acetic Acid	HDPE Tank	10 KL	20 KL	Liquid	Toxic, Flammable
5	MDC	HDPE Drum	0.2 KL	5 KL	Liquid	Toxic

Storage of Hazardous chemicals in Tanks

- MS storage tank provided as per IS code.
- Dyke wall provided to storage tank.
- Level gauge provided with low level high level provided.
- Fire hydrant monitor with foam trolley facility provided.
- FLP type pump provided.
- Double static earthing provided to storage tank.
- Double Jumper clip provided to all pipeline flanges.
- Road tanker unloading procedure prepared and implemented.
- Lightening arrestor, PPEs provided.
- Safety shower, eye washer provided.
- NFPA labelling system adopted for storage tanks.

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

Sr. No	Name of raw materials	State	Storage Mode	Capacity of single container /tank/bag	Max. storage capacity at site	Characteristic
1.	H ₂ SO ₄	Liquid	MS Tank	20 KL	20 KL	Corrosive
2.	HCl	Liquid	HDPE Tank	10 KL	20 KL	Corrosive
3.	Emulsifier	Liquid	HDPE Drum	200 Lit	1 KL	Toxic
4.	PCI ₃	Liquid	HDPE Drum	200 Lit	2 KL	Toxic, Corrosive
5.	Aniline	Liquid	HDPE Drum	200 Lit	2 KL	Toxic
6.	C.S.Lye	Liquid	HDPE Tank	10 KL	30 KL	Toxic
7.	Ortho Chloropara Toluene	Liquid	HDPE Drum	200 Lit.	3 KL	Toxic

8.	Nitric Acid 60%	Liquid	SS Tank	10 KL	10 KL	Corrosive
9.	Diethylamine	Liquid	HDPE Drum	200 Lit.	1.5 KL	Corrosive
10.	Ortho Anisidine	Liquid	HDPE Drum	200 Lit.	3 KL	Toxic
11.	Ortho Chloro Aniline	Liquid	Drum	200 Lit.	3 KL	Toxic
12.	Ortho Toluidene	Liquid	HDPE Drum	200 Lit.	3 KL	Toxic
13.	Nitric Acid-98%	Liquid	Aluminium Tank	5 KL	5 KL	Corrosive
Type of Hazardous Chemicals		Safety measures				
CORROSIVE & CHEMICALS		Storage in compatible storage unit with safe distance with other chemicals, Only trained person allowed to handle				
TOXIC CHEMICALS		Storage in compatible storage unit with safe distance with other chemicals, Only trained person allowed to handle				
<p>➤ Applicability of PESO: Yes. Unit will obtain PESO License for storage of chemicals.</p> <p>Comments:</p> <p>Committee was of the opinion that the provisions of PESO, licensing, condition compliance, monitoring, fall within the preview of The Petroleum and Explosives Safety Organization (PESO) and SEAC has very limited role in this. Nevertheless SEAC has examined it. The PP has submitted that the list of raw materials/products proposed to be produced along with the quantity, attract the provisions of PESO and they will abide by the requisite legal compliances with reference to storage and safety. SEAC has taken note of it.</p>						
H-2	Types of hazardous Processes involved and its safety measures:					
NITRATION PROCESS		Nitration Process will be carried out through PLC System. <ol style="list-style-type: none"> 1. Nitric acid and sulphuric acid is highly reactive at high temperature. By product of reaction may have explosive property. 2. It is required to take strict safety measures to control any accident. 3. Nitration reaction is highly exothermic. It must be controlled by systematic cooling designed to withdraw the energy evolved. 4. Provide pressure safety valve, Pressure indicator with alarm system. Set maximum and minimum pressure level. 				

		<ol style="list-style-type: none"> 5. Temperature indicator with alarm system. Set maximum and minimum temperature level. 6. Reactor must be jacketed and provide adequate cooling system by supplying water. 7. All pipeline and tanks painted as per IS colour code. 8. Provide close loop process. 9. Process area must be well ventilated. 10. One tank is always kept empty during Nitration process, connection with emergency release line to neutralize the system 11. Installation of special electrical equipment for flammable vapors, gases, combustible dusts or other materials. 12. Periodic testing of grounding and bonding circuits, lightning arresters, and electrical distribution equipment. 13. Maintenance/calibration done for critical safety equipment (e.g. sensors, instruments, valves, interlocks, reactors, condenser etc.) at suitable intervals. 14. Provide suction line in which vapour space above the liquid charge to remove the acid fume and oxides of nitrogen which may be liberated. Provide scrubber system for the same. 15. Level gauge provided. 16. Required PPEs provided to all employees. Person who will handling this process must be trained. 17. Double drain valve will be provided 	
	<p>SULPHONATION PROCESS</p>	<p>Sulphonation Process will be carried out through PLC System.</p> <ol style="list-style-type: none"> 1.Procedures and actions will be well defined and known to all operating personnel's for safe shut down of plant incase of failure of any power, instrumentation, cooling water, air, etc; 2.All the vessels and tanks will be provided with temperature indicator, pressure gauge and safety valves as depending upon the process and operating parameters; 3.Plant specific HAZOP studies will be carried out using P&IDs (Piping and Instrumentation Diagrams) for identification of hazards during operation considering deviation of operational parameters, their possible cause and consequence and safe guards; 4. Interlocks and PLC control will be provided during reaction process; 5.All the reactors which will not working at atmospheric temperature will be provided with glass wool lagging to contain the heat; 6.All the motors and other rotating equipment machines will be provided with suitable safety guards; 7.First Aid Fire extinguishers will also be installed in the plant area; 8.Flame arrestors will be provided at all vent lines at solvent tanks; 9.Suitable first aid fire extinguishers, such as, DCP (Dry Chemical Powder), CO₂ & foam type will be kept in every plant area at easily approachable spots and in sufficient numbers. 10. Fire hydrant points with sufficient length of hose reel will be provided at major emergency spots. 	

11. Emergency Safety shower will be installed at crucial places.
 12. Sufficient space will be provided for free movement in the plant area.
 13. Safe distances have been considered in designing of plant lay out.

H-3 Details of Fire Load Calculation

Total Plot Area:	5386.88
Area utilized for plant activity:	1127
Area utilized for Hazardous Chemicals Storage:	582.35
Number of Floors:	G+3
Water requirement for firefighting in KLD:	30
Water storage tank provided for firefighting in KLD:	200
Details of Hydrant Pumps:	Main Pump cap: 70 HP Jockey pump cap: 65 HP DG Pump cap: 80 HP
Nearest Fire Station :	Dahej Fire Station: 25 KM
Applicability of Off Site Emergency Plan:	No

Comments:

The project proponent has proposed fire safety plan which includes fire hydrant line, sprinkler system, fire extinguishers, fire suits, covering the project area and provides for fire water storage tank of 200 KL. SEAC found it as per the requirement.

H-4 Details of Fire NOC/Certificate:

Unit will obtain Fire NOC after receipt of EC and before getting CTO.

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

Number of permanent Employee:	50
Number of Contractual person/Labour:	40
Area provided for OHC:	15
Number of First Aid Boxes:	2 Nos.
Nearest General Hospital:	PHC Vagra:- 3.47 KM.
Name of Antidotes to be store in plant:	Adequate antidotes will be stored within premises

Comments

Project proponent has provided Occupational health center with adequate provision of manpower, equipment and operational cost. SEAC finds it as per the provisions of Gujarat Factory Rules 1963.

9) DELIBRATION AND RECOMMENDATION:

"On the basis of information provided to SEAC on project, its location, technical, physical and

environmental infrastructure, products, quantity to be manufactured, its raw material, storage, waste disposal, water treatment, safety measures, green belt development planning, regulatory compliance assured of related statutory provisions, necessary documents of requisite permissions provided from concerned departments and overall environmental management planning for the project, along with financial resources committed for operation and maintenance, and on the basis of presentation made before SEAC, modification suggested by SEAC and incorporated by project proponent, SEAC finds the project as per the requirement and **unanimously** recommends the same to SEIAA for environmental clearance."

Conditions with which Environment Clearance is recommended:

Construction Phase

- a) "Wind – breaker of appropriate height i.e. 1/3rd of the building height and maximum up to 10 meters shall be provided. Individual building within the project site shall also be provided with barricades.
- b) "No uncovered vehicles carrying construction material and waste shall be permitted."
- c) "No loose soil or sand or construction & demolition waste or any other construction material that cause dust shall be left uncovered. Uniform piling and proper storage of sand to avoid fugitive emissions shall be ensured."
- d) Roads leading to or at construction site must be paved and blacktopped (i.e. – metallic roads).
- e) No excavation of soil shall be carried out without adequate dust mitigation measures in place.
- f) Dust mitigation measure shall be displayed prominently at the construction site for easy public viewing.
- g) Grinding and cutting of building materials in open area shall be prohibited.
- h) Construction material and waste should be stored only within earmarked area and road side storage of construction material and waste shall be prohibited.
- i) Construction and demolition waste processing and disposal site shall be identified and required dust mitigation measures be notified at the site. (If applicable).

SPECIFIC CONDITIONS:

1. 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**].

2. 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.
3. Leak Detection and Repair (LDAR) program shall be prepared and implemented as per the CPCB guidelines. LDAR Logbooks shall be maintained.
4. 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.
5. 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.
6. 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.
7. All measures shall be taken to avoid soil and ground water contamination within premises.

8. 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 fire hydrants, water monitors & foam application system at solvent storage area and unit shall provide adequate safety system such as water sprinklers, foam-pouring system etc. to restrict cascade fire emergency in solvent storage area.
- l) Unit shall provide effective Isolation for Process area and storage of hazardous chemicals.

WATER

9. Total water requirement for the project shall not exceed 303 KLD. From which recycle water shall be 103 KLD, fresh water requirement shall not exceed 200 KLD, and it shall be met through GIDC 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 246 KLD.
11. Management of Industrial effluent shall be as under:

Concentrated Stream (100 KLD)

- 100 KLD, High TDS & High COD stream, will be collected in collection tank. Then, effluent will be send for Fenton Treatment. After clarifier, Filtrate will be will be sent to Tertiary treatment (Sand filter and activated carbon filter).

Dilute Stream (146 KLD):

- 140 KLD industrial effluent from process, cooling tower, scrubber, washing shall be treated into Effluent Treatment Plant-1 followed by primary, tertiary treatment and RO, then RO permeate 100 KLD shall be reused within plant and 50 KLD RO rejected shall be further treated into Effluent Treatment Plant-2 along with 100 KLD concentrated stream.
- 3 KLD industrial effluent generated from boiler blow down shall be reused and another 3 KLD effluent generated from boiler scrubber shall be reused for ash quenching and coal handling.
- Treated wastewater shall be sent to CETP of Saykha only after complying with the inlet norms of CETP prescribed by GPCB to ensure no adverse impact on Human Health and Environment.

12. Unit shall discharge wastewater to CETP of GIDC Saykha only after complying with inlet norms prescribed by GPCB and 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.
13. Domestic wastewater generation shall not exceed 10 KL/Day for proposed project and it shall be treated in ETP. It shall not be disposed off through soak pit/ septic tank. Unit shall provide buffer water storage tank of adequate capacity for storage of treated waste water during rainy days.
14. The unit shall provide metering facility at the inlet and outlet of ETP and maintain records for the same.
15. Proper logbooks of ETP; reuse/ recycle of treated/ untreated effluent; 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.

AIR:

16. Unit shall not exceed fuel consumption for Boiler, Tray Dryer and D G Set as per the point no. E-2 as mentioned above.
17. Unit shall provide adequate APCM with flue gas generation sources to achieve the norms prescribed by GPCB.
18. Unit shall provide adequate APCM with process gas generation sources as the point no. E-3 as mentioned above.
19. PP shall use approved fuels only as fuel in boilers.
20. The fugitive emission in the work zone environment shall be monitored. The emission shall conform to the standards prescribed by the concerned authorities from time to time (e.g. Directors of Industrial Safety & Health). Following indicative guidelines shall also be followed to reduce the fugitive emission.
 - Internal roads shall be either concreted or asphalted or paved properly to reduce the fugitive emission during vehicular movement.
 - Air borne dust shall be controlled with water sprinklers at suitable locations in the plant.
 - A green belt shall be developed all around the plant boundary and also along the roads to mitigate fugitive & transport dust emission.
21. Regular monitoring of Volatile Organic Compounds (VOCs) shall be carried out in the work zone area and ambient air.
22. For control of fugitive emission, VOCs, following steps shall be followed :
 - ✓ Closed handling and charging system shall be provided for chemicals.
 - ✓ Reflux condenser shall be provided over Reactors / Vessels.
 - ✓ Pumps shall be provided with mechanical seals to prevent leakages.
 - ✓ Air borne dust at all transfers operations/ points shall be controlled either by spraying water or

providing enclosures.

23. Solvent management shall be carried out as follows:

- ✓ Measures shall be taken to reduce the process vapors emissions as far as possible. Use of toxic solvents shall be minimum. All venting equipment shall have vapour recovery system
- ✓ Reactor shall be connected to adequate chilling system to condensate solvent vapors and reduce solvent losses.
- ✓ Reactor and solvent handling pump shall have mechanical seals to prevent leakages.
- ✓ The condensers shall be provided with sufficient HTA and residence time so as to achieve maximum solvent recovery.
- ✓ Solvents shall be stored in a separate space specified with all safety measures.
- ✓ Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
- ✓ Solvent storage and handling area shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.

24. Regular monitoring of groundlevel concentration of PM₁₀, PM_{2.5}, SO₂, NO_x, HCl and VOCs shall be carried out in the impact zone and its records shall be maintained. Ambient air quality levels shall not exceed the standards stipulated by the GPCB. If at any stage these levels are found to exceed the prescribed limits, necessary additional control measures shall be taken immediately. The location of the stations and frequency of monitoring shall be decided in consultation with the GPCB.

HAZARDOUS / SOLID WASTES:

25. All the hazardous/ solid waste management shall be taken care as per the point no. F-1 as mentioned above.
26. Authorized end-users shall have permissions from the concerned authorities under the Rule 9 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016.
27. Unit shall explore the possibilities for environment friendly methods like co-processing of hazardous waste for disposal of Incinerable & land fillable wastes before sending to CHWIF & TSDF sites respectively.
28. The project proponent has to obtain membership of TSDF site & CHWIF before obtaining CTO of GPCB.
29. 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 (1777.60 Sq. m 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.

OTHERS:

30. The project proponent shall carry out the activities (To Provide Solar Panel for power generation in Primary health centre & Primary School and also provide solar street light in saykha village.) proposed under CER and it shall be part of the Environment Management Plan (EMP) as per the MoEF&CC's OM no. F. No. 22-65/2017-IA.III dated 30.09.2020. This shall be monitored and the monitoring report shall be submitted to the regional office of MoEF&CC as a part of half-yearly compliance report and to the District Collector. The monitoring report shall be posted on the website of the project proponent.
31. All the recommendations, mitigation measures, environmental protection measures and safeguards proposed in the EIA report of the project prepared by M/s. Jyoti Om Chemical Research Centre Pvt. Ltd. and submitted by the project proponent and commitments made during presentation before SEAC and proposed In the EIA report shall be strictly adhered to in letter and spirit.

COMPLIANCE OF ENVIRONMENT CLEARANCE/REPORTING/ADMINISTRATION/APPEAL:

32. Project proponent shall inform to all the concerned authorities including Municipal Corporation and District Collector and shall also give wide publicity through advertisement in minimum two local newspapers within seven days, about the Environment Clearance order accorded.
33. Project proponent shall appoint a key person in the organization who shall be responsible for compliance of above condition fully on behalf of the proponent. It will not mean that appointing a key person will exempt the project proponent from the responsibility of compliance. Any change in key person shall immediately be informed to SEIAA and all concerned authorities.
34. Designated key person shall submit six monthly compliance report to SEIAA/SEAC, MOEF&CC, GPCB and Nodal Department of the Government.
35. The Nodal Department or any authority or officer authorized by MOEF&CC/SEIAA can inspect the site of the project and all the facilities, for verification of compliances of environment clearance conditions.
36. In case of violation reported upon, the project proponent shall be responsible for all the legal actions as per Environment Protection Act, 1986 including SEIAA may cancel, withdraw or keep in abeyance, the Environment Clearance accorded.
37. Any person including the project proponent affected by this Environment Clearance order may file appeal to Honorable National Green Tribunal West Zone branch, Pune, preferably within a period of thirty days from the date of issue of Environment Clearance as prescribe under section 16 of National Green Tribunal Act 2010.
38. All complains and public grievance or representations may be addressed to SEIAA/SEAC in the email addresses (a) msseiaagj@gmail.com& (b) seacgujarat@gmail.com

04	SIA/GJ/IND3/68753/2021	M/s. Sharda Industries Plot No. 6907, 6908, 6909, 6910, GIDC Industrial Estate Ankleshwar, Bharuch	EC
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Category of the unit: **5 (f)**

Project status: **Expansion**

In context to above subject matter find below the recommendation of SEAC for your perusal.

1) **DETAILS OF APPLICATION:**

1.1. Type of application:	EC-Expansion
1.2. Proposal no.	SIA/GJ/IND3/68753/2021
1.3. Category of Project:	5 (f) – B1
1.4. Date of application:	26.10.2021
1.5. Documents Submitted by Project Proponent (PP)	EIA report, Pre-feasibility Report
1.6. TOR No. & Date:	SIA/GJ/106806/2021, Date:14.06.2021
1.7. Technical expert / Environmental Consultant:	Dr. Mahendra Sadaria M/s. San Envirotech Private Limited
1.8. SEAC Meeting No. and Date:	356 nd meeting dated 03.02.2022
1.9. Compliance of Existing EC & CCA	No earlier EC, unit has obtained CCA in the year of 2003., unit has valid Consent order no.: AWH-87740, valid up to: 31.07.2022. Self-certified compliance report submitted with application.

- 2) The proposal was considered in the SEAC video conference meeting dated 03.02.2022.
- 3) Project proponent has submitted EIA Report prepared by M/s. San Envirotech Pvt. Ltd, based on the TOR issued by SEIAA.
- 4) This is an existing unit and now proposed for expansion in manufacturing of synthetic organic chemicals as mentioned below:

Sr. No.	Name of Products	API OR INTERMEDIATE	CAS No.	Quantity (MT/month)			End-use of the product
				Existing	Proposed	Total	
1	Pigment fast Beta Blue 15:3	--	147-14-8	60	200	260	Dyes manufacturing
2	Pigment fast Beta Blue 15:4	---	147-14-8	00			Dyes manufacturing
Total				60.0	200.0	260.0	--

- 5) The project falls under B1 category of project activity 5(f) as per the schedule of EIA Notification

2006.

- 6) 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.
- 7) 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.
- 8) Generated industrial effluent will be will be treated in ETP then passes through RO; RO permeates (20 KLD) will be recycled in process, washing and utilities. RO reject (5.0 KLD) will be evaporated in common evaporation facility. 17.0 FETP (NCTL)-Ankleshwar, for further treatment and final disposal.
- 9) There is no earlier EC. Unit is having Valid CCA of the Board for existing plant. PP submitted CC&A self-compliance report for existing plant. Compliance report found satisfactory.
- 10) PP submitted that there is no legal court case and public complaint against unit.
- 11) The baseline environmental quality has been assessed for various components of the environment viz. air, noise, water, biological and socioeconomic aspect. The baseline environmental study has been conducted for the study area of 10 km radial distance from project site for the period March, 2021 to May, 2021. Ambient Air Quality monitoring was carried out PM10, PM2.5, SOx, NOx, CO, VOCs and HC at Eight locations, including the project site. Values conform to the prescribed standards for Ambient Air Quality. The incremental Ground Level Concentration (GLC) has been computed using "BREEZE-ISCST3". 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).
- 12) 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.
- 13) Compliance of ToR found satisfactory.
- 14) PP presented 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):		
	Existing	Proposed	Total
	Rs. 1.31 Crores	Rs. 3.1 Crores	Rs. 4.41 Crores
	Break-up of proposed project Cost:		

		Details	Existing (Rs. In Crores)	Proposed (Rs. In Crores)	Total (Rs. In Crores)	
		Land	0.4	1.2	1.6	
		Building	0.42	0.6	1.02	
		Machinery	0.17	0.73	0.9	
		Env. & Safety	0.25	0.37	0.62	
		Miscellaneous	0.07	0.2	0.27	
		Total	1.31	3.1	4.41	
A-2		Details of Environmental Management Plan (EMP)			As below:	
Sr. No	Unit	Detail	Capital Cost (Rs. In Lakhs)	Operating Cost (Rs. In Lakhs)	Maintenance Cost (Rs. In Lakhs)	Total Recurring Cost (Rs. In Lakhs)
1	Waste Water	ETP, FETP membership, treatment cost	15	55	5	60
2	Air	Installation of APCM	10	5	1.55	6.55
3	Hazardous Management	Shed & Membership cost	3	2.5	0.5	3
4	Fire & Safety	Fire Hydrant & pipeline System	5	0.25	0.25	0.5
		Fire Extinguisher	1.5	0.25	0.3	0.55
		Safety Equipment, PPEs	2.5	0	0.3	0.3
5	AWH Monitoring	pH meter, COD apparatus, Balance, Glassware etc.	0.5	2	0.2	2.2
6.	Green Belt Development	Plants, fertilizers etc.	2	0	0.5	0.5
7.	Occupational Health	First Aid facility	1	1	0.2	1.2
8.	Noise Pollution Control	Suspensor and Rubber packing at vibrating part Machinery	2.4	0.5	0.2	0.7
9.	CER	Social upliftment	3.1	0	0	0
Total			46	66.5	9	75.5
Comments:						
1. The overall environment management plan (EMP) provided for capital and recurrent cost for waste water treatment, air emission control, noise control, hazardous waste disposal, fire safety, occupational health, green belt and corporate social responsibility was deliberated and found satisfactory.						
A-3		Details of CER -				
PP shall carry out CER activities as below:						

Details of expenditure for CER activities:

Cost of proposed expansion	:	Rs. 3.1 Crores
Expenditure earmarked towards CER	:	Rs 3.10 Lakhs (1% of expansion cost)

The detailed expenditure break-up of above activities for the one year are given below:

Detailed expenditure break-up for CER activities

Activities	Total Budget (Rs. in Lakhs)
Provision of solar panels of 6 KW in Nava Diva village primary school	3.10
Total	3.10

B**Land / Plot ownership details:**

Land Possession Documents from Gujarat Industrial Development Corporation vide letter no. GIDC/RM/ANK/AM/FO/ANK1/9 on dated 31/05/2019.

B-1**Plot area**

Existing	Proposed	Total
2641.71 Sq. m.	----	2641.71 Sq. m.

B-2**Area adequacy**

The Total land area of the site is 2641.17 m², out of which 330 m² area will used for production, 200 m² area will be used for storage of Raw material & Finished products. 40 m² Hazardous Material Storage including tank farm area.

- Production capacity: 260 MT/Month.
- Company will store its raw material in Tanks (We procure Raw Materials from the local market. 80-90% of these raw materials are easily available from local market(Same Industrial area). Hence, no excess quantity of raw materials will be stored).
- Separate Entry & Exit for easy movement of fire tenders and emergency vehicle.
- Provision of 6 m road in periphery.
- Hazardous chemicals stored in tanks shown below.

Name of Raw Material	Storage Capacity of Tank (KL)	Remarks
Hydrochloric Acid	4.0	Non-PESO
Sulphuric Acid	4.0	Non-PESO
Caustic Lye	7.0	Non-PESO

Area Adequacy for Storage:

Particular	Existing (m ²)	Proposed (m ²)	Total (m ²)
Security cabin	4	0	4
Admin	48	0	48
Lab	40	10	50
Occupational health centers	32	0	32
Utilities Area	40	20	60
Haz. Waste storage area	20	20	40
Manufacturing area drying & packaging	280	50	330

8	Raw Material Storage	80	20	100
9	Finished product Storage area	40	60	100
10	ETP	90	10	100
11	Under ground water tank	50	00	50
12	Tank farm area	50	0	50
13	Green Belt area	750	402	1152
14	Open area	1117.71	0	525.71
Total		2641.71	00	2641.71

Hence, adequate area is available for proposed new Facility.

Comments:

SEAC has examined it w.r.t.to total monthly production, products manufactured per month, the total raw material required, weekly storage requirement of each raw material, their mode of storage, their compatibility (flammability, corrosive, toxic), area needed by each raw material, one week storage of finished goods. Area adequacy, from overall safety perspective, has been provided in proposal and is satisfactory.

B-3

Green belt area

	Existing	Proposed (Sq. meter)	Total (Sq. meter)
Area in Sq. meter	750	402	1152
% of total area	28.4%	15.21%	43.61%

Comments:

The condition shall be given that -

1. The PP shall develop green belt (1152 Sq. m i.e. 43.61% of the total plot area) as per the undertaking submitted before 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.

C

Employment generation

Existing	Proposed	Total
26 nos.	24 nos.	50 nos.

-

D

WATER

D-1

Source of Water Supply

- Ankleshwar- GIDC Water Supply.

Comments:

- Prior permission from concerned authority shall be obtained for

	withdrawal of water.				
D-2	Water consumption (KLD)				
	-				
	Category	Existing KLD	Proposed (Additional) KLD	Total after Expansion KLD	Remark
	(D) Domestic	4.0	2.0	6.0	Fresh
	(E) Gardening	1.0	0.0	1.0	Fresh
	(F) Industrial				
	Process	11.0	22.0	33.0	Fresh
	Washing	2.0	3.0	5.0	Recycle water
	Boiler	00	00	00	--
	Cooling	1.5	6.5	8.0	Recycle water
	Others	00	00	00	00
	Water Treatment	0.5	1.5	2.0	Recycle water
	Industrial Total	15.0	33.0	48.0	--
	Grand Total (A+B+C)	20.0	35.0	55.0	--
	Less Recycle	--	20.0	20.0	Recycle water
	Actual fresh water requirements	20.0	15.0	35.0	--
	Comments:				
	1. The water consumption above is found to be calculated considering the worst-case scenario and in any case the water requirement shall not exceed the same.				
D-3	Waste water generation (KLD)				
	-				
	Category	Existing (KL/day)	Proposed (Additional) (KL/day)	Total after Expansion (KL/day)	Remarks
	(A) Domestic	2.0	3.0	5.0	ETP
	(B) Gardening	0.00	0.00	0.00	--
	(C) Industrial				
	Process	9.0	18.0	27.0	ETP
	Washing	2.0	3.0	5.0	ETP
	Boiler	00	00	00	
	Cooling	0.5	2.5	3.0	ETP
	Others	00	00	00	
	Water Treatment	0.5	1.5	2.0	ETP
	Industrial Total	12.0	25.0	37.0	--
	Grand Total (A+B+C)	14.0	28.0	42.0	--
	To ETP	14.0	28.0	42.0	ETP
	Comments:				
	1) The waste water generation above is found to be calculated				

	considering the worst-case scenario and in any case the waste water generation shall not exceed the same.					
D-4	Break-up of waste water disposal & facility (For Domestic)					
5.0 KLD Domestic Waste Water will be treated along with industrial effluent.						
Comments:						
✓ Domestic wastewater generation shall not exceed 5.0 KL/day for proposed project and it shall be treated in ETP along with industrial effluent.						
D-5	Break-up of waste water disposal & facility (For Industrial)					
	Sr. no.	Quantity KLD	Facility			
	1	17.0	NCTL			
	2	5.0	Common evaporation facility			
	3.	20.0	RO permeate—reuse within premises			
	Total	42.0	--			
Comments:						
1. Total industrial wastewater generation will be treated in ETP and then pass through RO; RO Permeate (20 KLD) will be reused process, washing & utility. And 17.0 KLD will be sent to NCTL-Ankleshwar for further treatment and final disposal. RO reject (5.0 KLD) will be evaporated in common evaporation facility.						
2. Unit shall provide ETP, RO with adequate capacity.						
3. The PP shall ensure to dispose off Waste water to the Common Facilities having valid CTO of GPCB.						
4. The PP shall ensure to dispose off Waste water to the Common Facilities having valid CTO of GPCB.						
E	AIR					
E-1	Power (Electricity) requirement: 450 KVA					
E-2	Flue gas emission details					
-						
	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
	Existing					
	1.	Hot Air Generator* (4.0 Lakh KCal/Hr)	12	Natural gas	600 SCM/Day	PM<150 mg/Nm ³ SO ₂ <100 ppm NO _x <50 ppm
	2.	Thermic Fluid Heater* (2.0 Lakh KCal/Hr)	12	Natural gas	300 SCM/Day	--

3.	DG Set 125 kVA (Stand by)	12	HSD	40 Liter/Hr.		Adequate stack height																									
4.	DG Set 160 kVA (Stand By)																														
Proposed scenario after expansion																															
1.	Hot Air Generator (6.0 Lakh KCal/Hr)	21	Natural gas	1200 SCM/Da y	PM: 150 mg/Nm ³ SO ₂ : 100 ppm NOx: 50 ppm	Adequate stack height																									
2.	Thermic Fluid Heater (4.0 Lakh KCal/Hr)		Natural gas	800 SCM/Da y																											
3.	DG Set 125 kVA (Stand By)	12	HSD	40 Liter/Hr.	PM: 150 mg/Nm ³ SO ₂ : 100 ppm NOx: 50 ppm	Adequate stack height																									
4.	DG Set 160 kVA (Stand By)																														
*After Proposed expansion, existing Hot Air Generator and Thermic Fluid Heater will be dismantled.																															
E-3		Process gas i.e. Type of pollutant gases (SO ₂ , HCl, NH ₃ , Cl ₂ , NO _x etc.)																													
-																															
<table border="1"> <thead> <tr> <th>Sr. no.</th> <th>Specific Source of emission (Name of the Product & Process)</th> <th>Type of emissions i.e. Air Pollutants (SO₂, HCl, Cl etc.)</th> <th>Stack/Vent Height (meter)</th> <th>Air Pollution Control Measures (APCM)</th> </tr> </thead> <tbody> <tr> <td colspan="5">Existing</td> </tr> <tr> <td colspan="5">There is no process gas emission from existing activity.</td> </tr> <tr> <td colspan="5">Proposed addition after expansion</td> </tr> <tr> <td>1.</td> <td>Spin Flash Dryer (400 Kg/Hr)</td> <td>PM: 45 mg/Nm³</td> <td>11</td> <td>In built Cyclone and Bag Filter</td> </tr> </tbody> </table>							Sr. no.	Specific Source of emission (Name of the Product & Process)	Type of emissions i.e. Air Pollutants (SO ₂ , HCl, Cl etc.)	Stack/Vent Height (meter)	Air Pollution Control Measures (APCM)	Existing					There is no process gas emission from existing activity.					Proposed addition after expansion					1.	Spin Flash Dryer (400 Kg/Hr)	PM: 45 mg/Nm ³	11	In built Cyclone and Bag Filter
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-																															
E-4		Fugitive emission details with its mitigation measures.																													
<ul style="list-style-type: none"> - Concrete road is already developed within plot premises to avoid fugitive dust due to vehicle movement. - Manufacturing activity is being/will be carried out in closed reactors/vessels and - Regular checking and maintenance of the same is being/will be carried out to avoid any leakages. All the Raw materials are being/will be stored in closed containers and in sealed bags and will be handled through closed system to avoid the handling losses. - Frequent work area monitoring will be done ensure fugitive emissions level. - Greenbelt will be developed around the plant to arrest the fugitive emission. - Pneumatically transfer of liquid raw material in rector. - Water sprinkling will be done to control air borne dust. 																															
Comments for E2, E3 & E4:																															
<ul style="list-style-type: none"> ✓ The fuel to be used is approved fuel for the requirement of the heat energy and has been proposed the Air pollution Control measures so as to achieve the emission norms prescribed by the competent authorities. ✓ The air pollution control measures, has been proposed by PP for checking flue gas 																															

emission, Process gas emission, fugitive gas emission, with adequate systems of reaction/ reaction condensers, thermic fluid heater, Hot Air Generator as per the requirements, to achieve the emission norms prescribed by the competent authorities.

F Hazardous waste

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
				Existing	Proposed (addition)	Total	
1.	ETP waste	ETP	35.3	2.0	58.0	60.0	Collection, Storage, Transportation, Disposal at TSDF-BEIL Ankleshwar site.
2.	Discarded Containers/ Liner/ Bags	Raw material Storage	33.1	15.0	30.0	45.0	Collection, Storage, Decontamination, Transportation, Disposal by selling to Authorized Recycler.
3.	Used Oil	Machineries	5.1	0.060	0.440	0.500	Collection, Storage, Transportation, Disposal by selling to Registered re-refiners

Comments:

- ✓ Waste management includes hazardous waste management and other solid waste management. Hazardous waste-management comprises of collection, storage, transportation, disposal, incineration, and recycle of waste. SEAC examined the details provided and found it as per requirement.
- ✓ The project proponent has to obtain membership of TSDF site before obtaining CTO of GPCB.

F-2 Non- Hazardous waste management matrix

Not Applicable

G Solvent management, VOC emissions etc.

G-1 Types of solvents, Details of Solvent recovery, % recovery, reuse of recovered Solvents etc.

Solvent Name	Consumption	Generation	Recovery %	Loss %
	MT/Month	MT/Month		
IBA/ Xylene	260	247	95%	

G-2	VOC emission sources and its mitigation measures																			
<p>Measures for achieving maximum solvent recovery and minimize VOC generation:</p> <ul style="list-style-type: none"> ➤ Close handling system provided for transfer of chemicals. ➤ Pneumatically transfer of liquid raw material in reactor. ➤ Raw material will be stored in the covered structure. ➤ Regular maintenance of valves, pipes etc. ➤ Periodic work area monitoring will be carried out. 																				
G-3	LDAR proposed:																			
<p>Leak Definition</p> <p>Pumps are provided proper mechanical seal and pipe line are connected with each other by flanges and gaskets. The leak detector and emission digital transmitter with smart sensor equipment will be provided nearby pump with set point of half level of TLV/TWA value. If the set level exceed in the work area, automatic siren system will be started. Immediate action will be taken by operator to shut down valve/pump to prevent the leak and emission of gas. Periodically preventive maintenance schedule shall also be conducted by team for safe operation and prevention of leak and emission.</p> <p>-</p>																				
<p>Comments:</p> <ul style="list-style-type: none"> ✓ Measures for achieving maximum solvent recovery and minimize VOC generation, inclusive of VOC detectors, pumps, maintenance of pipelines, proper ventilation etc., provided are as per requirement. ✓ Spent solvents shall be recovered by in-house distillation in such a manner that recovery shall not be achieved to the maximum extent and recovered solvent shall be reused in the process. Solvent recovery system with adequate reflux condensers shall be provided for controlling escape of low boiling solvents (VOCs). 																				
H	SAFETY details																			
H-1	Details regarding storage of Hazardous chemicals																			
<p>-</p> <table border="1" data-bbox="193 1272 1445 1462"> <thead> <tr> <th>Sr. no.</th> <th>Name of Chemical</th> <th>Capacity of Tank</th> <th>Number of Tanks</th> <th>Hazardous Characteristics of Chemical</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Hydrochloric Acid</td> <td rowspan="2">4.0</td> <td>1</td> <td>Corrosive</td> </tr> <tr> <td>2</td> <td>Sulphuric Acid</td> <td>1</td> <td>Corrosive</td> </tr> <tr> <td>3</td> <td>Caustic Lye</td> <td>7.0</td> <td>1</td> <td>Corrosive</td> </tr> </tbody> </table> <p>-</p>		Sr. no.	Name of Chemical	Capacity of Tank	Number of Tanks	Hazardous Characteristics of Chemical	1	Hydrochloric Acid	4.0	1	Corrosive	2	Sulphuric Acid	1	Corrosive	3	Caustic Lye	7.0	1	Corrosive
Sr. no.	Name of Chemical	Capacity of Tank	Number of Tanks	Hazardous Characteristics of Chemical																
1	Hydrochloric Acid	4.0	1	Corrosive																
2	Sulphuric Acid		1	Corrosive																
3	Caustic Lye	7.0	1	Corrosive																
<p><u>Storage of Hazardous chemicals in Tanks</u></p> <ul style="list-style-type: none"> ➤ Tanker unloading procedure is prepared and implemented. ➤ Caution note and emergency handling procedure is displayed at unloading area and trained all operators. ➤ Storage tank is stored away from the process plant. ➤ Dyke wall is provided to all storage tanks, collection pit with valve provision. ➤ Double drain valve will provided. ➤ Level gauge is provided on all storage tanks. ➤ Fire hydrant system with jockey pump will be installed <p><u>Storage of Hazardous chemicals other than Tanks i.e. Drum, Barrels, Carboys, Bags etc.</u></p> <ul style="list-style-type: none"> ➤ Proper ventilation will be provided in storage area. ➤ Proper label and identification board /stickers will be provided in the storage area. ➤ Drum handling trolley/stackers/fork lift will be used for drum handling. ➤ 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.
- Solvents transfer by vacuum or by pump only.
- Static earthing will be provided.
- SS flexible hose/conductive hose will be used.

Safety details of Hazardous Chemicals:

Type of Hazardous Chemicals	Safety measures
Corrosive	<p><u>Safety during storage:</u></p> <ul style="list-style-type: none"> • Containers and equipment used for storage and processing of corrosive material will be corrosion resistant. • It will be stored separately from each other. • Oxidizing acids will be separated from organic acids and flammable/combustible materials. <p><u>Safety during handling:</u></p> <ul style="list-style-type: none"> • Appropriate personal protective equipment (e.g., gloves, fire-resistant or all cotton lab coat, and safety goggles) will be provided when working with corrosive chemicals. • A face shield, rubber apron, and rubber booties will be provided depending on the work performed. • Appropriate protective gloves that are resistant to permeation or penetration from corrosive chemicals will be selected and tested for the absence of pin holes prior to use. • Eyewashes and safety showers will be readily available in areas where corrosive chemicals are used and stored. • In the event of skin or eye contact with a corrosive chemical, the affected area should be immediately flushed with water for 15 minutes. Contaminated clothing should be removed and medical attention sought. <p>Appropriate spill clean-up material will be available in areas where corrosive chemicals are used and stored</p>

- **Applicability of PESO: Not Applicable**

Comments:

- ✓ Committee was of the opinion that the provisions of PESO, licensing, condition compliance, monitoring, fall within the preview of The **Petroleum and Explosives Safety Organization (PESO)** and SEAC has very limited role in this. Nevertheless SEAC has examined it. The PP has submitted that the list of raw materials/products proposed to be produced along with the quantity, attract the provisions of PESO and they will abide by the requisite legal compliances with reference to storage and safety. SEAC has taken note of it.

H-2

Types of hazardous Processes involved and its safety measures:

Exothermic reaction :

- Reactant mass in reactor should be added such that surface-to-volume ratio is maintained and runaway reaction is prevented.
- Cooling – jacketed system for the reactor should be in place to maintain the reaction temperature.
- All the Plant Personnel will be provided with Personal Protection.
- Safety Valve and pressure gauge will be provided on reactor.
- Utility like Chilling/cooling, vacuum, steaming and its alternative will be provided to control

exothermic reaction parameters in a safe manner.

- All employees will be given and updated in Safety aspects through periodic training in safety.
- Material Safety Data Sheets of Raw Materials & Products will be readily available that the shop floor.
- Caution note, safety posters, stickers, periodic training & Updation in safety and emergency preparedness plan will be displayed and conducted.

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

Total Plot Area:	2641.71 m ²
Area utilized for plant activity:	330 m ² x 2 (floors) = 660 m ²
Area utilized for Hazardous Chemicals Storage:	40 m ²
Number of Floors:	Ground, First Floor
Water requirement for firefighting in KLD:	Total Area for process & haz. storage = 700 m ² Water requirement in LPM: 700/20 = 35 fire load Water requirement = 35 x 120 (for 2 hrs.) = 4200 ltr.
Water storage tank provided for firefighting in KLD:	U/G water tank – 100 KL x 1 no. Overhead tank – 20 KL x 1 no.
Details of Hydrant Pumps:	1 x 7.5 HP Jockey pump
Nearest Fire Station :	DPMC fire station Ankleshwar, 3.15 km Ankleshwar Fire station, 5.87 km
Applicability of Off Site Emergency Plan:	--

Comments:

- ✓ The project proponent has proposed fire safety plan which includes fire hydrant line, sprinkler system, fire extinguishers, fire suits, covering the project area and provides for fire water storage tank of 100 KL. SEAC found it as per the requirement.

H-4**Details of Fire NOC/Certificate:**

We have.

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

Number of permanent Employee:	50
Number of Contractual person/Labour:	00
Area provided for OHC:	32
Number of First Aid Boxes:	04 nos.
Nearest General Hospital:	Sunshine Global OPD Center, Ankleshwar
Name of Antidotes to be store in plant:	Adequate antidotes will be stored within premises

Comments

- ✓ Project proponent has provided Occupational health center with adequate provision of manpower, equipment and operational cost. SEAC finds it as per the provisions of Gujarat Factory Rules 1963.

15) DELIBRATION AND RECOMMENDATION:

"On the basis of information provided to SEAC on project, its location, technical, physical and environmental infrastructure, products, quantity to be manufactured, its raw material, storage, waste disposal, water treatment, safety measures, green belt development planning, regulatory compliance assured of related statutory provisions, necessary documents of requisite permissions provided from concerned departments and overall environmental management planning for the project, along with financial resources committed for operation and maintenance, and on the basis of presentation made before SEAC and incorporated by project proponent, SEAC finds the project as per the requirement and recommends the same to SEIAA for environmental clearance."

Conditions with which Environment Clearance is recommended:**Construction Phase**

- 16) "Wind – breaker of appropriate height i.e. 1/3rd of the building height and maximum up to 10 meters shall be provided. Individual building within the project site shall also be provided with barricades.
- 17) "No uncovered vehicles carrying construction material and waste shall be permitted."
- 18) "No loose soil or sand or construction & demolition waste or any other construction material that cause dust shall be left uncovered. Uniform piling and proper storage of sand to avoid fugitive emissions shall be ensured."
- 19) Roads leading to or at construction site must be paved and blacktopped (i.e. – metallic roads).
- 20) No excavation of soil shall be carried out without adequate dust mitigation measures in place.
- 21) Dust mitigation measure shall be displayed prominently at the construction site for easy public viewing.
- 22) Grinding and cutting of building materials in open area shall be prohibited.
- 23) Construction material and waste should be stored only within earmarked area and road side storage of construction material and waste shall be prohibited.
- 24) Construction and demolition waste processing and disposal site shall be identified and required dust mitigation measures be notified at the site. (If applicable).

SPECIFIC CONDITIONS:

- 25) Project proponent (PP) shall submit six monthly compliance report of Environmental Clearance without fail and the same shall be critically assessed by the regulatory authority.
- 26) 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**].
- 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.
- 29) 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.
- 30) 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.
- 31) 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.
- 32) The project proponent must strictly adhere to the stipulations made by the Gujarat Pollution Control Board, State Government and/or any other statutory authority.
- 33) All measures shall be taken to avoid soil and ground water contamination within premises.
- 34) 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 after proposed expansion project.
- 35) Safety & Health:**
- 36) PP shall obtain PESO permission for the storage and handling of hazardous chemicals. (If applicable)
- 37) PP shall provide Occupational Health Centre (OHC) as per the provisions under the Gujarat

Factories Rule 68-U.

- 38) 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.
- 39) Unit shall adopt functional operations/process automation system including emergency response to eliminate risk associated with the hazardous processes.
- 40) 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.
- 41) 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.
- 42) 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.
- 43) 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.
- 44) Flame proof electrical fittings shall be provided in the plant premises, wherever applicable.
- 45) Unit shall never store drum/barrels/carboys of incompatible material/chemical together.
- 46) Unit shall provide effective Isolation for Process area and storage of hazardous chemicals.
- 47) Unit shall provide safety valve and rapture disc, as well as auto dump or auto quench/, suppress system for exothermic reaction vessel safety.

WATER

- 48) Total water requirement for the project shall not exceed **55.0 KLD**. Fresh water requirement shall not exceed **35.0 KLD** and it shall be met through GIDC only.
- 49) The industrial effluent generation from the project shall not exceed **37.0 KLD**.
- 50) Management of waste water shall be as uner:
- 51) After expansion, total industrial wastewater generation (from newly proposed products) shall be treated in ETP and then passes through RO; RO permeates (20 KLD) will be recycled in process, washing and utilities. RO reject will be evaporated in common evaporation facility. 17.0 FETP (NCTL)-Ankleshwar, for further treatment and final disposal. RO reject (5.0 KLD) will be evaporated in common evaporation facility.

- 52) Domestic wastewater generation shall not exceed **5.0 KL/day** for proposed project and it shall be treated with industrial effluent in ETP.
- 53) 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.
- 54) Unit shall provide buffer water storage tank of adequate capacity for storage of treated waste water during rainy days.
- 55) Domestic wastewater generation shall not exceed 5.0 KL/Day for proposed expansion project and it shall be treated in ETP. Unit shall provide buffer water storage tank of adequate capacity for storage of treated waste water during rainy days.
- 56) The unit shall provide metering facility at the inlet and outlet of ETP and maintain records for the same.
- 57) Proper logbooks of ETP; reuse/ recycle of treated/ untreated effluent; 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.

AIR:

- 58) Unit shall not exceed fuel consumption for Hot Air Generator, Thermic Fluid Heater and D G Set as per the point no. E-2 as mentioned above.
- 59) Unit shall provide adequate APCM with flue gas generation sources to achieve the norms prescribed by GPCB.
- 60) There is no process gas emission from existing activity. After expansion one spin flash dryer with capacity of 400 Kg/hr. will be installed.
- 61) PP shall use approved fuels only as fuel in hot air generator & thermic fluid heater.
- 62) The fugitive emission in the work zone environment shall be monitored. The emission shall conform to the standards prescribed by the concerned authorities from time to time (e.g. Directors of Industrial Safety & Health). Following indicative guidelines shall also be followed to reduce the fugitive emission.
- a. Internal roads shall be either concreted or asphalted or paved properly to reduce the fugitive emission during vehicular movement.
 - b. Air borne dust shall be controlled with water sprinklers at suitable locations in the plant.
 - c. A green belt shall be developed all around the plant boundary and also along the roads to mitigate fugitive & transport dust emission.
- 63) Regular monitoring of Volatile Organic Compounds (VOCs) shall be carried out in the work zone area and ambient air.

- 64) For control of fugitive emission, VOCs, following steps shall be followed:
- Closed handling and charging system shall be provided for chemicals.
 - Reflux condenser shall be provided over Reactors / Vessels.
 - Pumps shall be provided with mechanical seals to prevent leakages.
 - Air borne dust at all transfers operations/ points shall be controlled either by spraying water or providing enclosures.
- 65) Solvent management shall be carried out as follows:
- 66) Measures shall be taken to reduce the process vapors emissions as far as possible. Use of toxic solvents shall be minimum. All venting equipment shall have vapour recovery system
- 67) Reactor shall be connected to adequate chilling system to condensate solvent vapors and reduce solvent losses.
- 68) Reactor and solvent handling pump shall have mechanical seals to prevent leakages.
- 69) The condensers shall be provided with sufficient HTA and residence time so as to achieve maximum solvent recovery.
- 70) Solvents shall be stored in a separate space specified with all safety measures.
- 71) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
- 72) Solvent storage and handling area shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.
- 73) Regular monitoring of ground level concentration of PM₁₀, PM_{2.5}, SO₂, NO_x and CO, HC, VOCs shall be carried out in the impact zone and its records shall be maintained. Ambient air quality levels shall not exceed the standards stipulated by the GPCB. If at any stage these levels are found to exceed the prescribed limits, necessary additional control measures shall be taken immediately. The location of the stations and frequency of monitoring shall be decided in consultation with the GPCB.

HAZARDOUS / SOLID WASTES:

- 74) All the hazardous/ solid waste management shall be taken care as per the point no. F-1 as mentioned above.
- 75) Authorized end-users shall have permissions from the concerned authorities under the Rule 9 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016.
- 76) Unit shall explore the possibilities for environment friendly methods like co-processing of hazardous waste for disposal of Incinerable & land fillable wastes before sending to CHWIF & TSDF sites respectively.
- 77) The project proponent has to obtain membership of TSDF site CHWIF before obtaining CTO of GPCB.

78) 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

79) The PP shall develop green belt within premises (1152 Sq. m i.e. 43.61% 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.

OTHERS:

80) The project proponent shall carry out the activities (Provision of solar panels of 6 KW in Nava Diva village primary school) proposed under CER and it shall be part of the Environment Management Plan (EMP) as per the MoEF&CC's OM no. F. No. 22-65/2017-IA.III dated 30.09.2020. This shall be monitored and the monitoring report shall be submitted to the regional office of MoEF&CC as a part of half-yearly compliance report and to the District Collector. The monitoring report shall be posted on the website of the project proponent.

81) All the recommendations, mitigation measures, environmental protection measures and safeguards proposed in the EIA report of the project prepared by M/s. San Envirotech Private Limited and submitted by the project proponent and commitments made during presentation before SEAC and proposed in the EIA report shall be strictly adhered to in letter and spirit.

COMPLIANCE OF ENVIRONMENT CLEARANCE/REPORTING/ADMINISTRATION/APPEAL:

82) Project proponent shall inform to all the concerned authorities including Municipal Corporation and District Collector and shall also give wide publicity through advertisement in minimum two local newspapers within seven days, about the Environment Clearance order accorded.

83) Project proponent shall appoint a key person in the organization who shall be responsible for compliance of above condition fully on behalf of the proponent. It will not mean that appointing a key person will exempt the project proponent from the responsibility of compliance. Any change in key person shall immediately be informed to SEIAA and all concerned authorities.

84) Designated key person shall submit six monthly compliance report to SEIAA/SEAC, MOEF&CC, GPCB and Nodal Department of the Government.

85) The Nodal Department or any authority or officer authorized by MOEF&CC/SEIAA can inspect the site of the project and all the facilities, for verification of compliances of environment clearance conditions.

86) In case of violation reported upon, the project proponent shall be responsible for all the legal actions as per Environment Protection Act, 1986 including SEIAA may cancel, withdraw or keep in abeyance, the Environment Clearance accorded.

87) Any person including the project proponent affected by this Environment Clearance order may file appeal to Honorable National Green Tribunal West Zone branch, Pune, preferably within a period of

thirty days from the date of issue of Environment Clearance as prescribe under section 16 of National Green Tribunal Act 2010.

88) All complains and public grievance or representations may be addressed to SEIAA/SEAC in the email addresses (a) msseiaagj@gmail.com & (b) seacgujarat@gmail.com

05	SIA/GJ/IND3/69471/2019	M/s. Overseas Enterprise Plot No.: 53/5, GIDC Odhav, Ahmedabad-382415, Gujarat	EC
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Category of the unit: **5 (f)**

Project status: **Expansion**

1) DETAILS OF APPLICATION:

1.1. Type of application:	EC-Expansion
1.2. Proposal no.	SIA/GJ/IND3/69471/2019
1.3. Category of Project :	5 (f) – B1
1.4. Date of application :	19.09.2019
1.5. Documents Submitted by Project Proponent(PP)	EIA report, Form-2, EMP
1.6. TOR No. & Date :	SEIAA/GUJ/TOR/5(f)/334/2020, Date: 05/06/2020
1.7. Technical expert / Environmental Consultant :	M/s. Bhagwati Enviro Care Pvt. Ltd.
1.8. SEAC Meeting No. and Date:	356 th meeting dated 03.02.2022 Earlier SEAC meeting dates, (If any)
1.9. Compliance of Existing EC & CCA	No earlier EC. Consent order no.: AWH-105560, Date of Validity: 30/09/2024 Self-compliance report submitted with application.

2) Project proponent has submitted EIA Report prepared by M/s. Bhagwati Enviro Care Pvt. Ltd. based on the TOR issued by SEIAA.

3) This is an existing unit and now proposed for expansion in manufacturing of synthetic organic chemicals as mentioned below:

Sr. no.	Name of the Products	CAS no.	Quantity MT/Month	End-use of the products *
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			Existing	Proposed	Total			
1	REACTIVE YELLOW M4G	12226-49-2	1.5	---	1.5	Most suitable for dyeing of cellulosic fibers like cotton, flax, viscose rayon, acetate and jute, Applicable on Leather and Paper coloration		
2	REACTIVE ORANGE H2R	12225-85-3	2.5	---	2.5			
3	REACTIVE ORANGE HE2R	91261-29-9	----	21	21			
4	REACTIVE ORANGE ME2RL	12220-12-1						
5	REACTIVE RED ME4BL	93050-79-4						
6	REACTIVE YELLOW H4G	12226-48-1						
7	REACTIVE YELLOW M8G	61-79-35-0						
8	REACTIVE GOLDEN YELLOW MR	12270-91-6						
9	REACTIVE GOLDEN YELLOW HR	35642-64-9						
10	SOLVENT RED 23	85-86-9						
11	SOLVENT RED 24	85-83-6						
12	SOLVENT YELLOW 2	60-11-7						
13	SOLVENT YELLOW 14	842-07-9						
14	SOLVENT YELLOW 56	2481-94-9						
	Total					4.0	21	25

- 4) The project falls under B1 category of project activity 5(f) as per the schedule of EIA Notification 2006.
- 5) The proposal was considered in the SEAC video conference meeting dated 03.02.2022.
- 6) Project proponent (PP) and their Technical Expert remain present during video conference meeting.
- 7) 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.
- 8) There is no earlier EC. Unit is having Valid CCA of the Board for existing plant. PP submitted CC&A self-compliance report for existing plant. Compliance report found satisfactory.
- 9) PP submitted that there is no legal court case and public complaint against unit.
- 10) 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.

- 11) The baseline environmental quality has been assessed for various components of the environment viz. air, noise, water, biological and socioeconomic aspect. The baseline environmental study has been conducted for the study area of 10 km radial distance from project site for the period March to May 2021. Ambient Air Quality monitoring was carried out PM10, PM2.5, SOx, NOx, VOCs and HC at Eight locations, including the project site. Values conform to the prescribed standards for Ambient Air Quality. The incremental Ground Level Concentration (GLC) has been computed using "AERMOD". 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).
- 12) 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.
- 13) Compliance of ToR found satisfactory.
- 14) PP presented 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):															
	<table border="1"> <thead> <tr> <th>Existing</th> <th>Proposed</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>0.119 Crores</td> <td>0.506 Crores</td> <td>0.625 Crores</td> </tr> </tbody> </table>	Existing	Proposed	Total	0.119 Crores	0.506 Crores	0.625 Crores									
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	Break-up of proposed project Cost:															
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Building	0.04															
Machinery	0.57															
Env. & Safety	-															
Miscellaneous	-															
Total	0.62															
A-2	Details of Environmental Management Plan (EMP)	As below:														
	<table border="1"> <thead> <tr> <th>Sr. No</th> <th>Unit</th> <th>Detail</th> <th>Capital Cost (Rs. In Crores)</th> <th>Operating Cost (Rs. In Crores)</th> <th>Maintenance Cost (Rs. In Crores)</th> <th>Total Recurring Cost (Rs. In Crores)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Waste</td> <td>ETP,</td> <td>12.0</td> <td>30.0</td> <td>42.0</td> <td>72.0</td> </tr> </tbody> </table>	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	ETP,	12.0	30.0	42.0	72.0	
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	ETP,	12.0	30.0	42.0	72.0										

	Water	STP, CETP, CF				
2	Air	Boiler, HAG	5.0	2.0	1.0	3.0
3	Hazardous Management	Membership, Storage	2.0	0.5	0.0	0.5
4	Fire & Safety	Fire Hydrant, PPE	8.0	1.0	1.0	2.0
5	AWH Monitoring	Env monitoring by third party	1.5	0.0	2.0	2.0
6.	Green Belt Development	Trees Plantation, Greenbelt development	0.5	0.5	0.0	0.5
7.	Occupational Health	Health checkup of workers	3.0	1.0	0.5	1.5
8	CER Activity	CER activity do in near village	0.0	0.5	0.0	0.5
Total			32	35.5	46.5	82

Comments:

The overall environment management plan (EMP) provided for capital and recurrent cost for waste water treatment, air emission control, noise control, hazardous waste disposal, fire safety, occupational health, green belt and corporate social responsibility was deliberated and found satisfactory.

A-3 Details of CER -

PP shall carry out CER activities as below:

- ✓ Budget allocated for CER activity 1.0 % of project cost (For Brown field project)- 0.50 Lacs
- ✓ **M/s. Overseas Enterprise** proposes the 1 year plan (2022-2023) CER activity plan to be undertaken in priority sectors i.e. Contribution for Solar panel in primary school.

B Land / Plot ownership details:

Land Possession Documents from Gujarat Industrial Development Corporation vide letter no. GIDC/TFR/PLT/ODV/10714 dated: 15/12/2004.

B-1	Plot area <table border="1" data-bbox="352 297 1326 371"> <tr> <td data-bbox="352 297 724 331">Total Plot area</td> </tr> <tr> <td data-bbox="352 331 724 371">650.50 Sq. m.</td> </tr> </table>					Total Plot area	650.50 Sq. m.																																																																						
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D	WATER																																												
D-1	<p>Source of Water Supply</p> <p>➤ Vatva GIDC Water Ssupply.</p> <p>Comments:</p> <p>➤ Prior permission from concerned authority shall be obtained for withdrawal of water.</p>																																												
D-2	<p>Water consumption (KLD)</p> <p>-</p> <table border="1"> <thead> <tr> <th>Category</th> <th>Existing KLD</th> <th>Proposed (Additional) KLD</th> <th>Total after Expansion KLD</th> </tr> </thead> <tbody> <tr> <td>(G) Domestic</td> <td>0.7</td> <td>2.5</td> <td>3.2</td> </tr> <tr> <td>(H) Gardening</td> <td>00</td> <td>0.5</td> <td>0.5</td> </tr> <tr> <td>(I) Industrial</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Process</td> <td>3.0</td> <td>4.9</td> <td>7.9</td> </tr> <tr> <td>Washing</td> <td>1.0</td> <td>4.0</td> <td>5.0</td> </tr> <tr> <td>Boiler</td> <td>0.5</td> <td>4.0</td> <td>4.5</td> </tr> <tr> <td>Cooling</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Others</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Industrial Total</td> <td>4.5</td> <td>12.9</td> <td>17.4</td> </tr> <tr> <td>Grand Total (A+B+C)</td> <td>5.2</td> <td>15.9</td> <td>21.1</td> </tr> </tbody> </table> <p>-</p> <p>Comments:</p>	Category	Existing KLD	Proposed (Additional) KLD	Total after Expansion KLD	(G) Domestic	0.7	2.5	3.2	(H) Gardening	00	0.5	0.5	(I) Industrial				Process	3.0	4.9	7.9	Washing	1.0	4.0	5.0	Boiler	0.5	4.0	4.5	Cooling	0	0	0	Others	0	0	0	Industrial Total	4.5	12.9	17.4	Grand Total (A+B+C)	5.2	15.9	21.1
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Grand Total (A+B+C)	5.2	15.9	21.1																																										

The water consumption above is found to be calculated considering the worst case scenario and in any case the water requirement shall not exceed the same.

D-3 Waste water generation (KLD)

Category	Existing KLD	Proposed (Additional) KLD	Total after Expansion KLD
(C) Domestic	0.5	2.0	2.5
(D) Industrial			
Process	2.45	8.17	10.62
Washing	1.0	4.0	5.0
Boiler	0.05	0.45	0.5
Cooling	0	0	0
Others	0	0	0
Total Industrial waste water	3.5	12.62	16.12

Comments:

The waste water generation above is found to be calculated considering the worst case scenario and in any case the waste water generation shall not exceed the same.

D-4 Break-up of waste water disposal & facility (For Domestic)

2.5 KLD Domestic Waste Water will be treated in STP & treated wastewater will be reused in gardening & flushing purpose within premises.

Comments:

- ✓ Domestic wastewater generation shall not exceed 2.5 KL/day for proposed project and it shall be treated in STP. It shall not be disposed off through soak pit/ septic tank. Treated sewage shall be utilized for gardening and plantation purpose within premises after achieving on-land discharge norms prescribed by the GPCB.
- ✓ Unit shall provide STP with adequate capacity.

D-5 Break-up of waste water disposal & facility (For Industrial)

Sr. no.	Quantity	Facility
1	3.5	Low. Conc. After treatment sent to CETP, Odhav.

	2	11.29	RO permeate reused in ind. Purpose.			
	3	1.33	RO rejected sent to Common Spray drying facility.			
	Total	16.12				
Membership Certificate no. & Date (For CETP/CMEE/CSD etc.)						
Membership certificate of M/s:OEPL, Odhav dated 01/01/2021						
Comments:						
1. Management of Industrialeffluent shall be as under:						
✓ <u>Low. Concentrated Stream (3.5 KLD)</u>						
➤ Low. Conc. Effluent @ 3.5 KLPD generated from boiler and 2 nd washing will be treated in primary ETP 1 then after sent to CETP, Odhav for further treatment.						
✓ <u>High Concentrated Stream (12.62 KLD):</u>						
➤ High Conc. Effluent 12.62 KLPD generated from process and 1 st washing will be treated in ETP 2 followed by RO plant.						
➤ RO permeate @ 11.29 KLPD will be reused in industrial purpose.						
➤ RO rejected @ 1.33 KLPD will be sent to Common spray drying facility at OEPL, Odhav.						
2. Unit shall provide STP and ETP with adequate capacity.						
3. The PP shall ensure to dispose off Waste water to the Common Facilities having valid CTO of GPCB.						
E	AIR					
E-1	Power (Electricity) requirement : 250 KVA					
E-2	Flue gas emission details					
-						
Sr . n o.	Source of emission With Capacity	Stack Height (meter)	Type of Fuel	Quantit y of Fuel MT/ Day	Type of emiss ions i.e. Air Pollut ants	Air Pollution Control Measures (APCM)
3.	Small Boiler (Capacity: 800 Kg/hr) (Existing)	30	Agro Waste	1.0	PM, SO ₂ , NO _x	Multi Cyclone Dust Collector
4.	Hot Air Generator-I (Capacity: 3.5 Lac Kcal)	30	Agro Waste	3.0	PM, SO ₂ , NO _x	Multi Cyclone Dust Collector

	(Existing)					
5.	Hot Air Generator-II* (Capacity: 3.5 Lac Kcal) (Existing) (*After Expansion, it will be dismantled)	30	Agro Waste	3.0	--	Multi Cyclone Dust Collector
6.	Hot Air Generator-III (Capacity: 3.5 Lac Kcal) (Proposed)	20	PNG	655 SCM/Day	Particulate Matter	Adequate Stack Height
7.	IBR Boiler (Capacity; 1.5 TPH) (Proposed)	20	PNG	686 SCM/Day	Particulate Matter	Adequate Stack Height

E-3 **Process gas**

Sr No	Specific Source of emission (Name of the Product & Process)	Type of Emission	Stack/Vent Height (meter)	Air Pollution Control Measures (APCM)
1	Spin Flash Dryer (200 L/Hr) (Proposed)	Particulate Matter	11.0	Adequate Stack height
2				

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

- For Fugitive emission such as VOCs, VOC detectors will be installed.
- Leak Detection and Repair (LDAR) program shall be implemented to comply with environmental regulations for reducing the fugitive emissions of targeted chemicals into the environment.
- To control fugitive emission from process / reaction, all reactor condensers shall be connected to a scrubber to minimize loss of solvents / fugitive emission in to the atmosphere.

Comments for E2, E3 & E4:

- ✓ The fuel to be used is approved fuel for the requirement of the heat energy and has been proposed the Air pollution Control measures so as to achieve the emission norms prescribed by the competent authorities.

- ✓ The air pollution control measures, has been proposed by PP for checking flue gas emission, Process gas emission, fugitive gas emission, with adequate systems of reaction/ reaction condensers, thermic fluid heaters, boilers, and scrubbing systems as per the requirements, to achieve the emission norms prescribed by the competent authorities.

F Hazardous waste

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
				Existing	Proposed	Total	
1	ETP Sludge	From ETP	35.3	1.2 MT/Annum	2.8 MT/Annum	4.0 MT/Annum	Collection, Storage, Transportation, Disposal by send to TSDF site (Eco Care Infrastructure Pvt. Ltd.).
2	Used oil	Plant Machinery	5.1	5.0 Liter/Year	3.0 Liter/Year	8.0 Liter/Year	Collection, Storage, Transportation, Disposal by reused lubricant.
3	Discarded Bags & Containers	Raw Material/Production Section	33.1	0.125 MT/Year	1.875 MT/Year	2.0 MT/Year	Collection, Storage, Decontamination, Transportation, and Disposal by return back to supplier.

Comments:

- ✓ Waste management includes hazardous waste management and other

solid waste management. Hazardous waste-management comprises of collection, storage, transportation, disposal, incineration, and recycle of waste. SEAC examined the details provided and found it as per requirement.

- ✓ The project proponent has to obtain membership of TSDF site & CHWIF before obtaining CTO of GPCB.

F-2 Non- Hazardous waste management matrix

- ✓ Fly Ash generation will be 1.2 MTPA.
- ✓ STP sludge generation will be 0.2 MTPA

Comments:

- ✓ Management of fly ash shall be as per the Fly ash Notification 2009 & its amendment time to time and it shall be ensured that there is 100% utilization of fly ash to be generated from the unit.
- ✓ STP sludge shall be collected and used as manure in gardening activity or send to TSDF site for landfilling.

G Solvent management, VOC emissions etc.

G-1 Types of solvents, Details of Solvent recovery, % recovery, reuse of recovered Solvents etc.

No any solvent used in mfg. process.

G-2 VOC emission sources and its mitigation measures

No VOC generation as No any solvent used in mfg. process.

G-3 LDAR proposed:

No proposed as No any solvent used in mfg. process.

Comments:

- ✓ There shall be no use of solvents for the manufacturing of proposed products.
- ✓ There shall be no generation of spent Solvents from the manufacturing of proposed products.

H SAFETY details

H-1 Details regarding storage of Hazardous chemicals

Sr. no	Name of Chemical	Capacity of Tank	Number of Tanks	Hazardous Characteristics of Chemical
1	HCL	7 KL	01	250 threshold limit

-

Storage of Hazardous chemicals in Tanks

- Proper storage area for tanks and dykes will be provided.
- Pipes and equipment shall be inspected at regular intervals.
- All storage areas are isolated from all sources of open flame and well posted with "Hazardous Chemical Storage", "No Smoking", "Hot Work Restricted" and provided with adequate fire-fighting/extinguishing systems.
- Spark-resistant tools shall be used.
- Combustibles (wood, paper, oil etc.) shall be kept away from spilt material.
- Flame arrestors and breather valve will be provided for solvent storage tanks.
- Dyke wall will be provided to storage tanks.
- Level transmitter will be made available with low level/high level auto cut-off provision.
- Fire hydrant monitor with foam System with Capacity 2000 L will be provided. Dumping/drain vessel/alternate vessel shall be made available to collect the spillage material inside the dyke wall.
- FLP type pumps shall be provided.
- Flame proof electrical fittings will be provided.
- Double static earthing shall be provided to storage tank, as per the requirement.
- Double jumper clip shall be provided to all solvent handling pipeline flanges.

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

- Store chemicals inside a closeable cabinet or on a sturdy shelf with a front-edge lip to prevent accidents and chemicals spills; a ¾ - inch front edge lip will be followed.
- Secure shelving to the wall or floor will be provided.
- It will be ensured that all storage areas have doors with locks.
- It will be ensured that chemical storage areas off limits to all persons.
- It will be ensured that proper ventilation will be provided to storage area
- It will be ensured that all containers are properly closed.
- After each use, carefully wipe down the outside of the container with a paper towel before returning it to the storage area. Properly dispose of the paper towel after use.-

Safety details of Hazardous Chemicals:

Type of Hazardous Chemicals	Safety measures
FLAMMABLE & EXPLOSIVE	<ul style="list-style-type: none"> • Separate Isolated Storage Area is 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. • Lightning 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.

	<ul style="list-style-type: none"> • Work Instructions shall be prepared and followed. • 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 • MSDS of chemicals stored will be available in storage area
CORROSIVE & CHEMICALS	<ul style="list-style-type: none"> • Preventing or minimizing contact between corrosive substances and skin, mucous membranes and eyes. • Corrosive substances should not be allowed to come in contact with materials that may react. • All the containers, pipes, apparatus, installations and structures used for the manufacture, storage, transport or use of these substances may be protected by suitable coatings, impervious to and unaffected by corrosives. • All containers or receptacles should be clearly labelled to indicate their contents and should bear the danger symbol for corrosives. • Adequate ventilation and exhaust arrangement whether general or local, should be provided whenever corrosive toxic gases or dust are present. • Personal protective devices shall be used • First aid treatment facilities shall be provided and all concerned should be instructed to follow safe practices such as (a) Prolonged washing with water (b) Removing contaminated clothing (c) Seeking immediate medical help. • Safety showers and eye washers is provided.
TOXIC CHEMICALS	<ul style="list-style-type: none"> • Ventilation must be sufficient to prevent accumulation of vapor pockets. All fan switches should be outside the storage area. • 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.
REACTIVE CHEMICALS	<ul style="list-style-type: none"> • Store minimum quantities • Segregate chemicals, e.g. from water, air, incompatible chemicals, sources of heat, ignition sources • Spillage control; bund, spray, blanket, containment. Drain to collection pit • Decontamination and first-aid provisions, e.g. neutralize/destroy, fire-fighting • Contain/vent pressure generated to a safe area • Split-up stocks into manageable lots, e.g. with reference to fire loading/spillage control. • Ensure appropriate levels of security, hazard warning notices, fences, patrols. Control access including vehicles • Appropriate gas/vapour/fume/pressure venting, e.g. flame arrestors, scrubbers, absorbers, stacks • Ensure adequate natural or forced general ventilation of the storage area Provide adequate, safe lighting • Label (name and number); identify loading/unloading/transfer couplings

- Provide appropriate fire protection (sprinkler, dry powder, gas)
- Ensure adequate access for both normal and emergency purposes with alternative routes

➤ **Applicability of PESO:** No. Less quantity of raw material.

Comments:

Committee was of the opinion that the provisions of PESO, licensing, condition compliance, monitoring, fall within the preview of The **Petroleum and Explosives Safety Organization** (PESO) and SEAC has very limited role in this. Nevertheless SEAC has examined it. The PP has submitted that the list of raw materials/products proposed to be produced along with the quantity, attract the provisions of PESO and they will abide by the requisite legal compliances with reference to storage and safety. SEAC has taken note of it.

H-2 **Types of hazardous Processes involved and its safety measures:**

No any Haz. Process.

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

Total Plot Area:	650.5 sq. m
Area utilized for plant activity:	371.83 sq. m (Gr.fl +1 st floor)
Area utilized for Hazardous Chemicals Storage:	108.22 sq. m (Gr.fl +1 st floor)
Number of Floors:	Gr. Fl + 1st fl.
Water requirement for firefighting in KLD:	30 KL
Water storage tank provided for firefighting in KLD:	50 KL
Details of Hydrant Pumps:	Main Pump:900 L/min. Jockey Pump: 100 L/min. Diesel Engine driven Pump: 450 L/min
Nearest Fire Station :	Odhav Fire station
Applicability of Off Site Emergency Plan:	Applicable

Comments:

The project proponent has proposed fire safety plan which includes fire hydrant line, sprinkler system, fire extinguishers, fire suits, covering the project area and provides for fire water storage tank of 50 KL. SEAC found it as per the requirement.

H-4 **Details of Fire NOC/Certificate:**

Shall be obtained after receipt of EC.

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

-	
Number of permanent Employee:	12
Number of Contractual person/Labour:	0
Area provided for OHC:	16.84
Number of First Aid Boxes:	5

Nearest General Hospital:	Sardar Patel Hospital– 2 km, Odhav
Name of Antidotes to be store in plant:	Adequate antidotes will be stored within premises

Comments

Project proponent has provided Occupational health center with adequate provision of manpower, equipment and operational cost. SEAC finds it as per the provisions of Gujarat Factory Rules 1963.

15) DELIBRATION AND RECOMMENDATION:

"On the basis of information provided to SEAC on project, its location, technical, physical and environmental infrastructure, products, quantity to be manufactured, its raw material, storage, waste disposal, water treatment, safety measures, green belt development planning, regulatory compliance assured of related statutory provisions, necessary documents of requisite permissions provided from concerned departments and overall environmental management planning for the project, along with financial resources committed for operation and maintenance, and on the basis of presentation made before SEAC, modification suggested by SEAC and incorporated by project proponent, SEAC finds the project as per the requirement and **unanimously** recommends the same to SEIAA for environmental clearance."

Conditions with which Environment Clearance is recommended:

Construction Phase

- a) "Wind – breaker of appropriate height i.e. 1/3rd of the building height and maximum up to 10 meters shall be provided. Individual building within the project site shall also be provided with barricades.
- b) "No uncovered vehicles carrying construction material and waste shall be permitted."
- c) "No loose soil or sand or construction & demolition waste or any other construction material that cause dust shall be left uncovered. Uniform piling and proper storage of sand to avoid fugitive emissions shall be ensured."
- d) Roads leading to or at construction site must be paved and blacktopped (i.e. – metallic roads).
- e) No excavation of soil shall be carried out without adequate dust mitigation measures in place.
- f) Dust mitigation measure shall be displayed prominently at the construction site for easy public viewing.
- g) Grinding and cutting of building materials in open area shall be prohibited.
- h) Construction material and waste should be stored only within earmarked area and road side storage of construction material and waste shall be prohibited.

- i) Construction and demolition waste processing and disposal site shall be identified and required dust mitigation measures be notified at the site. (If applicable).

SPECIFIC CONDITIONS:

1. 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**].
2. 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.
3. There shall be no use of solvents for the manufacturing of proposed products.
4. There shall be no generation of spent Solvents from the manufacturing of proposed products.
5. 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.
6. 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.
7. All measures shall be taken to avoid soil and ground water contamination within premises.
8. **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 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.
- l) Unit shall provide effective Isolation for Process area and storage of hazardous chemicals.

WATER

9. Total water requirement for the project shall not exceed 21.1 KLD. Unit shall recycle 13.79 KLD in industrial purpose. Hence, fresh water requirement shall not exceed 7.31 KLD and it shall be met through GIDC 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 16.12 KLD after expansion.
11. Management of Industrial effluent shall be as under:
 - ✓ **Low. Concentrated Stream (3.5 KLD)**
 - Low. Conc. Effluent @ 3.5 KLPD generated from boiler and 2nd washing will be treated in primary ETP 1 then after sent to CETP, Odhav for further treatment.
 - ✓ **High Concentrated Stream (12.62 KLD):**
 - High Conc. Effluent 12.62 KLPD generated from process and 1st washing will be treated in ETP 2 followed by RO plant.
 - RO permeate @ 11.29 KLPD will be reused in industrial purpose.
 - RO rejected @ 1.33 KLPD will be sent to Common spray drying facility at OEPL, Odhav.
12. Unit shall discharge wastewater to GIDC underground drainage leading to CETP of GIDC Sarigam only

after complying with inlet norms prescribed by GPCB and 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.

13. Domestic wastewater generation shall not exceed 2.5 KL/Day for proposed project and it shall be treated in STP. It shall not be disposed off through soak pit/ septic tank. Unit shall provide buffer water storage tank of adequate capacity for storage of treated waste water during rainy days.
14. The unit shall provide metering facility at the inlet and outlet of ETP and maintain records for the same.
15. Proper logbooks of ETP; reuse/ recycle of treated/ untreated effluent; 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.

AIR:

16. Unit shall not exceed fuel consumption for Boiler, Fluid Bed Dryer and D G Set as per the point no. E-2 as mentioned above.
17. Unit shall provide adequate APCM with flue gas generation sources to achieve the norms prescribed by GPCB.
18. Unit shall provide adequate APCM with process gas generation sources as the point no. E-3 as mentioned above.
19. PP shall use approved fuels only as fuel in boilers.
20. The fugitive emission in the workzoneenvironment shall be monitored. The emission shall conform to the standards prescribed by the concerned authorities fromtime to time (e.g. Directors of IndustrialSafety& Health). Following indicativeguidelines shall also be followed to reducethe fugitive emission.
 - Internal roads shall be either concreted or asphalted or paved properly to reducethe fugitive emission during vehicular movement.
 - Air borne dust shall becontrolled with water sprinklers at suitable locations in the plant.
 - A green belt shall be developed all around the plant boundary and also along the roads to mitigate fugitive & transport dust emission.
21. Regular monitoring of Volatile Organic Compounds (VOCs) shall be carried out in the work zone area and ambient air.
22. Forcontrol of fugitive emission, VOCs, following steps shall be followed :
 - ✓ Closed handling and charging system shall be provided for chemicals.
 - ✓ Reflux condenser shall be provided over Reactors / Vessels.
 - ✓ Pumps shall be provided with mechanical seals toprevent leakages.
 - ✓ Air borne dust at all transfers operations/ points shall be controlled either by spraying water or

providing enclosures.

23. Solvent management shall be carried out as follows:

- ✓ Measures shall be taken to reduce the process vapors emissions as far as possible. Use of toxic solvents shall be minimum. All venting equipment shall have vapour recovery system
- ✓ Reactor shall be connected to adequate chilling system to condensate solvent vapors and reduce solvent losses.
- ✓ Reactor and solvent handling pump shall have mechanical seals to prevent leakages.
- ✓ The condensers shall be provided with sufficient HTA and residence time so as to achieve maximum solvent recovery.
- ✓ Solvents shall be stored in a separate space specified with all safety measures.
- ✓ Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
- ✓ Solvent storage and handling area shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.

24. Regular monitoring of groundlevel concentration of PM₁₀, PM_{2.5}, SO₂, NO_x and VOCs shall be carried out in the impact zone and its records shall be maintained. Ambient air quality levels shall not exceed the standards stipulated by the GPCB. If at any stage these levels are found to exceed the prescribed limits, necessary additional control measures shall be taken immediately. The location of the stations and frequency of monitoring shall be decided in consultation with the GPCB.

HAZARDOUS / SOLID WASTES:

25. All the hazardous/ solid waste management shall be taken care as per the point no. F-1 as mentioned above.
26. Authorized end-users shall have permissions from the concerned authorities under the Rule 9 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016.
27. Unit shall explore the possibilities for environment friendly methods like co-processing of hazardous waste for disposal of Incinerable & land fillable wastes before sending to CHWIF & TSDF sites respectively.
28. The project proponent has to obtain membership of TSDF site & CHWIF before obtaining CTO of GPCB.
29. 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

30. The PP shall develop green belt within premises **[130m² (20%) inside plant premises + 220 m² (33%)**

at Common Plot in GIDC= Total: 350 Sq. m.) i.e. 53 % of 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.

OTHERS:

31. The project proponent shall carry out the activities (Contribution for Solar panel in primary school.) proposed under CER and it shall be part of the Environment Management Plan (EMP) as per the MoEF&CC's OM no. F. No. 22-65/2017-IA.III dated 30.09.2020. This shall be monitored and the monitoring report shall be submitted to the regional office of MoEF&CC as a part of half-yearly compliance report and to the District Collector. The monitoring report shall be posted on the website of the project proponent.
32. All the recommendations, mitigation measures, environmental protection measures and safeguards proposed in the EIA report of the project prepared by M/s. Bhagwati Enviro Care Pvt. Ltd. and submitted by the project proponent and commitments made during presentation before SEAC and proposed In the EIA report shall be strictly adhered to in letter and spirit.

COMPLIANCE OF ENVIRONMENT CLEARANCE/REPORTING/ADMINISTRATION/APPEAL:

33. Project proponent shall inform to all the concerned authorities including Municipal Corporation and District Collector and shall also give wide publicity through advertisement in minimum two local newspapers within seven days, about the Environment Clearance order accorded.
34. Project proponent shall appoint a key person in the organization who shall be responsible for compliance of above condition fully on behalf of the proponent. It will not mean that appointing a key person will exempt the project proponent from the responsibility of compliance. Any change in key person shall immediately be informed to SEIAA and all concerned authorities.
35. Designated key person shall submit six monthly compliance report to SEIAA/SEAC, MOEF&CC, GPCB and Nodal Department of the Government.
36. The Nodal Department or any authority or officer authorized by MOEF&CC/SEIAA can inspect the site of the project and all the facilities, for verification of compliances of environment clearance conditions.
37. In case of violation reported upon, the project proponent shall be responsible for all the legal actions as per Environment Protection Act, 1986 including SEIAA may cancel, withdraw or keep in abeyance, the Environment Clearance accorded.
38. Any person including the project proponent affected by this Environment Clearance order may file appeal to Honorable National Green Tribunal West Zone branch, Pune, preferably within a period of thirty days from the date of issue of Environment Clearance as prescribe under section 16 of National Green Tribunal Act 2010.
39. All complains and public grievance or representations may be addressed to SEIAA/SEAC in the email

addresses (a) msseiaagj@gmail.com& (b) seacgujarat@gmail.com

06	SIA/GJ/IND3/69522/2018 dated 29/11/2021	M/s. Meridian Chembond Pvt. Ltd. (Unit-III) Plot No. 5906/4, GIDC-Ankleshwar, Dist.: Bharuch, Gujarat	EC
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Category of the unit: **5 (f)**Project status: **Expansion**

In context to above subject matter find below the recommendation of SEAC for your perusal.

1) DETAILS OF APPLICATION:

1.1. Type of application:	EC-Expansion
1.2. Proposal no.	SIA/GJ/IND3/69522/2018 dated 29/11/2021
1.3. Category of Project :	5 (f) – B1
1.4. Date of application :	29.11.2021
1.5. Documents Submitted by Project Proponent(PP)	EIA report, Form-2, EMP
1.6. TOR No. & Date :	SEIAA/GUJ/TOR/5(f)/583/2019, Date: 10 Apr 2019.
1.7. Technical expert / Environmental Consultant :	M/s. Envisafe Environment Consultants
1.8. SEAC Meeting No. and Date:	356 th meeting dated 03.02.2022 Earlier SEAC meeting dates, (If any)
1.9. Compliance of Existing EC & CCA	No earlier EC. Consent order no.: H-103216, Date of Validity: 25/03/2024 Self-compliance report submitted with application.

2) Project proponent has submitted EIA Report prepared by M/s. Envisafe Environment Consultants based on the TOR issued by SEIAA.

3) This is an existing unit and now proposed for expansion in manufacturing of synthetic organic chemicals as mentioned below:

Sr. No.	Name of Products	CAS No.	*Capacity, TPM			End-Use
			E	P	T	
☞ Synthetic Organic Chemicals						
1.	Mono Chloro Acetic Acid (MCAA)	79-11-8	700	2,100	2,800	Intermediate for Pharmaceuticals
2.	Chloro Acetylene Chloride (CAC)	79-04-9	Nil	250	250	

3.	Try Chloro Acetyl Chloride (TCAC)	76-02-8	Nil	750	750	
4.	Sulphur Mono Chloride (SMC)	10025-67-9	Nil	750	750	Intermediate for Sulphur Dyes
5.	Sodium Mono Chloro Acetate	3926-62-3	Nil	750	750	Intermediate for Pharmaceuticals, Dye stuff, Textile chemicals
Total			700	4,600	5,300	
Inorganic Chemical						
6.	Calcium Chloride	10043-52-4	Nil	2,500	2,500	For manufacturing of specialty chemicals
7.	Di Calcium Phosphate	7757-93-9	Nil	1,000	1,000	
8.	Chlorosulphonic Acid	7790-94-5	Nil	1,000	1,000	
Total			Nil	4,500	4,500	
Grand Total (Synthetic Organic Chemicals + Inorganic Chemicals)			700	9,100	9,800	
*E: Existing, P: Proposed, T: Total after proposed expansion						

- 4) The project falls under B1 category of project activity 5(f) as per the schedule of EIA Notification 2006.
- 5) The proposal was considered in the SEAC video conference meeting dated 03.02.2022.
- 6) Project proponent (PP) and their Technical Expert remain present during video conference meeting.
- 7) 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.
- 8) The baseline environmental quality has been assessed for various components of the environment viz. air, noise, water, biological and socioeconomic aspect. The baseline environmental study has been conducted for the study area of 10 km radial distance from project site for the period December-2020 to February-2021. Ambient Air Quality monitoring was carried out PM10, PM2.5, SOx, NOx, HCl, Cl2 and VOCs at Seven 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". 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).
- 9) 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.
- 10) Deliberation Points discussed by committee
- 11) 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.

12) While discussion Committee asked to submit the following:

- a) Check the details of fuel requirement for all the utilities and submit revise details
- b) Provide the cost of process automation for safety and submit revised budgetary allocation for EMP.
- c) Provide the revised details of CER Activities considering execution within 3 years.
- d) Increase the storage capacity of fire water tank

13) Later on PP submitted the following:

- a) They have existing steam boiler of 3 TPH and considering 8 hours of operation of existing steam boiler working on half capacity i.e. 1.5 TPH. Hence the total fuel requirement of existing steam boiler is 700 SCM/day. After proposed expansion, operation hours of existing steam boiler (3 TPH) and proposed steam boiler (10 TPH) will be 20 hours and will work on full capacity. Hence total fuel requirement after proposed expansion will be 15,500 SCM/Day.
- b) They have planned to provide certain measures system and implement certain measures for the process safety as below;
 - ✓ Installation of adequate nos. indicator/gauge with audio-visual alarm to control operating conditions like flow, pressure and temperature during manufacturing process.
 - ✓ Activation of audio-visual alarm upon any mishap in the reaction resulting in to increase in temperature and interlock system will safely shut down ongoing operations.
 - ✓ Provision of rupture disc and safety valve at chlorinator with reactor vent connected to the scrubber system
 - ✓ Provision of gases detection sensors in vulnerable area of process and hazardous chemical storage along with hooter system and implementation of LDAR program.
 - ✓ Provision of PLC based interlocking system is not feasible due to highly corrosive nature of product and interlocking is not possible as there high chance of chlorine line breakage due to back pressure of chlorine cylinder.
 - ✓ They have made budgetary provision for the same and details of revised budgetary allocation of EMP are submitted.
- c) They have revised the plan of CER Activities, which will be executed within 3 years after the commissioning of proposed expansion. Details of revised CER Activities are submitted.
- d) Unit have already provided underground fire water tank of 150 KL in existing premises and it is planned to provide additional underground water tank of 150 KL during proposed expansion. So that total capacity of fire water tank will be 300 KL.
- e) They have submitted revised SEAC format incorporating above details.

14) Committee found presentation and submission of project proponent satisfactory.

15) Compliance of ToR found satisfactory.

		Provision of Process automation										
Total			138.65	0.19	0.06	11.6						
<p>-</p> <p><u>Comments:</u></p> <p>The overall environment management plan (EMP) provided for capital and recurrent cost for waste water treatment, air emission control, noise control, hazardous waste disposal, fire safety, occupational health, green belt and corporate social responsibility was deliberated and found satisfactory.</p>												
A-3	Details of CER -											
<p>PP shall carry out CER activities as below:</p> <ul style="list-style-type: none"> ✓ Installation of RO plant in schools/ common buildings ✓ Solar panels installation at schools/ common buildings ✓ Green belt development and Other related Activities 												
B	Land / Plot ownership details:											
Land Possession Documents from Gujarat Industrial Development Corporation vide letter no. GIDC/RM/ANK/3571 on dated 15/10/2016.												
B-1	Plot area											
<table border="1" style="width: 100%;"> <tr> <td style="text-align: center;">Total Plot area</td> </tr> <tr> <td style="text-align: center;">30,613.05 Sq. m.</td> </tr> </table>							Total Plot area	30,613.05 Sq. m.				
Total Plot area												
30,613.05 Sq. m.												
B-2	<p>Area adequacy</p> <p>➤ Hence, adequate area is available for proposed new Facility.</p> <p><u>Comments:</u></p> <p style="text-align: center;">SEAC has examined it w.r.t. to total monthly production, maximum products, manufactured per month, the total raw material required, weekly storage requirement of each raw material, their mode of storage, their compatibility (flammability, corrosive, toxic), area needed by each raw material, one week storage of finished goods. Area adequacy, from overall safety perspective, has been provided in proposal and is satisfactory.</p>											
B-3	Green belt area											
<table border="1" style="width: 100%;"> <tr> <td></td> <td style="text-align: right;">Total (Sq. meter)</td> </tr> <tr> <td style="text-align: center;">Area in Sq. meter</td> <td style="text-align: center;">10,200 inside</td> </tr> <tr> <td style="text-align: center;">% of total area</td> <td style="text-align: center;">33.32 % Inside</td> </tr> </table>								Total (Sq. meter)	Area in Sq. meter	10,200 inside	% of total area	33.32 % Inside
	Total (Sq. meter)											
Area in Sq. meter	10,200 inside											
% of total area	33.32 % Inside											
<u>Comments:</u>												

The condition shall be given that -

3. The PP shall develop green belt (10,200 Sq. m i.e. 33.32 % 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.

C

Employment generation

Existing	Proposed	Total
103 Nos.	112 Nos.	215 Nos.

-

D

WATER

D-1

Source of Water Supply

- Ankleshwar GIDC Water Supply.

Comments:

- Prior permission from concerned authority shall be obtained for withdrawal of water.

D-2

Water consumption (KLD)

-

Category	Existing KL/day	Proposed (Additional) KL/day	Total after Expansion KL/day	Remarks
(J) Domestic	5.0	5.0	10.0	Fresh
(K) Gardening	8.0	4.6	20.6	Fresh
	Nil	8.0		Reuse (STP)
(L) Industrial				
Process	--	--	--	--
Washing	2.0	3.0	5.0	Fresh
Boiler	18.0	6.0	24.0	Fresh
Cooling	25.0	5.0	30.0	Fresh
Others (Scrubber)	47.5	275.9	323.4	Fresh
	3.5	5.1	*8.6	Direct Reuse
Industrial Total	96.0	295.0	391.0	Fresh + Reuse
	3.5	5.1	8.6	Reuse
Grand Total (A+B+C)	105.5	299.5	405.0	Fresh
	109.0	312.6	421.6	Fresh + Reuse

-

Comments:

The water consumption above is found to be calculated considering the worst case scenario and in any case the water requirement shall not exceed the same.

D-3 Waste water generation (KLD)

Category	Waste water KLD			Remarks
	Existing KL/Day	Proposed (Additional) KL/day	Total after Expansion KL/day	
(E) Domestic	5.0	3.0	8.0	Reuse in gardening
(F) Industrial				
Process	--	--	--	--
Washing	2.0	3.0	5.0	Direct reuse in APCE
Boiler	1.0	1.6	2.6	
Cooling	0.5	0.5	1.0	
Others (Scrubber)	*Nil	*Nil	Nil	--
Total Industrial waste water	3.5	5.1	8.6	Direct reuse in APCE
Total [A + B]	8.5	8.1	16.6	--

Comments:

The waste water generation above is found to be calculated considering the worst case scenario and in any case the waste water generation shall not exceed the same.

D-4 Break-up of waste water disposal & facility (For Domestic)

8 KLD Domestic Waste Water will be treated in STP & treated wastewater will be reused in gardening purpose within premises.

Comments:

- ✓ Domestic wastewater generation shall not exceed 8 KL/day for proposed project and it shall be treated in STP. It shall not be disposed off through soak pit/ septic tank. Treated sewage shall be utilized for gardening and plantation purpose within premises after achieving on-land discharge norms prescribed by the GPCB.
- ✓ Unit shall provide STP with adequate capacity.

D-5 Break-up of waste water disposal & facility (For Industrial)

Sr. no.	Category	Quantity			Facility	
		Existing	Proposed	Total		
1	Process	--			Direct Reuse in APCE	
2	Washing	2.0	3.0	5.0		
3	Boiler	1.0	1.6	2.6		
4	Cooling	0.5	0.5	1.0		
Total	--	3.5	5.1	8.6	Direct Reuse in APCE	
Comments:						
4. Management of Industrial effluent shall be as under:						
✓ <u>Dilute Stream (8.6 KLD):</u>						
➤ 8.6 KLD industrial effluent generated from Boiler, Cooling & washing will be directly reused in APCE. Hence Unit will maintain Zero Liquid Discharge.						
5. Unit shall provide STP with adequate capacity.						
6. The PP shall ensure to dispose off Waste water to the Common Facilities having valid CTO of GPCB.						
E	AIR					
E-1	Power (Electricity) requirement : 1475 KVA					
E-2	Flue gas emission details					
-						
Sr. No.	Source of emission with capacity	Status	Ht. & Dia (m)	Fuel Name & Qty.	Type of Emission & Permissible Limit	Air Pollution Control Measure
1.	Steam Boiler-1 (3 TPH)	Existing	11 & 0.6	Natural Gas: 700 SCM/D	PM ≤ 150 mg/Nm ³	Stack of Adequate Height
3.	Steam Boiler-2 (10 TPH)	Proposed	30 & 1.5	Natural Gas: 14 800 SCM/D	SO ₂ ≤ 100 ppm	Stack of Adequate Height
4.	DG Set (650 kVA)	Proposed (Standby)	7.0 & 0.15	Diesel: 175 L/hour	NO _x ≤ 50 ppm	Stack of Adequate Height
5.	DG Set (1250 kVA)	Proposed (Standby)	7.0 & 0.15			Stack of Adequate Height
-						
E-3	Process gas					
-						
Sr. No.	Stack attached to	Status	Ht. & Dia., m	Air Pollutant	Air Pollution Control Equipment	
1.	Reactors of Product 1, 3 & 4	Existing	12 & 0.08	HCl ≤ 20 Cl ₂ ≤ 09	Three Stage water Scrubbers	

2.	Reactor of Product 2	Proposed	12 & 0.08	HCl ≤ 20 Cl ₂ ≤ 09 SO ₂ ≤ 200	Water scrubber followed by Two Stage Alkali Scrubbers
	Fumes Extraction System of Inorganic Plant and Haz. Chemical Storage & Handling	Proposed	12 & 0.08	HCl ≤ 20	Water scrubber

E-4 Fugitive emission details with its mitigation measures.

There will be a chance of fugitive emission and odour nuisance during manufacturing process as well as due to storage & handling of raw materials, fuel and products. The unit will take following precaution for the control of fugitive emission.

Probable Sources	Control Measures
Manufacturing activities during charging into reactors	<ul style="list-style-type: none"> Liquid raw materials are charged by pumping & closed loops. Dosing is done by metering system to avoid fugitive emissions. Dedicated measuring tanks are provided to each reactor. Usage of closed handling system for odorous chemicals /solvents as far as possible.
Chemical vapor from wet cake in filtration and drying area	<ul style="list-style-type: none"> Covered transfer systems will be adopted, workers shall be provided PPE. Fume extraction systems will be provided, wherever required
Emission from bulk storage tanks during storage, loading, unloading	<ul style="list-style-type: none"> Breather valves, PSVs, Rupture disc, Vapor recovery system are installed for process/storage tank vents. Unit adopts bulk handling of odorous chemicals and avoid usage of drums/carboys for such materials
Hazardous chemical storage area	<ul style="list-style-type: none"> Dedicated storage area is provided Adequate ventilation systems are provided All the containers are kept tightly closed Trolley/Forklift is used for transfer of drums and containers Transfers of odorous waste is preferably during day time. Transfers during odd hours is avoided.
Pump and compressor Emissions	<ul style="list-style-type: none"> Mechanical seals are provided in pumps and agitators Standby arrangement for critical equipment and parts is ensured. Drip trays will be placed for each pump to collect leakages and spillages.

Pressure relief valve emission from pipelines	<ul style="list-style-type: none"> For highly pressurized lines, vent pipes of PRVs are connected in case of toxic gases. 				
Valves, Flanges, plugs and instrument connections	<ul style="list-style-type: none"> Welded pipes are used wherever feasible. Suitable gasket materials are used. Suitable glad packing is used in valves. Periodic inspection and maintenance of pipes and pipe fittings is carried out. 				
Release from sampling lines	<ul style="list-style-type: none"> Closed loop system is used. 				
Hazardous chemical storage area	<ul style="list-style-type: none"> Provision of dedicated storage area Adequate ventilation system to be provided All the containers will be kept tightly closed Trolley/Forklift will be used for transfer of drums and containers 				
Comments for E2, E3 & E4:					
<ul style="list-style-type: none"> ✓ The fuel to be used is approved fuel for the requirement of the heat energy and has been proposed the Air pollution Control measures so as to achieve the emission norms prescribed by the competent authorities. ✓ The air pollution control measures, has been proposed by PP for checking flue gas emission, Process gas emission, fugitive gas emission, with adequate systems of reaction/ reaction condensers, thermic fluid heaters, boilers, and scrubbing systems as per the requirements, to achieve the emission norms prescribed by the competent authorities. 					
F	Hazardous waste				
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	Process Residue	Process (Product 2 & 3)	Sch - I 28.1	123 MT	Collection, Storage, Transportation, Disposal by co-processing on priority, if not available, Disposal by incineration at GPCB approved CHWIF
2	Solid Waste (Inorganic Waste)	Process (Product 6 & 7)	Sch - I 28.1	3,433 MT	Collection, Storage, Transportation and Disposal by landfilling at TSDF
3	Mother Liquor of MCAA	Process (Product 1)	Sch-II C2	12,465 MT	Collection, Storage, Transportation &

4	NaHSO ₃ Solution (21%)	APCM- (Product 2)	Sch-II C2	14,498 MT	Disposal by sell to GPCB authorized end-user having permission under Rule 9.
5	NaOCl Solution (14.5%)	APCM- (Product 1, 3 & 4)	Sch-II C2	50,727 MT	
6	Hydrochloric Acid (30%)	APCM (Product 1, 2, 3)	Sch-II C2	80,274 MT	Collection, Storage, Transportation & Disposal by sell to GPCB authorized end-user having permission under Rule 9 OR Captively reused within premises for manufacturing of Inorganic Chemicals
7	Spent Oil/ Used Oil	Plant & Machineries	Sch - I 5.1	7 Lit	Collection, Storage, Transportation, sell to registered Re-processor / MoEF&CC approved recyclers on priority, if not available Reused as Lubricant within premises
8	Discarded Bags/Liners/ Drums/Carboys/ Containers	Raw Material Storage	Sch-I 33.1	5,250 Nos	Collection, Storage, and Disposal by selling to scrap vendors
<p>Comments:</p> <ul style="list-style-type: none"> ✓ Waste management includes hazardous waste management and other solid waste management. Hazardous waste-management comprises of collection, storage, transportation, disposal, incineration, and recycle of waste. SEAC examined the details provided and found it as per requirement. ✓ The project proponent has to obtain membership of TSDF site & CHWIF before obtaining CTO of GPCB. 					
F-2	Non- Hazardous waste management matrix				
<p>Comments:</p>					
G	Solvent management , VOC emissions etc.				
G-1	Types of solvents, Details of Solvent recovery, % recovery, reuse of recovered Solvents etc.				
No spent solvent will be generated from the proposed expansion project					

G-2	VOC emission sources and its mitigation measures			
As Mentioned in Section E-4, G-3				
G-3	LDAR proposed:			
<p>↻ Electronic sensors/detectors are installed in the prominent section of the plant for continuous surveillance of leakages and fugitive emission of hazardous chemicals.</p> <p>↻ These sensors/detectors are continuously measure the concentration of each hazardous chemical in the work environment and the same are displayed at the measuring point (Section / Area) as well as in control room.</p> <p>↻ The sensors/detectors are fitted with audio-visual alarm, which will be activated when the measured concentration exceeds the threshold standards.</p> <p>↻ Whenever the measured the concentration of hazardous chemicals exceeds the threshold standards, the LDAR Program will be activated as under:</p> <ul style="list-style-type: none"> ▪ The audio-visual alarm will buzz at measuring point and in control room to warn the operator & supervisor so that immediate corrective action can be taken. ▪ Leaking equipment/component/connection will be identified and will be repaired/replaced as soon as possible. ▪ If the repair/replace of any component is not feasible technically without a process unit shutdown, the particular unit process will be shut-down immediately till the leakage is completely controlled. ▪ Problematic components will be replaced/upgraded with “leak less” or other technologies. <p>↻ Record of the leakage as well as repair are kept and used to plan preventive maintenances at source of leak.</p> <p>↻ Periodical checking and calibration of sensors/detectors are carried out for effective and reliable operation.</p> <p>Uninterrupted operation of sensors/detectors at all time are ensured by provision of emergency power supply & regular maintenance.</p>				
Comments:				
<ul style="list-style-type: none"> ✓ Measures for achieving maximum solvent recovery and minimize VOC generation, inclusive of VOC detectors, pumps, maintenance of pipelines, proper ventilation etc., provided are as per requirement. ✓ Spent solvents shall be recovered by in-house distillation in such a manner that recovery shall not be achieved to the maximum extent and recovered solvent shall be reused in the process. Solvent recovery system with adequate reflux condensers shall be provided for controlling escape of low boiling solvents (VOCs). 				
H	SAFETY details			
H-1	Details regarding storage of Hazardous chemicals			
-				
Sr. no	Name of Chemical	Capacity of Drum	Number of Drum	Hazardous Characteristics of Chemical
1.	Acetic Acid	2 KL	8	Toxicity, Fire
2.	Chloro Acetyl Chloride	5 KL	10	Toxicity, Corrosive
3.	Chlorine Gas	0.90 KL	112	Toxicity
4.	Sulphur Monochloride	2 KL	3	Toxicity, Corrosive
5.	Hydrochloric Acid	5 KL	10	Toxic, Reactive
6.	Sulphur Trioxide	0.25 KL	60	Toxic, Reactive
-				
<u>Brief note on storage of Hazardous chemicals other than Tanks i.e. Drum, Barrels, Carboys, Bags etc.</u>				
<ul style="list-style-type: none"> ➤ Use of drum trolley for the movement of drums of hazardous chemicals to avoid accident due to manual error. ➤ Provision of spare drums/barrel/tanks of sufficient quantity for any emergency spillage 				

- or leakage.
- Storage of drums/tanks at ground level and take measures to prevent corrosion of the drums/tank base
 - Availability of adequate ventilation to ensure that in case of incidental release of organic vapour the vapour concentration is as low as possible, and in any event within the regulatory requirements
 - No installation or storage shed to be open, and no work in any installation or storage shed to be permitted, between sunset and sunrise except where use of electric lighting is approved.
 - Always keep adequate supply of dry sand or earth together with the necessary implements for its convenient application, or other efficient means of extinguishing petroleum fires in every installation and in or adjacent to every storage shed.
 - Regular inspection of all the drums/tanks of hazardous chemicals and damaged drums for separation and disposal to avoid the possibility of catastrophic rupture.
 - Maintain proper inventory of hazardous chemical and keep buffer stock as minimum as possible.

Safety details of Hazardous Chemicals:

Type of Hazardous Chemicals	Safety measures
Chlorine Gas	<ul style="list-style-type: none"> ○ Label properly and stored in a cool, well-ventilated and fire-resistant area. Prefer separate storage area. ○ Storage of cylinders in upright condition, with valve protection cap in place, firmly secured to prevent falling or being knocked over and away from incompatible materials. ○ Never use rope slings, chains or magnetic devices for handling chlorine tonner. ○ Take utmost care so that cylinder temperature does not exceed 51 °C. ○ Colour coding of chlorine gas pipeline as per IS code. ○ Empty chlorine pipeline never be welded without purging it with air. ○ Pipeline used for chlorine gas having suitable thermal expansion. ○ Piping systems will well supported, adequately slopped to allow flow and have minimum flange joints. ○ Vertical “U bends” in piping avoided as such bends retain gas when the supply is off. ○ All ends of chlorine gas pipeline are closed and moisture tight, when not in use. ○ Emergency equipment made readily available and special training is provided for handling of Chlorine Gas. ○ Provision of Proper neutralization or scrubbing system in the cylinder filling and storage area for toxic and corrosive gases. ○ Single person will never be allowed to handle chlorine gas.
Sulphur Monochloride	<ul style="list-style-type: none"> ○ Label properly and store in a cool, dry and dark location in a tightly sealed container. ○ Keep containers away from heat, metals, rubber and plastics. ○ Keep containers separated to avoid contact with water and incompatibles such as oxidizing agents. ○ Protect container from physical damage and keep container under fume hood.

		<ul style="list-style-type: none"> ○ Do not store in unlabelled containers. ○ Installation of explosion proof electrical service in storage areas. ○ Transfer of chemical by mechanical seal pump with flame proof motor through fixed pipeline as far as possible. ○ Avoid all possible sources of ignition. ○ Availability of safe handling procedure for storage. ○ Availability of MSDS. 	
	Chloroacetyl Chloride	<ul style="list-style-type: none"> ○ Label properly and store in a cool, well-ventilated and fire-resistant area in a tightly closed container. ○ Container must be equipped with a pressure-relief valve. ○ Keep containers away from heat and sources of ignition. ○ Do not store above 25 OC. ○ Keep containers separated to avoid contact with water and incompatibles such as oxidizing agents and alkalis since violent reaction can occur in case of contact. ○ Transfer of chemical by mechanical seal pump through fixed pipeline as far as possible. ○ Installation of explosion proof electrical service in storage areas. ○ Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Empty containers retain product residue and can be hazardous. Do not reuse container. ○ Avoid all possible sources of ignition. ○ Availability of safe handling procedure for storage. ○ Availability of MSDS. 	
	Sulphur trioxide	<ul style="list-style-type: none"> ○ Label properly and store in a cool, dry, well-ventilated and fire-resistant area in a tightly closed container. ○ Sulfur trioxide is moisture sensitive. Keep containers away from heat, moisture, any sources of ignition, direct sunlight or strong incandescent light. ○ Keep containers separated to avoid contact with water as it reacts violently with water and incompatibles such as oxidizing agents, metal and alkalis . ○ Store at around 20°C and in a suitable container in a dry area above the substance's freezing point. Do not freeze. ○ Transfer of chemical by mechanical seal pump through fixed pipeline as far as possible. ○ Installation of explosion proof electrical service in storage areas. ○ Do not store in unlabelled containers. ○ Avoid all possible sources of ignition. ○ Availability of safe handling procedure for storage. ○ Availability of MSDS. 	
	Concentrate Acid	<ul style="list-style-type: none"> ○ The regular checking of Piping System including valves, sight glass etc. and replacement if required. ○ 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 acid containers with containment tray. ○ Provision of emergency transfer arrangements for transferring material into another storage tank. 	

	<ul style="list-style-type: none"> ○ Provision of dykes with acid proof lining around storage tanks to keep the liquid flowing out in case of damage to tank. ○ Provision of roof to protect tank from rain water. ○ Provision for emergency showers and eyewash fountains in the unloading area in case of accidental skin or eye contact. ○ Provision of necessary PPEs like self-breathing apparatus and acid-proof hand-gloves, aprons and gum boots to the trained workers. ○ DCP extinguishers can be used for small fires. ○ Availability of MSDS of all concentrated acids. 	
<p>➤ Applicability of PESO: Yes. Unit already have license from Petroleum & Explosives Safety Organization (PESO) for storage of chlorine gas and will apply for additional storage of chlorine gas and storage of Acetic Acid, under class B.</p> <p>Comments:</p> <p>Committee was of the opinion that the provisions of PESO, licensing, condition compliance, monitoring, fall within the preview of The Petroleum and Explosives Safety Organization (PESO) and SEAC has very limited role in this. Nevertheless SEAC has examined it. The PP has submitted that the list of raw materials/products proposed to be produced along with the quantity, attract the provisions of PESO and they will abide by the requisite legal compliances with reference to storage and safety. SEAC has taken note of it.</p>		
H-2	Types of hazardous Processes involved and its safety measures:	
<p>➤ (Hydrogenation process, Nitration process, Chlorination process, Exothermic Reaction etc.)</p>		
Type of Process	Safety measures including Automation	
Chlorination process	<ul style="list-style-type: none"> ○ Ensure all chlorinator vents are connected with two stage alkali scrubber system to control emission of Cl₂. ○ Ensure quick availability of neutralizing agent / sand buckets in case of accidental leakage of chlorine. ○ Installation of emergency relief valve on the reactor. Activation of audio-visual alarm upon any mishap in the reaction resulting in to increase in temperature and pressure. ○ Ensure the use of Chlorine gas cartridge masks for small leaks and Self-Contained Breathing Apparatus (SCBA) for handling emergency. ○ Availability of safety shower and eye-wash fountains nearby handling and charging facility. ○ Allow only trained persons 	
Sulphonation process	<ul style="list-style-type: none"> ○ Ensure all sulfonator vents are connected with two stage alkali scrubber system to control emission of SO₂ and SO₃ fumes and vapors. ○ Ensure quick availability of neutralizing agent / sand buckets in case of accidental leakage of Sulfuric Acid and Oleum while charging into reactor. ○ Adopt closed loop process while drawing Sulfuric Acid and Oleum from storage tank into measuring vessel into reactor. ○ Ensure slow charging of water in sulfonator to avoid sputtering and 	

- excess heat generation.
- Provision of flushing water (chilled water / ice quenching) circulation in reactor jacket to control runaway reaction.
- Installation of emergency relief valve on the reactor. Activation of audio-visual alarm upon any mishap in the reaction resulting in to increase in temperature and pressure.
- PPEs like full body protection PVC apron, Hand gloves, gumboot, Respiratory mask etc. will be provided to operator at time of nitric acid charging.
- Availability of safety shower and eye-wash fountains nearby handling and charging facility.

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

Total Plot Area:	30,612.7 m ²
Area utilized for plant activity:	8,459.10 m ²
Area utilized for Hazardous Chemicals Storage:	4,754.80 m ²
Number of Floors:	G+3 Floors
Water requirement for firefighting in KLD:	96 KL
Water storage tank provided for firefighting in KLD:	150 KL
Details of Hydrant Pumps:	Main Pump: 900 L/min. Jockey Pump: 100 L/min. Diesel Engine driven Pump: 450 L/min
Nearest Fire Station :	Ankleshwar Fire station
Applicability of Off Site Emergency Plan:	Applicable

Comments:

The project proponent has proposed fire safety plan which includes fire hydrant line, sprinkler system, fire extinguishers, fire suits, covering the project area and provides for fire water storage tank of 150 KL. SEAC found it as per the requirement.

H-4 **Details of Fire NOC/Certificate:**

Unit is covered under The Factories Act, 1984. Hence, as per Notification by Urban Development and Urban Housing Department Sachivalay, Gandhinagar Dated 08/07/2021 unit does not require Fire NOC/Certificate

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

Number of permanent Employee:	215
Number of Contractual person/Labour:	--
Area provided for OHC:	50 m ²
Number of First Aid Boxes:	2 nos
Nearest General Hospital:	Civil Hospital
Name of Antidotes to be store in plant:	Milk of magnesia, banana, jaggery, glucose etc.

Comments

Project proponent has provided Occupational health center with adequate provision of manpower, equipment and operational cost. SEAC finds it as per the provisions of

Gujarat Factory Rules 1963.

17) DELIBERATION AND RECOMMENDATION:

"On the basis of information provided to SEAC on project, its location, technical, physical and environmental infrastructure, products, quantity to be manufactured, its raw material, storage, waste disposal, water treatment, safety measures, green belt development planning, regulatory compliance assured of related statutory provisions, necessary documents of requisite permissions provided from concerned departments and overall environmental management planning for the project, along with financial resources committed for operation and maintenance, and on the basis of presentation made before SEAC, modification suggested by SEAC and incorporated by project proponent, SEAC finds the project as per the requirement and **unanimously** recommends the same to SEIAA for environmental clearance."

Conditions with which Environment Clearance is recommended:

Construction Phase

- a) "Wind – breaker of appropriate height i.e. 1/3rd of the building height and maximum up to 10 meters shall be provided. Individual building within the project site shall also be provided with barricades.
- b) "No uncovered vehicles carrying construction material and waste shall be permitted."
- c) "No loose soil or sand or construction & demolition waste or any other construction material that cause dust shall be left uncovered. Uniform piling and proper storage of sand to avoid fugitive emissions shall be ensured."
- d) Roads leading to or at construction site must be paved and blacktopped (i.e. – metallic roads).
- e) No excavation of soil shall be carried out without adequate dust mitigation measures in place.
- f) Dust mitigation measure shall be displayed prominently at the construction site for easy public viewing.
- g) Grinding and cutting of building materials in open area shall be prohibited.
- h) Construction material and waste should be stored only within earmarked area and road side storage of construction material and waste shall be prohibited.
- i) Construction and demolition waste processing and disposal site shall be identified and required dust mitigation measures be notified at the site. (If applicable).

SPECIFIC CONDITIONS:

4. 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 air emission as per pollutants emission from 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.

2. Leak Detection and Repair (LDAR) program shall be prepared and implemented as per the CPCB guidelines. LDAR Logbooks shall be maintained.
3. 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.
4. 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.
5. 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.
6. All measures shall be taken to avoid soil and ground water contamination within premises.

7. 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.

WATER

8. Total water requirement for the project shall not exceed 421.6 KLD. Unit shall reuse 8.6 KLD in APCE. Hence, fresh water requirement shall not exceed 405 KLD and it shall be met through GIDC supply only. Prior permission from concerned authority shall be obtained for withdrawal of water.
9. The industrial effluent generation from the project shall not exceed 8.6 KLD after expansion.
10. Management of Industrial effluent shall be as under:

Dilute Stream (8.6 KLD):

- 8.6 KLD industrial effluent generated from scrubber, washing, Cooling tower and Boiler shall be directly reused in APCE.
11. Domestic wastewater generation shall not exceed 8 KL/Day for proposed project and it shall be treated in STP. It shall not be disposed off through soak pit/ septic tank. Unit shall provide buffer water storage tank of adequate capacity for storage of treated waste water during rainy days.
 12. Proper logbooks of reuse/ recycle of treated/ untreated effluent; 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.

AIR:

13. Unit shall not exceed fuel consumption for Boiler, Fluid Bed Dryer and D G Set as per the point no. E-2 as mentioned above.
14. Unit shall provide adequate APCM with flue gas generation sources to achieve the norms prescribed by GPCB.
15. Unit shall provide adequate APCM with process gas generation sources as the point no. E-3 as mentioned above.
16. PP shall use approved fuels only as fuel in boilers.
17. The fugitive emission in the work zone environment shall be monitored. The emission shall conform to the standards prescribed by the concerned authorities from time to time (e.g. Directors of Industrial Safety & Health). Following indicative guidelines shall also be followed to reduce the fugitive emission.
 - Internal roads shall be either concreted or asphalted or paved properly to reduce the fugitive emission during vehicular movement.

- Air borne dust shall be controlled with water sprinklers at suitable locations in the plant.
- A green belt shall be developed all around the plant boundary and also along the roads to mitigate fugitive & transport dust emission.

18. Regular monitoring of Volatile Organic Compounds (VOCs) shall be carried out in the work zone area and ambient air.

19. For control of fugitive emission, VOCs, following steps shall be followed :

- ✓ Closed handling and charging system shall be provided for chemicals.
- ✓ Reflux condenser shall be provided over Reactors / Vessels.
- ✓ Pumps shall be provided with mechanical seals to prevent leakages.
- ✓ Air borne dust at all transfers operations/ points shall be controlled either by spraying water or providing enclosures.

20. Regular monitoring of ground level concentration of PM₁₀, PM_{2.5}, SO₂, NO_x, HCl, Cl₂ and VOCs shall be carried out in the impact zone and its records shall be maintained. Ambient air quality levels shall not exceed the standards stipulated by the GPCB. If at any stage these levels are found to exceed the prescribed limits, necessary additional control measures shall be taken immediately. The location of the stations and frequency of monitoring shall be decided in consultation with the GPCB.

HAZARDOUS / SOLID WASTES:

21. All the hazardous/ solid waste management shall be taken care as per the point no. F-1 as mentioned above.

22. Authorized end-users shall have permissions from the concerned authorities under the Rule 9 of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016.

23. Unit shall explore the possibilities for environment friendly methods like co-processing of hazardous waste for disposal of Incinerable & land fillable wastes before sending to CHWIF & TSDF sites respectively.

24. The project proponent has to obtain membership of TSDF site & CHWIF before obtaining CTO of GPCB.

25. 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

26. The PP shall develop green belt within premises (10,200 Sq. m i.e. 33.32 % 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.

OTHERS:

27. The project proponent shall carry out the activities (Installation of Solar Panels, Water Sanitation, &

Greenbelt Development activities at Village- Ucchali, Kosamadi, Piprod, Avadar, & Ankleshwar INA) proposed under CER and it shall be part of the Environment Management Plan (EMP) as per the MoEF&CC's OM no. F. No. 22-65/2017-IA.III dated 30.09.2020. This shall be monitored and the monitoring report shall be submitted to the regional office of MoEF&CC as a part of half-yearly compliance report and to the District Collector. The monitoring report shall be posted on the website of the project proponent.

28. All the recommendations, mitigation measures, environmental protection measures and safeguards proposed in the EIA report of the project prepared by M/s. Envisafe Environmental Consultants and submitted by the project proponent and commitments made during presentation before SEAC and proposed in the EIA report shall be strictly adhered to in letter and spirit.

COMPLIANCE OF ENVIRONMENT CLEARANCE/REPORTING/ADMINISTRATION/APPEAL:

29. Project proponent shall inform to all the concerned authorities including Municipal Corporation and District Collector and shall also give wide publicity through advertisement in minimum two local newspapers within seven days, about the Environment Clearance order accorded.
30. Project proponent shall appoint a key person in the organization who shall be responsible for compliance of above condition fully on behalf of the proponent. It will not mean that appointing a key person will exempt the project proponent from the responsibility of compliance. Any change in key person shall immediately be informed to SEIAA and all concerned authorities.
31. Designated key person shall submit six monthly compliance report to SEIAA/SEAC, MOEF&CC, GPCB and Nodal Department of the Government.
32. The Nodal Department or any authority or officer authorized by MOEF&CC/SEIAA can inspect the site of the project and all the facilities, for verification of compliances of environment clearance conditions.
33. In case of violation reported upon, the project proponent shall be responsible for all the legal actions as per Environment Protection Act, 1986 including SEIAA may cancel, withdraw or keep in abeyance, the Environment Clearance accorded.
34. Any person including the project proponent affected by this Environment Clearance order may file appeal to Honorable National Green Tribunal West Zone branch, Pune, preferably within a period of thirty days from the date of issue of Environment Clearance as prescribe under section 16 of National Green Tribunal Act 2010.
35. All complains and public grievance or representations may be addressed to SEIAA/SEAC in the email addresses (a) msseiaagj@gmail.com & (b) seacgujarat@gmail.com

Corrigendum / Amendment cases

01	SIA/GJ/IND2/243801/2021	M/s. K B Pharmaceuticals for setting up plant of synthetic organic chemicals at Survey No: 362, Village Neja, Tal-	EC- Amendment
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Khambhat, Dist-Anand, Gujarat-388620.

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

Project status: **EC-Corrigendum**

- I. This is a Greenfield project proposed for manufacturing of “Synthetic Organic Chemicals” for which Environmental Clearance was accorded vide letter no. SEIAA, Gujarat letter No: SEIAA/GUJ/EC/5(f)/1526/2021 DATED: 14.10.2021
- II. Now, project proponent has applied online vide proposal no. SIA/GJ/IND2/243801/2021 for EC-Corrigendum in EC letter no. SEIAA, Gujarat letter No: SEIAA/GUJ/EC/5(f)/1526/2021 Dated: 14.10.2021 in which there is typographical error and details are as under:
- III. Based on the above request for change in EC conditions

Sr. no.	Condition no. in which Amendment is proposed.	As per EC	As per proposed amendment	Justification
1	Address of the company in the EC vide letter no SEIAA/GUJ/EC/5(f)/1526/2021 dated: October 14, 2021	EC has been issued to M/s. K B Pharmaceuticals located at Survey No 62, Village-Neja, Tal-Khambhat-388620, Dist-Anand, Gujarat	Address of the company has to be revised as Survey No 362, Village-Neja, Tal-Khambhat-388620, Dist-Anand, Gujarat	We have intimated SEAC by emailing this error in the minutes of 249 th meeting of SEAC dated: July 28, 2021. But, Mistakenly EC was issued on wrong address.

- IV. Project proponent submitted their presentation with relevant details and this proposal was considered in the SEAC meeting dated **03.02.2022**
- V. During the meeting, Committee noted that there is a typographical error in the address of the company.
- VI. Committee noted that there is typographical error in address of the company. Referring to the online application submitted on Parivesh Portal vide proposal no SIA/GJ/IND2/206681/2021 dated: March 27, 2021, Committee found that this typographical error was inadvertent which was inadvertent.

After detailed deliberation, Committee unanimously decided to recommend grant of EC – Corrigendum to SEIAA, Gujarat with corrigendum in Address of the company which shall be read as follows and remaining condition unchanged in EC granted by SEIAA, Gujarat vide Letter No. SEIAA/GUJ/EC/5(f)/1526/2021 Dated: 14.10.2021,
Address of the company shall now be read as under:

M/s. K B Pharmaceuticals located at Survey No. 362, Village-Neja, Tal-Khambhat-388620, Dist-Anand,

Gujarat.				
02	SIA/GJ/IND3/233533/2021	M/s. P. K. Intermediates Pvt. Ltd. for setting up manufacturing plant of ' Synthetic Organic Chemicals ' at Plot No. C1B-1906, 1907, Panoli GIDC, Tal: Ankleshwar, Dist. – Bharuch – 394 115, Gujarat.		EC- Amendment
Category of the unit: 5 (f)				
Project status: EC-Amendment				
<p>1) This is Brownfield project for manufacturing of “Synthetic Organic Chemicals” for which was accorded Environmental Clearance vide letter no. SEIAA/GUJ/EC/5(f)/1023/2019 Date: 12/07/2019.</p> <p>2) Now, project proponent has applied online vide proposal no. SIA/GJ/IND3/233533/2021 for EC-Amendment in EC letter no. SEIAA/GUJ/EC/5(f)/1023/2019 Date: 12/07/2019 for change in mode of discharge of effluent.</p> <p>3) Based on the above request for change in EC conditions as follows,</p>				
Sr. no.	Condition no. in which Amendment is proposed.	As per EC	As per proposed amendment	Justification
1.	A.2 WATER Condition No: 11	Total water requirement for the project shall not exceed 12.98 KLD. Unit shall recycle 0.2 KLD of treated effluent. Hence, Fresh water requirement shall not exceed 12.78 KLD and it shall be met through GIDC supply only. Prior permission from the concerned authority shall be obtained for withdrawal of water.	Total water requirement for the project shall not exceed 12.98 KLD. Unit shall recycle 4.38 KLD of treated effluent. Hence, Fresh water requirement shall not exceed 8.60 KLD and it shall be met through GIDC supply only. Prior permission from the concerned authority shall be obtained for withdrawal of water.	Unit will STP, cooling reuse & Boiler Condensate recycle after EC Amendment.
2.	A.2 WATER Condition No: 13	The industrial effluent generation from the project after expansion shall not exceed 19.98 KLD.	The industrial effluent generation from the project after expansion shall not exceed 9.78 KLD.	There is error in industrial effluent generation so, we will correct industrial effluent generation details.
3.	A.2 WATER Condition No: 14	After Primary treatment within premises, 0.2 KLD of effluent shall be reused as makeup water for boiler.	Total 4.3 KLD water recycled (Cooling reuse: 1.5 KLD + Boiler Condensate: 1.2 KLD + STP: 1.6 KLD) after EC amendment.	Unit will STP, cooling reuse & Boiler Condensate recycle after EC Amendment.

4.	A.2 WATER Condition No: 15	After Primary treatment within premises, remaining quantity of 9.78 KLD effluent shall be sent to Common Facility of ACPTCL (MEE) and PETL (spray dryer).	<ul style="list-style-type: none"> ➤ Total 11.46 KLD (Industrial: 9.78 KLD + Domestic: 1.68 KLD) of effluent shall be generated. ➤ Stream-I: 4.18 KLD (from process: 3.18 KLD + Scrubbing: 1.0 KLD) will be treated in ETP consist of primary treatment then sent to Common Facility of ACPTCL OR PETL Spray Dryer for further treatment & disposal. ➤ Stream-II: 5.6 KLD (from process: 4.22 KLD + Washing: 0.78 KLD + Utility: 0.6 KLD) will be treated in ETP consist of primary & secondary treatment facility and then sent to Disposed into CETP, PETL for further treatment & disposal. 	Unit has obtained Permission of Discharge in the priority list of GPCB policy and in that priority list GPCB has allotted 5.6 KLD of Discharge into CETP of PETL, Panoli vide letter no. GPCB/RO-ANK/T-205/1550 dated 30/11/2018.
5.	A.2 WATER Condition No: 17	Domestic wastewater generation shall not exceed 1.68 KL/day from project and it shall disposed off to soak pit via septic tank	1.68 KL/Day Domestic waste water will be treatment in STP and then reuse within plant premises.	After EC Amendment domestic waste water will be treatment in STP and then reuse within plant premises.
6.	A.4 SOLID/HAZARDOUS WASTE Condition No: 29	All the Hazardous Waste Management shall be taken care as mentioned below. NOTE: 14 No. of Categories of Hazardous Waste are Mentioned in which Quantity of ETP Sludge is 10.2 MT/Annum	All the Hazardous Waste Management shall be taken care as mentioned below. NOTE: 14 No. of Categories of Hazardous Waste are Mentioned in which Quantity of ETP Sludge to be revised as 56 MT/Annum.	Due to Change in Mode of Discharge ETP Sludge Quantity is Revised.

- 4) PP was called for presentation in the SEAC meeting dated 03.02.2022.
- 5) During the meeting dated 03.02.2022, technical presentation made during the meeting by technical expert of PP, M/s. Aqua Air Environmental Engineers Pvt. Ltd.
- 6) PP presented that they have applied for EC-Amendment for change in mode of discharge of effluent in existing EC.
- 7) PP presented the following documents:
 - ✓ Membership certificate of CETP, PETL Ref No. Ref. No. PETL/312/2022 dated: 01/02/2022
 - ✓ Membership certificate of PETL Common Spray Dryer Ref. No. PETL/311/2022 dated: 01/02/2022

- ✓ Membership certificate of ACPTCL Ref No. ACPTCL/1200003015/2019-20/08 dated: 11/04/2019
- 8) Committee found submission of project proponent satisfactory.
- 9) After detailed deliberation, Committee unanimously decided to recommend grant of EC – Amendment to SEIAA, Gujarat with additional condition as mentioned below and change in “Conditions” as follows and with remaining condition unchanged in EC granted by SEIAA, Gujarat vide Letter No. SEIAA/GUJ/EC/5(f)/1023/2019 Date: 12/07/2019.

A.2 WATER

Condition No. 11 shall now be read as under:

11. Total water requirement for the project shall not exceed 12.98 KLD. Unit shall recycle **4.38 KLD** of treated effluent. Hence, Fresh water requirement shall not exceed 8.60 KLD and it shall be met through GIDC supply only. Prior permission from the concerned authority shall be obtained for withdrawal of water.

Condition No. 13 shall now be read as under:

13. The industrial effluent generation from the project after expansion shall not exceed 9.78 KLD.

Condition No. 14 shall now be read as under:

14. **Total 4.3 KLD water recycled (Cooling reuse: 1.5 KLD + Boiler Condensate: 1.2 KLD + STP: 1.6 KLD) after EC amendment.**

Condition No. 15 shall now be read as under:

15. Total **11.46 KLD** (Industrial: 9.78 KLD + Domestic: 1.68 KLD) of effluent shall be generated.
- **Stream-I: 4.18 KLD** (from process: 3.18 KLD + Scrubbing: 1.0 KLD) will be treated in ETP consist of primary treatment then sent to Common Facility of ACPTCL OR PETL Spray Dryer for further treatment & disposal.
 - **Stream-II: 5.6 KLD** (from process: 4.22 KLD + Washing: 0.78 KLD + Utility: 0.6 KLD) will be treated in ETP consist of primary & secondary treatment facility and then sent to Disposed into CETP, PETL for further treatment & disposal.

Condition No. 17 shall now be read as under:

17. 1.68 KL/Day Domestic waste water will be treatment in STP and then reuse within plant premises.

A.4 SOLID/HAZARDOUS WASTE

Condition No. 29 shall now be read as under:

29. All the Hazardous waste management shall be taken care as mentioned below;

Sr. No.	Type of Waste	Specific Source of generation	Category	Quantity MT/Annunum		Mode of Disposal
				As per Existing EC	After EC Amendment	
1	Used Oil	Plant Machineries	SCH-1/5.1	27 lit/yr	27 lit/yr	Collection storage, transportation and sell to GPCB authorized

						recyclers/ reused in machineries as lubricants.
2	Discarded Containers Drums/ Carboys/Bags	Storage area	SCH-1/33.1	12000 Nos./yr	12000 Nos./yr	Collection, storage, transportation and sell to GPCB authorized vendors.
3	Caustic Lye Dilute	Process (Piperazine recovery)	SCH-1/28.1	1200	1200	Collection, storage, transportation and sent to rule 9 authorized recyclers
4	Spent Solvent	Process	SCH-1/28.6	304	304	Collection, storage, transportation and send to GPCB authorized re-processor.
5	ETP Sludge	ETP	SCH-1/35.3	10.2	56	Collection, Storage, Transportation and send to TSDF site
6	Process Waste (wet cake)	From the manufacturing of 4-Byphenyl carboxylic acid, Disodium phenyl phosphate, 4-Nitrophenyl Phosphate Disodium salt, 2-methyl-6-propyl-5-hexadecanyl hydroquinone	SCH-1/28.1	5.9	5.9	Collection, storage, transportation and send to co-processing/TSDF site.
7	Spent Carbon	From the manufacturing of 4-methyl quinolone (lepidine), 3-chloro-4-methoxy aniline	SCH-1/28.3	0.072	0.072	Collection, storage, transportation and send to GPCB authorized reprocessors or TSDF.
8	Spent catalyst (Raney Nickel)	2, 6 Diamino Mestiline, 2-methyl-6-	SCH-1/28.4	0.16	0.16	Collection, storage, transportation and sent to rule 9 authorized recyclers
9	Piperazine Solution	Benzhydrylpiperazine, 4Chlorobenzhy droppiperazine, N-Benzilpiperazine	SCH-1/28.1	239.54	239.54	Collection, storage and recover in plant premises.
10	Off Specification products	Process batch failure	SCH-1/28.5	10	10	Collection, storage, transportation and disposal by sending it to co-processing.
11	Dil. HCl	Scrubber	SCH-	62.16	62.16	Collection, storage, and

	(30%)		1/28.1			reuse in plant premises (Benzhyl Piperazine and 4-Chloro benzhydryl piprazine, 4-biphenyl carboxylic acid
12	Sodium bisulfite (20%)	Scrubber	SCH-1/28.1	17.97	17.97	Collection, storage, and transportation to spray dryer of PETL/MEE of ACPTCL.
13	Sodium bromide solution (35%)	Scrubber	SCH-1/28.1	17.01	17.01	
14	Distillation Residue	Distillation Residue	SCH-1/20.3	12	12	Collection, storage, transportation and disposal by sending it to co-processing.

NOTE: In table of change in EC conditions due to amendment in EC, we forgot to mentioned Hazardous waste condition 29. Which also be revised due to proposed amendment in change in mode of discharge as quantity of ETP Sludge need to revised. We already have considered change in quantity of ETP Sludge in online Application of EC Amendment vide proposal no. SIA/GJ/IND3/233533/2021 dated 09/10/2021.

03	SIA/GJ/IND3/236048/2021	M/s. Madhav Chemical Industries Plot No.: 3450/B, GIDC Industrial Estate- Ankleshwar, Tal.: Ankleswar, Dist. Bharuch- 393002	EC- Amendment
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Category of the unit: **5 (f)**

Project status: **EC-Amendment**

- 1) This is an existing project involving in manufacturing of "Synthetic Organic Chemicals" [API & its Intermediates] for which was accorded Environmental Clearance vide letter no. SEIAA/GUJ/EC/5(f)/287/2020 Dated: 06/04/2020
- 2) Now, project proponent has applied online vide proposal no. SIA/GJ/IND3/236048/2021 for EC-Amendment in above mentioned EC letter as under:

Sr. no.	Condition no. in which Amendment is proposed.	As per EC	As per proposed amendment	Justification
Detail under The Air Act:				
1.	A3 Air/ Condition no. 23	Sr. No 1: Boiler Capacity: 1.0 TPH Fuel Used: Natural Gas	Sr. No 1: Boiler Capacity: 1.0 TPH Fuel Used:	Earlier: Unit got EC with condition of CPA. There was

		<p>Quantity: 500 NM3/day</p> <p>Air Pollution Control measures: Adequate Stack height</p>	<p>Natural Gas or Bio coal</p> <p>Quantity: 500 NM3/day or 5 MT/Day</p> <p>Air Pollution Control measures: MCS, Bag filter, Scrubber & Adequate Stack height</p>	<p>restriction of single fuel Bio-Coal.</p> <p>Now, SIDC is not falling in CPA vide file no. 22-23/2018-IA.III Dated: 28/01/2021</p> <p>Unit proposed both fuel- Natural gas & bio-Coal In-case of non-availability of any of them, they can switch over to available fuel.</p>
		<p>Sr No 3: Thermic fluid heater</p> <p>Capacity: 2 Lac KCal/Hr.</p> <p>Fuel Used: Natural Gas</p> <p>Quantity: 400 NM3/day</p> <p>Air Pollution Control measures: Adequate Stack height</p>	<p>Sr. No 3: Thermic fluid heater</p> <p>Capacity: 2 Lac KCal/Hr.</p> <p>Fuel Used: Natural Gas or Bio Coal</p> <p>Quantity: 400 NM3/day or 2 MT/Day</p> <p>Air Pollution Control measures: MCS, Bag filter, Scrubber & Adequate Stack height</p>	

Detail under The Hazardous Waste Rules:

2.	A4 Hazard/Condition no. 31	<p>Non-Hazardous Waste Name of Waste: -</p> <p>Quantity: -</p> <p>Specific source of generation: -</p> <p>Category: -</p> <p>Management of HW: -</p>	<p>Non-Hazardous Waste Name of Waste: Fly Ash</p> <p>Quantity: 200 MT/Year</p> <p>Specific source of generation: Boiler & TFH (Bio Coal)</p> <p>Category: -</p> <p>Management of HW: Collection, storage, transportation & send to Brick manufacturer.</p>	<p>Earlier unit proposed only natural gas. Now, unit has also proposed Solid fuel so that there shall be generation of fly Ash.</p>
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- 3) PP was called for presentation in the SEAC meeting dated 03.02.2022.
- 4) During the meeting, technical presentation made by technical expert of PP, M/s. Envycraft Environmental Services and Project Proponent.
- 5) PP presented that they have applied for EC-Amendment for change in type of fuel (addition of Bio coal as alternative fuel).
- 6) PP presented the following documents:
 - ✓ PP requested to add bio coal as fuel along with Natural gas as fuel. PP submitted an undertaking that they will use Natural gas in priority.
 - ✓ PP submitted that additional APCM will be provided with the utilities in case of fuel as bio coal.
 - ✓ PP carried out Air Quality Modelling for proposed solid fuel (Bio Coal)
- 7) Committee insisted to use natural gas as priority fuel, PP agreed to the same.
- 8) Committee found submission of project proponent satisfactory.

- 9) After detailed deliberation, Committee unanimously decided to recommend grant of EC – Amendment to SEIAA, Gujarat with change in “Condition No. 23 & 31” as follows and with remaining condition unchanged in EC granted by SEIAA, Gujarat vide Letter No. SEIAA/GUJ/EC/5(f)/287/2020 dated 06/04/2020.

Condition No. 23 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)
1	Steam Boiler (1 TPH)	30	Natural Gas Or Bio Coal	500 NM3/Day Or 5 MT/Day	SPM SO2 NOx	MCS, Bag Filter, Scrubber and Adequate Stack Height
2	Thermic Fluid Heater (2 LacKcal/Hr)	30	Natural Gas Or Bio Coal	400 NM3/Day Or 2 MT/Day		MCS, Bag Filter, Scrubber and Adequate Stack Height
3	D G Set	11	HSD	15 Lit/Hr		Adequate Stack Height

Condition No. 31 shall now be read as under:

Sr. no.	Type/Name of Other wastes	Specific Source of generation (Name of the Activity, Product etc.)	As per EC Quantity (MT/Annum)	After EC Amendment Quantity (MT/Annum)	Management of Wastes
1	Fly Ash	Solid fuel (Bio Coal)	-	200	Collection, storage, transportation & send to Brick manufacturer.

04	SIA/GJ/IND2/226698/2021	M/s. THERMAX LIMITED Plot No. Z/96/C, Dahej SEZ, Phase-II, Taluka: Vagra, Dist. – Bharuch – 392 130, Gujarat.	EC- Amendment
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Sub: Amendment in Environment Clearance [EC] to **M/s. THERMAX LIMITED** for addition of 8 TPH Briquette of Biomass coal (green fuel) based Boiler, Change in fuel for Existing Boiler, Additional stand by Process Vents for Process Gas Emission in existing Ion Exchange Resins manufacturing unit at **Plot No. Z/96/C, Dahej SEZ, Phase-II, Taluka: Vagra, Dist. – Bharuch – 392 130, Gujarat.**

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

Project status: **EC-Amendment**

10) This is brownfield project for manufacturing of “Synthetic Organic Chemicals” [Ion Exchange Resins] for which was accorded Environmental Clearance vide letter no. SEIAA/GUJ/EC/5(f)/163/2016 Date: 24.02.2016.

11) Now, project proponent has applied online vide proposal no. SIA/GJ/IND2/226698/2021 for EC-Amendment in EC letter no. SEIAA/GUJ/EC/5(f)/163/2016 Date: 24.02.2016 for addition of 8 TPH Briquette of Biomass coal (green fuel) based Boiler, Change in fuel for Existing Boiler, Additional stand by Process Vents for Process Gas Emission.

12) Based on the above request for change in EC conditions as follows,

Sr. no.	Condition no. in which changes proposed.	As per EC	As per proposed amendment	Justification
1	A.1 Specific Condition Point No: 5	Entire quantity of HCl (30%) – 2604 MT/Annum shall be consumed in house and in no case, it shall be sold out.	Entire quantity of HCl (30%) – 1000 MT/Annum shall be consumed in house and in no case, it shall be sold out.	Process improvement resulted in to less generation of HCl. Unit have installed vertical condenser in the upstream of the reactor, where in HCl generated in the reaction is condensed back and utilize in the reaction further lead to less loss of HCl. CCA for which is already obtained vide CCA Amendment No. H-114153 dated August 19, 2021 valid up to June 27, 2022
2	A.3 Air Point No: 18	Natural gas (12000 SCM/day) or FO (10.56 MT/day) shall be used for two steam Boilers (capacity 8 TPH each).	Natural gas (12000 SCM/day) or HSD (10.56 MT/day) shall be used for two steam Boilers (capacity 4 TPH each).	Unit will not use FO as a fuel in boiler, in case of non-availability of the natural gas, unit will be using HSD as a fuel after EC amendment. There will be no increase in pollution load.
3	A.3 Air Point No: 22	Water scrubber shall be provided with chloromethylation process (Anion plant) to control traces of HCl.	Water scrubber/ Alkali Scrubber shall be provided with chloromethylation process (Anion plant) to control traces of HCl. Proposed: One Stand by system	Please note that there is no change in the proposed scrubbing system attached with process vent. Existing scrubbing system suffice the requirements for scrubbing the gases generated during the process. As a part of the pollution prevention, we proposed stand by scrubbing system same as existing.
4	A.3 Air Point No: 23	Water scrubber shall be provided with Amination process (Anion plant) to control traces of Amines. The process vent of Amination process shall be connected to secondary carbon	Water scrubber shall be provided with Amination process (Anion plant) to control traces of Amines. The process vent of Amination process shall be connected to secondary carbon absorber to remove traces of VOC.	Scrubbers are one of the primary devices that control gaseous emissions generating during process. Various scrubber media using to scrub the gases. Installation of standby

		absorber to remove traces of VOC.	Proposed: One Stand by system	scrubber system will benefit to the environment as follows:
5	A.3 Air Point No: 24	Separate Alkaline scrubbers to be provided with Sulphonation and Dilution process (Cation plant) to control acidic fumes.	Separate Alkaline scrubbers to be provided with Sulphonation and Dilution process (Cation plant) to control acidic fumes. Proposed: One Stand by system for each vent	<ul style="list-style-type: none"> • Backup: The system will be used when primary devices fails. • Emergency: In case of an emergency, the standby system will be taken in line to prevent pollution. • Secondary: Use and maintain as a secondary system in case of primary devise not performing to control of Environmental Pollution. • Supplementary: Pollution prevention system enhancing by installation of supplementary system and will be made in operation as & when require. • To ensure the smooth operation of the standby system, we will make a plan to use the system regularly i.e. Change over the system every fortnightly
6	A.3 Air Point No: 25	Water scrubber shall be provided with polymerization process (Polymer plant) to control organic fumes. The process vent of polymerization process shall be connected to secondary carbon absorb1er to remove traces of VOC.	Water scrubber shall be provided with polymerization process (Polymer plant) to control organic fumes. The process vent of polymerization process shall be connected to secondary carbon absorb1er to remove traces of VOC. Proposed: One Stand by system	
7	A.3 Air Point No: 26	Water scrubber shall be provided with acid storage tanks to control acidic fumes.	Water scrubber / Alkali scrubber shall be provided with acid storage tanks to control acidic fumes. Proposed: One Stand by system	
8	A.3 Air Point No: 39	There shall be no generation of used solvents from the manufacturing process.	Spent Solvent @ 1600 MT/Year shall be generated and Collected Stored, Transported, disposed by selling to authorized recycler/purifiers/ distillers/Reusers having permission under rule-9 of HOW-2016.	Due to improvement in process, we have been using Methanol in the existing washing process. We will now be able to recover this methanol and shall be reused in the process. While recovering process, low boiling solvent will also be generated. This low boiling solvent cannot be reused in the process as it affects product quality. We have made a MOU with various vendors for safe disposal of these solvents. CCA for which is already obtained vide CCA Amendment No. H-114153 dated August 19, 2021 valid up to June 27, 2022
9	A.4 Solid/ Hazardous Waste Point No. 45	ETP waste shall be disposed of at the Common TSDF site.	ETP waste shall be sent to GPCB Authorized TSDF/ send to authorized Pre-processor / Co-processor.	In Case of BEIL is unable to accept our hazardous waste then we can dispose our hazardous waste considering other mode of disposal CCA for which is already obtained vide CCA Amendment

				No. H-114153 dated August 19, 2021 valid up to June 27, 2022
10	A.4 Solid/Hazardous Waste Point No. 46	Off specification resin and any other chemical contaminated waste material shall be sent to authorize CHWIF.	Off specification resin and any other chemical contaminated waste material shall be sent to authorize CHWIF / Send to authorized pre-processor / co-process.	All possible efforts shall be made for co-processing of the Hazardous waste prior to disposal in to TSDF/CHWIF CCA for which is already obtained vide CCA Amendment No. H-114153 dated August 19, 2021 valid up to June 27, 2022
11		Details of Boilers & Fly Ash not mentioned in Earlier Environmental Clearance of 2016.	1 No. of Additional Boiler (8 TPH) based on Briquette of Biomass coal Quantity: 2085 Kg/Hr Fly Ash to be generated from Briquette of Biomass coal-based Boiler (10 MT/Day)	A briquette of biomass coal plant is an ideal replacement to the traditional types of fuel which are highly dangerous to the environment. <ul style="list-style-type: none"> • It is a renewable source of energy that can replace the conventional fuel. • It is the source greener and cheaper as compared to other sources and it easy to use. • The multiple benefits of this plant are contemplating industries to switch to this cheaper and safer source of energy. <p><u>What is the briquetting process?</u> The briquetting process is a process in which a briquetting plant is used to create combustible blocks from different materials, like cotton stalk, bagasse, almond shells, cumin waste, rice husk, tea husk, saw dust, etc. These blocks can be used as cooking fuel, heat or generate electricity. As no binder is used in the entire briquetting process, the briquette blocks are completely clean and green, making it perfect for use in open fires, furnaces and boilers.</p> <p><u>What are the benefits of using briquettes over conventional fuels?</u> There are multiple benefits of using briquettes over other non-renewable sources of energy. Some of the most beneficial ones are-</p>

				<p>Pollution-less: Briquettes are cleaner and greener source of energy. They produce little or no smoke, soot or carbon deposits when they burn, and no harmful gases or chemicals are emitted in their burning process.</p> <p>Easy to Store: Compact shape and size allow to use and store them easily.</p> <p>Efficiency: Briquettes burn slowly in a controlled manner. They have a low amount of moisture and density, which allows it to burn at intense temperatures.</p> <p>Cheap: Briquettes of Biomass coal are cheaper than other energy sources, like fuel oil, propane and natural gas. While coal is a little cheaper than briquettes, the latter has many more benefits as compared to the former.</p> <p>Has good thermal calorific value Prevents deforestation and helps to conserve natural resources. Generated Fly Ash will be Collected, Stored, and utilize as per Fly ash Notification. Please refer Annexure – B for Comparative Statement of Natural gas and Briquette of Biomass Coal.</p>
12		CER Activities not mentioned in Earlier Environmental Clearance of 2016.	Expected Additional Cost of the Project is Rs. 18.15 Cr. 1% of Additional Project Cost will be spent for CER Activities i.e. Rs. 1815000/-	<p>At Luvara Village:</p> <ul style="list-style-type: none"> • Increasing the depth of pond & improving beautification of surrounding pond area by providing fencing • Education Purpose as per Requirement • Skill Development • Sanitation <p>Letter for the same is submitted</p>

Annexure – B

Please note that existing process does not require additional heat. We are proposing one boiler having capacity @ 8 MT based on the Briquette Biomass coal fuel. The existing & proposed boiler require for heat energy is as follows:

Existing as per EC / CCA			Proposed		
Boiler	Capacity	Fuel quantity	Boiler Capacity	Fuel quantity	Remark
Boiler based on natural gas.	8 MT	Natural Gas (12000 Scm/day) / FO (10560 kg/day)	No Change (8 MT)	Natural Gas (12000 Scm/day) / HSD (10560 kg/day)	Boiler 1 will be used as a Standby
	8 MT* (Stand by)	Natural Gas (12000 Scm/day) / FO (10560 kg/day)	To be removed from the plant		
Boiler based on Briquette Biomass coal fuel	NIL		8 MT	50040 kg/Day	We will be using the boiler for the heat requirement for process.

* - As per Existing EC Letter No. SEIAA/GUJ/EC/5(f)/163/2016 dated 24/02/2016, as per Condition A.3 Air, Condition No. 18, it states that Natural Gas (12000 SCM/day) or FO (10.56 MT/day) shall be used for 2 Steam Boilers (Cap. 8 TPH each), but as per our application it was 1 Operational and 1 Stand by.

As per our Valid CCA No. AWH-88873 dated 28/11/2017 valid up to 27/06/2022, we have obtained 1 Operational and 1 Stand by for Steam Boilers of Cap. 8 TPH each and fuel quantity have been obtained as desired i.e. Natural Gas (12000 SCM/day) or FO (10.56 MT/day) for each boiler.

Conclusion:

No additional heat requires for the existing process. We proposed one boiler having capacity @ 8 MT based on Briquette Biomass Coal fuel.

After obtaining the approval, we will install the Briquette Biomass Coal fuel boiler. After successfully commissioning we will remove one 8 TPH boiler based on Natural Gas.

Finally, we have: 8 TPH Boiler based on the Briquette Biomass Coal fuel + 8 TPH Boiler based on the Natural gas (Standby)

Comparison of CO2 generation from Natural Gas & Briquette Biomass coal fuel

Fuel	Natural Gas Existing (As per EC & Valid CCA)	Briquette Biomass coal Proposed
Fuel consumption / Day	12000 SCM*	50 Ton
CO2 emission kg / Day	22680 kg (12000 x 1.89 emission factor)	Nil ** Being a carbon neutral fuel
CO2 emission Tons / Day	22.680	
CO2 emission Ton / year (335 days)	7597.8	

Note: *As per existing EC: Natural gas (12000 SCM/day) or FO (10.56 MT/day) shall be used for two boilers (Cap. 8 TPH each).

As per CCA: Boiler 2 nos. (Capacity: 8 Ton / hr each) (1 stand by). Fuel: Natural gas @ 12000 scm/day or FO

@ 10560 kg/day.

The above summarized for proposal:

1	Boiler 1 (Capacity 4 TPH x 2)	Natural Gas or HSD	12000 Scm/day or 10560 kg/day
	Boiler 2 (Proposed) (Capacity: 8 TPH)	or Biomass Briquette Coal	or 2085 Kg/Hr (50040 kg/Day)

CO2 Emission Nil from Biomass Briquettes:

**Biomass is carbon neutral fuel. Reference - <https://www.eia.gov/energyexplained/biomass/biomass-and-the-environment.php>

Reduction in CO2 emission from existing level for Thermax

Total CO2 emission for Thermax Limited: 44926 tCo2e / Year

Reduction in CO2 emission / Year for Thermax limited: 11231 tCo2e / Year (25 %)

Total CO2 emission for Chemical Division: 19606 tCo2e / Year

Target for Chemical Division for reduction of CO2 emission / Year: 7842 tCo2e / Year (40%)

Targeted reduction in emission of CO2 because of briquette Biomass coal: 3757 tCo2e / Year

Advantages of Briquette of Biomass Coal fired Boiler:

- Briquette of Biomass Coal is always and widely available as a renewable source of energy. ...
- It is carbon neutral.
- It reduces the overreliance of fossil fuels.
- Biomass production adds a revenue source for manufacturers.
- Less garbage in landfills.

Carbon Neutrality

- The amount of carbon that is released into the atmosphere is a major contributor to climate change. Biomass reduces this because the fuel is a natural part of the carbon cycle, unlike oil and other fossil fuels.
- The only carbon that is released into the atmosphere from biomass fuels is what was absorbed by the plants during their lifecycles.
- As these plants are replenished, the new ones then absorb the same amount of carbon again, creating a neutrality that sees no new carbon created. This makes biomass fuels exceptionally clean.

Less Dependency on Fossil Fuels

- The more we use biomass energy, the less we need to depend on the fossil fuels that are major contributors to climate change and other environmental issues.
- The abundance of biomass materials available also far outweighs that of fossil fuels, making it a more readily available fuel source.
- Better yet, if non-renewable materials, such as oil, aren't being used for fuel, the limited supplies that we have can be used elsewhere.

It Reduces Waste

- A lot of the waste that we produce is biodegradable and plant matter, which could be put to more

efficient use elsewhere.

- Biomass energy is often able to make use of the waste that would often sit and fester in landfills. This reduces the effects that such sites have on the natural environment, which are particularly pronounced regarding contaminating local habitats and damaging wildlife.
- This reduction in waste also opens more areas for humans to live in, as less space is needed to create landfills.

The fundamental difference between energy supply from fossil fuels and from biomass:

Comparison between Fossil Fuel and Biomass Fuel

PARTICULARS	FOSSIL FUEL	BIOMASS FUEL
Description	Fossil Fuel - A fossil fuel is a fuel formed by natural processes, such as anaerobic decomposition of buried dead organisms	Biomass Fuel - Biomass is a renewable fuel such as agricultural residue, Industrial waste, waste generated from grasslands and forest, municipal waste etc.
Nature of Fuel	Non-Renewable, Carbon dependent	Renewable, Carbon Neutral
Type of Fuel	1. Petroleum 2. Coal 3. Natural Gas	1. Agricultural Waste 2. Industrial Waste 3. Forest Waste which can be utilized in loose form and densified form (by briquetting/ pelleting)
Source of Fuel	These are buried combustible geologic deposits of organic materials which have been converted to crude oil, coal, natural gas, or heavy oils by exposure to heat and pressure.	Biomass is generated from crop residues, industrial & forest waste like Saw dust, Rice husk, GN shell, kernels etc.
Release of Carbon	Burning fossil fuels releases carbon that has been locked up in the ground for millions of years. Fossil fuel use increases the total amount of carbon in the biosphere-atmosphere system while bioenergy systems operates within this system; biosphere-atmosphere	Burning biomass emits carbon that is part of the biogenic carbon cycle. biomass combustion simply returns to the atmosphere the carbon that was absorbed as the plants grew. In the biogenic carbon cycle, the carbon cycles between the plants and atmosphere. It centers on the ability of plants to absorb and store carbon. The cycle is relatively fast, usually in the range of a few years to a few decades

Thus, although both fossil fuels and biomass fuels release CO₂ on combustion, the burning of fossil fuels has a longstanding impact on our climate, one that is much more significant than the combustion of biomass, which is part of the short-term biogenic carbon cycle.

Merits of Biomass as a Fuel It is recommended to use biomass arising out of the biomass residues for consumption as fuel on account of the following advantages:

1. Renewable biomass is globally considered as a clean and carbon neutral fuel.
2. For annual crops, the Intergovernmental Panel on Climate Change (IPCC) Guidelines assumes that while biomass carbon stock is lost through harvest and mortality, an equal amount of biomass carbon stock is obtained through regrowth in that same year and hence there is no net CO₂ emissions from biomass

carbon stock changes.

3. Use of biomass residues in project activities like use in boiler as fuel etc. also has a favorable economic impact. The collection of the biomass residue is a source of income to the local farmers and community at large. Apart from escalated energy costs to the industry, alternatives like use of PNG as fuel will have adverse economic impact on farmers and related communities.
 4. Absence of collection of biomass from fields and its productive use as aforesaid will result in either decay or its burning in open fields creating uncontrolled emissions. Consuming the same biomass in boiler by complying with all local emission norms is a preferred alternative.
 - 5 Presently all countries under Paris Agreement including India are committed to limit global temperature rise during this century to maximum 2°C above pre-industrial levels and are pursuing further to limit this temperature rise to 1.5°C. This will be clearly possible when companies use more renewable fuels by reducing the dependence on non-renewable fossil fuels.
 6. To achieve this goal, companies have already committed themselves to use carbon neutral fuel by supporting local farmer community and report themselves as sustainable company in the world.
 7. Hence it is recommended to promote use of biomass as clean fuel in industry applications in place of fossil fuels.
- 13) PP was called for presentation in the SEAC meeting dated 22.10.2021.
 - 14) During the meeting dated 22.10.2021, technical presentation made during the meeting by technical expert of PP, M/s. Aqua-Air Environmental Engineers Pvt. Ltd., Surat and Project Proponent.
 - 15) PP presented that they have applied for EC-Amendment addition of 8 TPH Briquette of Biomass coal (green fuel) based Boiler, change in fuel for Existing Boiler, Additional stand by Process Vents for Process Gas Emission mentioned in earlier EC order.
 - 16) PP presented the following documents:
 - ✓ Change in Fuel for Existing Boiler with mentioning that HSD (10.56 MT/Day) will be used instead of FO (10.56 MT/Day).
 - ✓ Addition of 8 TPH Briquettes of Biomass Coal based Boiler mentioning proper justification for usage of Briquettes of Biomass Coal instead of Natural Gas. Also given the Gas Dispersion Modelling details for additional new boiler.
 - ✓ Provision of Additional Stand by Process Vents for Process Gas Emission
 - ✓ Technical expert of PP presented that unit have already obtained Amendment in CCA vide letter No. H-114153 dated August 19, 2021 valid up to June 27, 2022 for proper disposal of Hazardous waste such as ETP waste, off specification resin and any other chemical contaminated waste material and also change in quantities of 30% HCl & Spent Solvent generation.
 - 17) Committee found that there are changes in scrubbing system attached to process vents and there is an additional heat requirement for the project without change in product profile which needs technical justification. Upon asking the same, PP as well as their technical expert could no reply satisfactory.

18) **After detailed discussion, Committee unanimously decided to consider the proposal in the upcoming SEAC meeting only after satisfactory submission of the following:**

1. Technical justification with relevant documents for proposed amendment in scrubbing system attached with Process vents and additional heat energy requirement without change in product profile.

19) PP was called for reconsideration presentation in the SEAC meeting dated 03.02.2022.

20) Committee found submission of project proponent satisfactory.

21) **After detailed deliberation, Committee unanimously decided to recommend grant of EC – Amendment to SEIAA, Gujarat with additional condition as mentioned below and change in “Conditions” as follows and with remaining condition unchanged in EC granted by SEIAA, Gujarat vide Letter No. SEIAA/GUJ/EC/5(f)/163/2016 Date: 24.02.2016.**

A.1 Specific Condition Point No: 5 shall now be read as under:

5. Entire quantity of HCl (30%) – **1000 MT/Annum** shall be consumed in house and in no case, it shall be sold out.

A.3 Air Point No: 18 shall now be read as under:

18. Natural gas (12000 SCM/day) or **HSD (10.56 MT/day)** shall be used for two steam Boilers (capacity 4 TPH each).

A.3 Air Point No: 22 shall now be read as under:

22. Water scrubber/Alkali Scrubber shall be provided with chloromethylation process (Anion plant) to control traces of HCl. **Proposed: One Stand by system**

A.3 Air Point No: 23 shall now be read as under:

23. Water scrubber shall be provided with Amination process (Anion plant) to control traces of Amines. The process vent of Amination process shall be connected to secondary carbon absorber to remove traces of VOC. **Proposed: One Stand by system**

A.3 Air Point No: 24 shall now be read as under:

24. Separate Alkaline scrubbers to be provided with Sulphonation and Dilution process (Cation plant) to control acidic fumes. **Proposed: One Stand by system for each vent**

A.3 Air Point No: 25 shall now be read as under:

25. Water scrubber shall be provided with polymerization process (Polymer plant) to control organic fumes. The process vent of polymerization process shall be connected to secondary carbon absorber to remove traces of VOC. **Proposed: One Stand by system**

A.3 Air Point No: 26 shall now be read as under:

26. Water scrubber / Alkali scrubber shall be provided with acid storage tanks to control acidic fumes. **Proposed: One Stand by system**

A.3 Air Point No: 39 shall now be read as under:

39. **Spent Solvent @ 1600 MT/Year shall be generated and Collected Stored, Transported, disposed by selling to authorized recycler/purifiers/ distillers/Reusers having permission under rule-9 of**

HOW-2016.**A.4 Solid/ Hazardous Waste Point No. 45 shall now be read as under:**

45. ETP waste shall be sent to **GPCB Authorized TSDF/ send to authorized Pre-processor / Co-processor.**

A.4 Solid/ Hazardous Waste Point No. 46 shall now be read as under:

46. Off specification resin and any other chemical contaminated waste material shall be sent to **authorize CHWIF / Send to authorized pre-processor / co-process.**

New Conditions to be added:

A. 1 No. of Additional Boiler (8 TPH) based on Briquette of Biomass coal Quantity: 2085 Kg/Hr. Fly Ash to be generated from Briquette of Biomass coal-based Boiler (10 MT/Day)

B. Expected Additional Cost of the Project is Rs. 18.15 Cr. 1% of Additional Project Cost will be spent for CER Activities i.e. Rs. 1815000/-

05	SIA/GJ/IND2/241009/2021	NEOCHEM INDUSTRIES for setting up manufacturing plant of ' Synthetic Organic Chemicals ' at Plot No. C1B-89/22, 86C+86C Phase-I, Vatva, Ahmedabad.	EC- Amendment
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Category of the unit: **5 (f)**

Project status: **EC-Amendment**

This is an expansion project for manufacturing of "Synthetic Organic Chemicals" for which was accorded Environmental Clearance vide letter no. SEIAA/GUJ/EC/5(f)/717/2019 Date: 04-05-2019

Now, project proponent has applied online vide proposal no. SIA/GJ/IND2/241009/2021 for EC-Amendment in in EC letter no. SEIAA/GUJ/EC/5(f)/717/2019 Date: 04-05-2019 to ADD adjoining additional plot without change in product capacity and no increase in pollution potential

Based on the above request for change in EC conditions as follows,

Sr. no.	Condition no.in which changes proposed.	As per EC	As per proposed amendment	Justification

1.	Location address of the project	C1B-89/22, Phase-I, GIDC Vatva, Ahmedabad	C1B-89/22, 86C+86C Phase-I, GIDC Vatva, Ahmedabad	The project proponent has purchased adjoining plot (Plot No 86C+86C) and proposal is for add this adjoining plot having area of 998 square meter in existing Environment Clearance. This proposal is for only add adjoining plot without change in product profile and after adding pollution potential remain unchanged which envisage in earlier Environment Clearance. There will be no change in utility. The manufacturing activity, raw material storage, finished good storage area, spray dryer and utility will be distributed in both the plots for easy movement of working by increasing working space.
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PP was called for presentation in the SEAC meeting dated 03-02-2022.

During the meeting, technical presentation made during the meeting by technical expert of PP, M/s. SATVA ENVIRON CONSULTANCY and Project Proponent.

PP presented that they have applied for EC-Amendment to ADD adjoining additional plot without change in product capacity and no increase in pollution potential.

- ✓ The company has Purchase additional adjoining Plot no. 86C + 86C having area of 998 Sq.m and intent to add this plot number in existing environment clearance without increase in production and no change in product profile as per existing environment clearance.
- ✓ Technical expert of PP presented this unit is in Vatva GIDC and this proposal is for providing better work environment as after this addition of plot, machineries, raw material storage, utility will be distributed in both the plot.
- ✓ Technical expert of PP presented that there will be no change in water consumption, wastewater generation, air emission and hazardous waste matrix.
- ✓ Technical expert of PP also convey that they have submitted notarized undertaking mentioning NO INCREASE IN POLLUTION POTENTIAL and also submitted Risk Assessment report incorporating both the plot.
- ✓ The unit has proposed 33% green belt area (657 square meter) within plant premises and also provide 200 KL water storage tank dedicated for fire fighting
- ✓ The unit has also proposed CER incorporating under EMP considering additional cost and proposed to Installation of RO System having capacity of 100 LPH with 10 KL capacity of water tank and paver work at Primary School, Vinzol
- ✓ The PP shall develop green belt [657 m² (33%) inside plant premises of 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.

- ✓ The project proponent shall carry out the activities (Installation of RO System having capacity of 100 LPH with 10 KL capacity of water tank and paver work at Primary School, Vinzol) proposed under CER and it shall be part of the Environment Management Plan (EMP) as per the MoEF&CC's OM no. F. No. 22-65/2017-IA.III dated 30.09.2020. This shall be monitored and the monitoring report shall be submitted to the regional office of MoEF&CC as a part of half-yearly compliance report and to the District Collector. The monitoring report shall be posted on the website of the project proponent

PP presented the following documents:

- ✓ Notarized Undertaking for No change in product profile and no increase in pollution potential after adding this adjoining plot
- ✓ Risk Assessment Report incorporating both the plot

Committee found submission of project proponent satisfactory and ask for notarized undertaking for no addition in pollution potential and no change in existing product profile. PP later on submitted in notarized undertaking incorporating all the details

After detailed deliberation, Committee unanimously decided to recommend grant of EC – Amendment to SEIAA, Gujarat with change in “Address of Project” as follows and with remaining condition unchanged in EC granted by SEIAA, Gujarat vide Letter No. SEIAA/GUJ/EC/5(F)/717/2019 Date: 04-05-2019.

The location of the project shall now be read as under:

Sr. no.	Condition no.in which changes proposed.	As per Earlier EC	After amendment
1.	Location address of the project	Plot No. C1B-89/22, Phase- I, GIDC Vatva, Ahmedabad	Plot No. C1B-89/22, Plot no. 86C + 86C Phase- I, GIDC Vatva, Ahmedabad

06	SIA/GJ/IND3/241358/2021	M/s. Green Leaf Chem Tech Pvt. Ltd. Plot No. D2-CH-231, Dahej Industrial Estate, Dahej-2, Tal. Vagra, Dist-Bharuch. Gujarat, India.	EC- Amendment
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Category of the unit: **5 (f)**

Project status: **EC-Amendment**

This is Greenfield project for manufacturing of "Synthetic Organic Chemicals" [API & its Intermediates] for which was accorded Environmental Clearance vide letter no. **SEIAA/GUJ/EC/5(f)/1420/2020** Date: 12.11.2020.

Now, project proponent has applied online vide proposal no. SIA/GJ/IND3/241358/2021 for EC-Amendment in EC letter no. **SEIAA/GUJ/EC/5(f)/1420/2020** Date: 12.11.2020 for change in the quantity of ALCL₃ Solution in hazardous waste management & disposal and correction in sources of process gas generation

Based on the above request for change in EC conditions as follows,

Sr. no.	Condition no. in which changes proposed.	As per EC	As per proposed amendment	Justification
1.	SEIAA/GUJ/EC/5(f)/1420/2020 - A.3. AIR (19)	Unit shall provide adequate APCM with process gas generation sources as mentioned Note: Specific Source of emission (Name of the Product): Sr. No. 3. Process Vent (Product No. 13)	Unit shall provide adequate APCM with process gas generation sources as mentioned Note: Specific Source of emission (Name of the Product & Process): Sr. No. 3. Process Vent-3 [Product No. 53; Name of Product: 4-(3,5-bis(2-hydroxyphenyl)-1,2,4-triazol-1-yl)benzoic acid]	There is a typographical mistake in the Specific Source of emission, Process Vent-3 (HCl + SO ₂) from Product no. 13. However, the Source of emission, Process Vent-3 (HCl + SO ₂) from Product no. 53 (Product Name- 4-(3,5-bis(2-hydroxyphenyl)-1,2,4-triazol-1-yl)benzoic acid]. There will be no change in pollution load.
2.	SEIAA/GUJ/EC/5(f)/1420/2020 - A.4. Solid/Hazardous Waste (25)	All the Hazardous waste management shall be taken care mentioned below, Note:- Sr. No. 21. Categories of Hazardous waste will be generated ALCL ₃ Solution @ 2153 MT/Annum.	All the Hazardous waste management shall be taken care mentioned below, Note:- Sr. No. 21. Categories of Hazardous waste will be generated ALCL ₃ Solution @ 25841 MT/Annum.	There is calculation error in Hazardous waste management for ALCL ₃ Solution. By the mistake the quantity we have write quantity of ALCL ₃ in 2153 MT/Month. Hence, After Amendment in Hazardous waste management the total Hazardous waste quantity of ALCL ₃ is 25,841 MT/Annum. There will be no change in pollution load. Other

				quantities of Hazardous waste will remain same.
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PP was called for presentation in the SEAC meeting dated 03.02.2022.

During the meeting dated 03.02.2022, technical presentation made during the meeting by technical expert of PP, M/s. Aqua Air Environmental Engineers Pvt. Ltd.

PP presented that they have applied for EC-Amendment for change in the quantity of $ALCL_3$ Solution in hazardous waste management & disposal and correction in sources of process gas generation mentioned in earlier EC order.

PP presented the following documents:

- ✓ Project Proponent has submitted the change in source of emission in Process vent-3.
- ✓ Project Proponent has submitted the change in quantity of $ALCL_3$ along with Technical justification regarding addition of spent aluminum chloride generation with mass balance and chemical reaction.

Committee found submission of project proponent satisfactory.

After detailed deliberation, Committee unanimously decided to recommend grant of EC – Amendment to SEIAA, Gujarat with additional condition as mentioned below and change in “Conditions” as follows and with remaining condition unchanged in EC granted by SEIAA, Gujarat vide Letter No. SEIAA/GUJ/EC/5(f)/1420/2020 Date:12.11.2020.

Condition No. 19 shall now be read as under:

19. Unit shall provide adequate APCM with process gas generation sources as mentioned

Sr. no.	Specific Source of emission (Name of the Product & Process)	Type of emission	Stack/Vent Height (meter)	Air Pollution Control Measures (APCM)
1	Process Vent-1 [Product No. 32; Name of Product - 2 chlor 4 fluoro 5 nitro benzyl chloride]	HCl & CL ₂	11	Two Stage Water + Alkali Scrubber
2	Process Vent-2 [Product No. 9; Name of Product - N-Bromo Succinamide]	HBr	11	Two Stage Water Scrubber
3	Process Vent-3 [Product No. 53; Name of Product - 4-(3,5-bis(2-hydroxyphenyl)-1,2,4-triazol-1-yl)benzoic acid]	HCl SO ₂	11	Two Stage Water + Alkali Scrubber
4	Process Vent-4 [Product No. 18;	H ₂ S	11	Two Stage Alkali

	Name of Product - 2-Mercapto Benzimidazole]	5-Methoxy			Scrubber
5	Process Vent-5 [Product No. 29; Name of Product - 2-[(4- aminopentyl)(ethyl)amino]ethanol]	NH ₃	11		Two Stage Water Scrubber
6	Process Vent-6 [Product No. 26; Name of Product - Piperonal]	No _x	11		Two Stage Alkali Scrubber

Condition No. 25 shall now be read as under:

25. All the Hazardous waste management shall be taken care mentioned below,

Sr. no.	Type/ Name of Hazardous waste	Specific Source of generation (Name of the Activity, Product etc.)	Category & Schedule as per HW Rules.	Quantity (MT/ Annum)	Management of HW
1	Discarded Drums/Bags	Raw Material and Storage	Sch-I/ 33.1	487	Collection, Storage, Transportation and sell to Register Re-processors after decontamination.
2	Used / Spent Oil	Equipment & Machinery	Sch-I/ 5.1	0.6 KL	Collection, Storage, Transportation and sell to registered recycler.
3	ETP Sludge	ETP	Sch-I/ 35.3	1538	Collection, Storage, Transportation and sent to co-processing / common TSDF.
4	Spent Solvent	Process (From Quetiapine Hemifumarate, Silodosine)	Sch-I/ 28.6	23910	Collection, Storage, Distill inhouse and Reuse within premises or Sale to end user under Rule-9.
5	Distillation Residue	Distillation	Sch-I/ 20.3	210	Collection, Storage, Transportation and sent to co-processing / CHWIF.
6	Organic Residue	Process	Sch-I/ 28.1	751	
7	Spent Catalyst	Process (From Nebivolol Hydrochloride & p Anisyl Acetone)	Sch-I/ 28.2	38	Collection, Storage, Transportation and sell to regenerator under Rule-9.
8	Spent Carbon	Process (From Quetiapine Hemifumarate & Sucralfate Calcium & Tranexamic Acid)	Sch-I/ 28.3	1200	Collection, Storage, Transportation and sent to co-processing / CHWIF.
9	Sodium Sulphate	Process (6-fluoro-2-(oxiran-	Sch-I/ 28.1	8148	Collection, Storage, Transportation and Sale to

		2-yl)3,4-dihydro-2h-chromene)			end user under Rule-9 or send to TSDF site.
10	NABr/HBr Solution (10-30%)	Process (From N-Bromo Succinamide)& Scrubber	Sch-II/ B36	19008 &720	Collection, Storage, Transportation and Sale to end user under Rule-9
11	Spent Monomethyl Amine	Process (From Amlodipine)	Sch-I/ 28.1	19212	Collection, Storage, Transportation and sent for coprocessing / pre processing / CHWIF / end user having permission under rule-9.
12	Hydrochloric acid solution (30%)	Process & Scrubber	Sch-II- Class- B15	5808 & 468	Collection, Storage and reused within premises (3168 Mt/Month from product Meta Chloro Propiophenone) within premises or sell to end users having Rule-9 Permission.
13	Spent Sulphuric Acid (50%)	Process (From (±)5-Amino-3-Iso Butyl Glutaric Acid)	Sch-I/ 28.1	16968	Collection, Storage, Transportation and reused within premises (9425 Mt/Month from product 4,7 Di Chloro Quinoline) within premises or sell to end users having Rule-9 Permission.
14	Data expired or Off Specification Products	From mfg. Process (Batch failure)	Sch-I/ 28.4	90	Collection, Storage, Transportation and Disposal at common incineration site.
15	Fly Ash	Utility	--	720	Collection, Storage, Transportation and sent for co-processing in cement industries / Common TSDF / Brick Manufacturer.
16	Spent Acetic Acid	Process (From Amlodipine)	Sch-I/ 28.1	19740	Collection, Storage, Transportation and reused within premises (1260 Mt/Month from product 5-(aminosulfonyl)-4-chloro- 2-((2-furanylmethyl)amino)) within premises or sell to end users having Rule-9 Permission.
17	Sodium Sulfite Solution	Scrubber	Sch-I/ 28.1	72	Collection, Storage, Transportation and sold to end user having permission under rule-9.
18.	NaHS Solution (30%)	Process & scrubber	Sch-I/ 28.1	463 & 288	Collection, Storage, Transportation and sold to end user having permission under rule-9 or Reuse in plant premises for same products.
19.	Liq. Ammonia(20-	Scrubber	Sch-I/ 28.1	684	Collection, Storage, Transportation and sold to

	25%)				end user having permission under rule-9.
20	Solid Waste (Inorganic Waste)	Process (From Resorcinol)	Sch-I/29.1	364	Collection, Storage, Transportation and dispose to co-processing /TSDf.
21.	ALCL ₃ Solution	Process (From 3-(bromomethyl)-2chloro-4(methylsulfonyl) benzoic Acid)	Sch-I/28.1	25841	Collection, Storage, Transportation and sent for coprocessing / pre-processing / CHWIF / end user having permission under rule-9.
22	Dilute 30% Sodium Nitrate	Scrubber	Sch-I/28.1	180	Collection, Storage, Transportation and sold to end user having permission under rule-9.
23	Caustic Lye (25%)	Process (From 4-Bromo Anisole)	Sch-I/29.1	3768	Collection, Storage, Transportation and reused (3168 Mt/Annum from 1,3 Benzodioxole) within premises or Sale to end user under Rule-9
24	Formic Acid (40%)	Process (From aceclofenac)	Sch-I/29.1	9708	Collection, Storage, Transportation and reused (1668 Mt/Annum from Quetiapine Hemifumarate) within premises or Sale to end user under Rule-9

07	SIA/GJ/IND3/244727/2021	M/s. Gujarat Halogen Petrochem Corporation Sr. No. – 293, Vill.-Lunej, Re. survey no.-348, Vill.- Neja, Tal – Khambhat, Dist – Anand, (Gujarat).	EC- Corrigendum
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Category of the unit: **5(f)**

Project status: **EC-Corrigendum**

This is a existing unit for manufacturing of '**synthetic organic chemicals**' [API & Its Intermediates] for which Environmental Clearance was accorded vide letter no. SEIAA/GUJ/EC/5(f)/1568/2021 dated 18/10/2021

Now, project proponent has applied online vide proposal no. SIA/GJ/IND3/244727/2021 for EC-Corrigendum in EC letter no. SEIAA/GUJ/EC/5(f)/1568/2021 dated 18/10/2021 in which there is typographical error and details are as under:

Based on the above request for change in EC conditions

Sr. no.	Condition no. in which Amendment is proposed.	As per EC	As per proposed amendment	Justification
1	Environmental Clearance on Page no.5 & 6 Section A-2 Condition No. 17	<p>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.</p> <ul style="list-style-type: none"> • <u>High COD and TDS effluent (3.7 KLD)</u> <p>3.70 KLD, High COD and TDS effluent from washing and R & D plant along with 0.80 KLD, RO reject shall be treated in ETP. Then treated effluent shall be sent to CETP of M/s EICL located at Umraya, Ta- Padra, Dist- Vadodara through GPS fitted tanker for further treatment and disposal.</p> <ul style="list-style-type: none"> • <u>Low COD and TDS effluent (3 +12.80 KLD):</u> <p>3 KLD, Low COD effluent from utility shall be treated in</p>	<p>Industrial effluent shall be segregated and it shall be managed as below.</p> <p>3.0 KLD utility effluent shall be treated into two stage RO Plant. About 2.2 KLD R.O. Permeate water shall be reused for industrial purpose.</p> <p>4.5 KLD (0.8 KLD R.O. Reject water + 3.5 KLD Washing & 0.2 KLD R&D) effluent shall be treated into ETP and send to Common ETP of M/s. EICL, Umraya, Padra for further treatment and final disposal.</p> <p>12.8 KLD Scrubbing Media will be reused in plant premises and sell to end user who is having Rule-9 Permission.</p>	Minutes of 241 th meeting of the SEAC held on dated 15/07/2021.

		<p>two stage RO plant. 2.20 KLD, RO permeate shall be reused back in process while 0.8 KLD RO reject shall be evaporated in in-house MEE.</p> <p>12.8 KLD effluent from scrubber shall be selling to end users having Rule-9 permission under Hazardous Waste Rules'2016 and also reused within premises as per Hazardous Waste Rules'2016.</p>		
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Project proponent submitted their presentation with relevant details and this proposal was considered in the SEAC meeting dated **03.02.2022**

During the meeting, Committee noted that there is a typographical error in Section A.2 Water Condition 17.

Committee noted that there is a typographical error in condition no-17 as mentioned above. Referring to the Form-1 and their presentation with relevant documents submitted before SEAC, Committee found that this typographical error was inadvertent. , which was inadvertent.

After detailed deliberation, Committee unanimously decided to recommend grant of EC – Corrigendum to SEIAA, Gujarat with corrigendum in condition no A.2 (Water) 17 which shall be read as follows and remaining condition unchanged in EC granted by SEIAA, Gujarat vide Letter No. SEIAA/GUJ/EC/5(f)/1568/2021 dated 18/10/2021,

Condition no A. 2(Water) 17 shall now be read as under:

Industrial effluent shall be segregated and it shall be managed as below.

3.0 KLD utility effluent shall be treated into two stage RO Plant. About 2.2 KLD R.O. Permeate water shall be reused for industrial purpose.

4.5 KLD (0.8 KLD R.O. Reject water + 3.5 KLD Washing & 0.2 KLD R&D) effluent shall be treated into ETP and send to Common ETP of M/s. EICL, Umraya, Padra for further treatment and final disposal.

12.8 KLD Scrubbing Media will be reused in plant premises and sell to end user who is having Rule-9 Permission.

08	SIA/GJ/IND2/247099/2021	M/s. Gujarat Halogen Petrochem Corporation Sr. No. – 293, Vill.-Lunej, Re. survey no.- 348, Vill.- Neja, Tal – Khambhat, Dist – Anand, (Gujarat).	EC- Amendment
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Category of the unit: **5(f)**

Project status: **EC- Amendment**

This is a existing unit for manufacturing of '**synthetic organic chemicals**' [**API & Its Intermediates**] for which Environmental Clearance was accorded vide letter no. SEIAA/GUJ/EC/5(f)/1568/2021 dated 18/10/2021

Now, project proponent has applied online vide proposal no. SIA/GJ/IND2/247099/2021 for **EC- Amendment** in EC letter no. SEIAA/GUJ/EC/5(f)/1568/2021 dated 18/10/2021 in which there is typographical error and details are as under:

Based on the above request for change in EC conditions

Sr. no.	Condition no. in which Amendment is proposed.	As per EC	As per proposed amendment	Justification
1	Environmental Clearance on Page no.1to 4 Product List Remarks	Exiting Product List Remarks Chlorination Compound (Product No. – 1 to 6) Unit has mfg either individual or total production of (Product No.- 1 to 6) was not exceed 48.0 MT/Month.	Exiting Product List Remarks 8 MT/Month (Max 1 Product)	There was a writing mistake in exiting product remarks in product list. So, here we have rectified our mistakes
		Acid Chlorides (Product No. – 7 to 29) Unit has mfg either individual or total	750 MT/Month (Max 3 Product)	

		production of (Product No.- 7 to 29) was not exceed 1432.0 MT/Month.		
		Aldehyde Derivatives (Product No. – 30 to 33) Unit has mfg either individual or total production of (Product No.- 30 to 33) was not exceed 32.0 MT/Month.	8 MT/Month (Max 1 Product)	

Project proponent submitted their presentation with relevant details and this proposal was considered in the SEAC meeting dated **03.02.2022**

During the meeting, Committee noted that there is a typographical error in product profile from PP side.

PP submitted revised Form-1, PFR and relevant details in line to proposed amendment.

Committee noted that there is no change in pollution potential, total production quantity and other details due to proposed amendments.

After detailed deliberation, Committee unanimously decided to recommend grant of EC – Amendment to SEIAA, Gujarat with amendment in product profile which shall be read as follows and remaining condition unchanged in EC granted by SEIAA, Gujarat vide Letter No. SEIAA/GUJ/EC/5(f)/1568/2021 dated 18/10/2021.

Product list shall now be read as under:

Sr. No.	Name of Product	CAS NO.	Quantity (MT/Month)			End Use	Remarks As per EC granted on dated 18/10/2021	After EC Amendment
			Existing	Proposed	Total			
EXISTING								
Chlorinated Compounds								
1	Chloro Methyl Pivaiate		8.0	0.0	8.0		Unit has mfg either individual or total production of (Product No.- 1 to 6) was not exceed 48.0	8 (Max 1 Product)
2	Laruy Chloride		8.0	0.0	8.0			
3	M-Chloro Benzyl Chloride		8.0	0.0	8.0			
4	O-Chloro Benzaldehyde		8.0	0.0	8.0			
5	2-Flouro Benzaldehyde		8.0	0.0	8.0			

6	2,4 Dichloro Benzaldehyde		8.0	0.0	8.0		MT/Month.	
Acid Chlorides								
7	Benzo Tri Chloride		485.0	0.0	485.0		Unit has mfg either individual or total production of (Product No. - 7 to 29) was not exceed 1432.0 MT/Month.	750 (Max Product) 3
8	Acetyl Chloride		240.0	0.0	240.0			
9	Benzoyl Chloride		435.0	0.0	435.0			
10	Chloro Acetyl Chloride		75.0	0.0	75.0			
11	2 Ethyl Hexonoyl Chloride		40.0	0.0	40.0			
12	Terephthaloyl Chloride		15.0	0.0	15.0			
13	Phenyl Acetyl Chloride		15.0	0.0	15.0			
14	Methoxy Acetyl Chloride		8.0	0.0	8.0			
15	Lauroyl Chloride		8.0	0.0	8.0			
16	3-Chloro pivaloyl Chloride		8.0	0.0	8.0			
17	2,3Dichloro Propionyl Chloride		8.0	0.0	8.0			
18	P-chloro benzoyl Chloride		8.0	0.0	8.0			
19	3 Phenyl Propionyl Chloride		8.0	0.0	8.0			
20	P-Hydroxy Benzophenone		8.0	0.0	8.0			
21	P-Hydroxy Acetophenone		8.0	0.0	8.0			
22	4-chloro 4-Hydroxy Benzophenone		8.0	0.0	8.0			
23	4,4, Difluoro Benzophenone		8.0	0.0	8.0			
24	P-Bromo Benzophenone		8.0	0.0	8.0			
25	4,4, Dibromo Benzophenone		8.0	0.0	8.0			
26	4-Fluoro Benzophenone		8.0	0.0	8.0			
27	4,4, Dichloro Benzophenone		8.0	0.0	8.0			
28	2,4,4, Trichloro Acetophenone		8.0	0.0	8.0			
29	Octanoyl Chloride		7.0	0.0	7.0			
Aldehyde Derivatives								
30	3-Phenoxy Benzaldehyde		8.0	0.0	8.0		Unit has mfg either individual or total production	8 (Max Product) 1
31	P-Phenoxy Benzaldehyde		8.0	0.0	8.0			
32	4-Methoxy		8.0	0.0	8.0			

						Clortermine		
48	2,4-Dichlorobenzoyl chloride	94-99-5				Intermediates of Miconazole		
INTERMEDIATES-B								
49.	o-Chlorobenzoyl chloride	611-19-8				Intermediates of Clotiazepam	Unit has mfg either individual or total production of (Product No.- 49 to 91) was not exceed 50.0 MT/Month.	Unit has mfg either individual or total production of (Product No.- 49 to 91) was not exceed 50.0 MT/Month.
50.	m-Chlorobenzoyl chloride	618-46-2				Intermediates of Rupatidine		
51.	2,3-Dichlorobenzoyl chloride	2905-60-4				Intermediates of Lamotrigine		
52.	2,4-Dichlorobenzoyl chloride	89-75-8				Intermediates of Mepacrine		
53.	2-Chloro-4-Fluorobenzoyl chloride	21900-54-9				Intermediates of Flosequinan		
54.	o-Fluorobenzoyl chloride	393-52-2				Intermediates of Midazolam		
55.	p-Fluorobenzoyl chloride	403-43-0				Intermediates of Suprofen		
56.	2-Ethoxybenzoyl chloride	42926-52-3	0.0	50.0	50.0	Intermediates of Sildenafil		
57.	3-Chloromethylbenzoyl (Toluoy) chloride	63024-77-1				Intermediates of Keroprofen		
58.	4-Chloromethylbenzoyl (Toluoy) chloride	876-08-4				Intermediates of Imatinib		
59.	2-Methylbenzoyl chloride	552-45-4				Intermediates of Tolvaptan		
60.	4-Methylbenzoyl chloride	874-60-2				Intermediates of Celecoxib		
61.	4-Methoxybenzoyl chloride	100-07-2				Intermediates of Aniracetam		
62.	n-Butyryl chloride	141-75-3				Intermediates of Telmisartan		
63.	Isobutyryl chloride	79-30-1				Intermediates of Ibuprofen		
64.	4-Chlorobutyryl chloride	4635-59-0				Intermediates of		

					Levetraceta m		
65.	Propionyl chloride	79-03-8			Intermediate s of Erythromycin		
66.	2-Chloropropionyl chloride	7623- 09-8			Intermediate s of Omoconazol e nitrate		
67.	3-chloropropionyl chloride	625-36- 5			Intermediate s of Beclamide		
68.	n-Valeryl chloride	638-29- 9			Intermediate s of Valsartan		
69.	5-Chlorovaleryl chloride	1575- 61-7			Intermediate s of Apixaban		
70.	Isovaleryl chloride	108-12- 3			Intermediate s of Bromisovalu m		
71.	Heptanoyl chloride	2528- 61-2			Intermediate s of Sphingofungi n		
72.	Hexanoyl chloride	142-61- 0			Intermediate s of 4- Hexylresorci nol		
73.	Isophthaloyl chloride	99-63-8			Intermediate s of Emitefur		
74.	Cyclopropane carbonyl chloride	4023- 34-1			Intermediate s of Buprenorphi ne		
75.	Cyclobutane carbonyl chloride	5006- 22-4			Intermediate s of Butorphanol		
76.	Cyclohexane carbonyl chloride	2719- 27-9			Intermediate s of Prazoquantel		
77.	2-Furoyl chloride	527-69- 5			Intermediate s of Terazosin		
78.	2-Thiophenecarbonyl chloride	5271- 67-0			Intermediate s of Suprofen		
79.	Trimethylacetyl chloride	3282- 30-2			Intermediate s of Amoxycylline		
80.	Ethyl-6,8- Dichlorooctanoate	1070- 64-0			Intermediate s of Alpha- Lipoic acid		

81.	n-Propyl chloride	540-54-5				Intermediates of Promethazine		
82.	n-Butyl chloride	109-69-3				Intermediates of Tetracycline		
83.	Isobutyl chloride	513-36-0				Intermediates of Butathamine		
84.	n-Pentyl chloride	543-59-9				Intermediates of Neticonazole		
85.	n-Hexyl chloride	544-10-5				Intermediates of Pentifylline		
86.	n-Heptyl Chloride	629-06-1				Intermediates of Hexylresorcinol		
87.	n-Octyl Chloride	111-85-3				Intermediates of Olitonium bromide		
88.	2-Ethylhexyl (Isooctyl) Chloride	123-04-6				Intermediates of Butoctamide		
89.	Propoxyethyl chloride	42149-74-6				Intermediates of Cetirizine		
90.	2-Chloroethylacetoacetate	609-15-4				Intermediates of Cimetidine		
91.	Methyl-2-chloropropionate	17639-93-9				Intermediates of Troglitazone		
92	R&D	--	0.0	0.1	0.1			
TOTAL			166 2.0	- 150. 0	166 2.1			

09	SIA/GJ/IND3/246544/2021	M/s. R P Industries Plot No. 212 & 212/A, GIDC-Panoli Estate, Tal. Ankleshwar, Dist.: Bharuch--394116, State: Gujarat	EC- Corrigendum
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Category of the unit: **5(f)**

Project status: **EC-Corrigendum**

- I. 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)/1821/202, Dated: 23/11/2021.
- II. Now, project proponent has applied online vide proposal no. SIA/GJ/IND3/246544/2021 for EC-Corrigendum in EC vide letter no. SEIAA/GUJ/EC/5(f)/1821/2021, Dated: 23/11/2021 in typographical error in Project Name & Address detail.
- III. Based on the above request for change in EC conditions

Sr. no.	Condition no. in which Amendment is proposed.	As per EC	As per proposed amendment	Justification
1	Project Name & Address	Name: M/s. RUSHAP INDUSTRIES Plot No.212/1, GIDC-Panoli, Ta-Ankleshwar Dist.-Bharuch-394116	Name: M/s. R P Industries Plot No. 212 & 212/A, GIDC-Panoli Estate, Tal. Ankleshwar, Dist. Bharuch-394116 Gujarat.	SEAC MoM

During meeting dated: 03.02.2022, committee noted that there is a typographical error in Project Name & Address.

The facts were verified with earlier SEAC meeting MOM dated: 17.08.2021 in which the EC case was appraised.

Committee noted that there is a typographical error in Project Name & Address detail in SEAC recommendation letter which was inadvertent.

After detailed deliberation, Committee unanimously decided to recommend grant of EC – Corrigendum to SEIAA, Gujarat with corrigendum Project Name & Address detail shall be read as “ M/s. R P Industries, Plot No. 212 & 212/A, GIDC-Panoli Estate, Tal. Ankleshwar, Dist. Bharuch-394116, Gujarat and with remaining condition unchanged in EC granted by SEIAA, Gujarat vide Letter No. SEIAA/GUJ/EC/5(f)/1821/2021 Dated: 23/11/2021.

10	SIA/GJ/IND3/245435/2021	M/s. KRC Chemicals Plot No - 3208, G.I.D.C. Industrial Estate, Panoli, Dist – Bharuch - 394116, Gujarat.	EC- Amendment
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Category of the unit: **5(f)**

Project status: **EC-** Amendment

This is a existing unit for manufacturing of “Synthetic Organic Chemicals” [API & API Intermediates] for which Environmental Clearance was accorded vide letter no. SEIAA/GUJ/EC/5(f)/652/2021 Date:19/05/2021

Now, project proponent has applied online vide proposal no. SIA/GJ/IND3/245435/2021 for EC-Amendment in EC letter no. SEIAA/GUJ/EC/5(f)/652/2021 Date:19/05/2021.

in which there is typographical error and details are as under:

Based on the above request for change in EC conditions

Sr. no.	Condition no. in which Amendment is proposed.	As per EC	As per proposed amendment	Justification
1	Section A-2 Condition No. 23	23.7 KLD process & utility effluent shall be treated into Solvent stripper. 23.2 KLD treated effluent shall be further treated in ETP consists of primary treatment units and sent to Common Spray Dryer of M/s. PETL, Panoli for final treatment & disposal.	22.4 KLD process & washing effluent shall be treated into Primary ETP and treated effluent send to Common MEE of M/s ACPTCL, Ankleshwar for final treatment & disposal & 1.3 KLD utility (boiler blow down & cooling blow down) shall be send to Common Spray Dryer of M/s. PETL, Panoli for final treatment & disposal & 0.9 KLD Scrubbing Media will be reused in plant premises and sell to end user who is having Rule-9 Permission	We have obtained common spray Dryer membership of M/s. PETL, Panoli & Common MEE of M/s. ACPTCL, Ankleshwar.
2	Section A-2 Condition No. 24	Unit shall send waste water to Common Spray Dryer of M/s. PETL, Panoli only after achieving inlet norms of Common Spray Dryer and ensuring content of effluent for COD/VOC in order to achieve no adverse impacts on Environment and Human Health.	Unit shall send waste water to Common Spray Dryer of M/s. PETL, Panoli & Common MEE of M/s ACPTCL, Ankleshwar only after achieving inlet norms of Common Spray dryer and Common MEE ensuring content of effluent for COD/VOC in order to achieve no adverse impacts on Environment and Human Health.	
3	Section A-2 Condition No. 29	Unit shall provide adequate size buffer storage tank	Unit shall provide adequate size buffer storage tank for	We have already provided 30 KL storage tank for effluent generated from

		for storage of high COD effluent for purpose of any shutdown of Common Spray Dryer.	storage of high COD effluent for purpose of any shutdown of Common Spray Dryer & Common MEE.	process & washing effluent from industry. And we will provided separate collection tank for utility effluent and it shall be send to Common Spray Dryer
4	Section A-2 Condition No. 30	The unit shall provide metering facility at the inlet and outlets of ETP & Solvent stripper, inlet to Common Spray Dryer and maintain records for the same.	The unit will provide metering facility at the inlet and outlets of ETP maintain records for the same.	--
5	Section A-2 Condition No. 31	Proper logbooks of ETP & Solvent stripper, chemical consumption in Effluent treatment; quantity and quality of effluent fed into Common Spray Dryer; 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 and quality of effluent send to Common Spray Dryer and Common MEE; power consumption etc. shall be maintained and shall be furnished to the GPCB from time to time.	--
6	Section A-4 Condition No. 40	All the hazardous waste management shall be taken care as mentioned in Hazardous waste table.	Dil. HCl (28%) @ 169 MT/Year disposal mode shall be Collection, Storage Transportation and sell to end user who is having Rule-9 Permission. Spent solvent from stripper @ 180 MT/Year shall be removed from Hazardous waste generation details.	We will utilized the bride liqueur generated from scrubber then it will deteriorate the quality of product. Hence instead of reused into process, we will sell to end user who is having Rule-9 Permission. We will propose to send utility (boiler blow down and cooling blow down) effluent to common spray dryer of M/s PETL, Panoli. Hence, no need to installed solvent stripper. So generation of Spent solvent from stripper @ 180 MT/Year shall be removed from Hazardous waste generation details.

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Project proponent submitted their presentation with relevant details and this proposal was considered in the SEAC meeting dated **03.02.2022**

During the meeting, Committee noted that there is a typographical error in Section A.2 Water Condition 25.

Committee noted that there is a typographical error in condition no-25 as mentioned above. Referring to the Form-1 and their presentation with relevant documents submitted before SEAC, Committee found that this typographical error was inadvertent. , which was inadvertent.

After detailed deliberation, Committee unanimously decided to recommend grant of EC – Amendment to SEIAA, Gujarat with corrigendum in condition no A.2(Water) 25 which shall be read as follows and remaining condition unchanged in EC granted by SEIAA, Gujarat vide Letter No. SEIAA/GUJ/EC/5(f)/652/2021 Date:19/05/2021,

Condition no 23,24,29,30,31 & 40 of the environmental clearance order no – SEIAA/GUJ/EC/5(f)/1146/2020 Date:09/10/2020 or SEIAA/GUJ/EC/5(f)/652/2021 Date:19/05/2021 have been amended and shall now be read as under:

1. Condition no.23 shall be read as under

- 23.** 22.4 KLD process & washing effluent shall be treated into Primary ETP and treated effluent send to Common MEE of M/s ACPTCL, Ankleshwar for final treatment & disposal & 1.3 KLD utility (boiler blow down & cooling blow down) shall be send to Common Spray Dryer of M/s. PETL, Panoli for final treatment & disposal
&
0.9 KLD Scrubbing Media will be reused in plant premises and sell to end user who is having Rule-9 Permission

2. Condition no.24 shall be read as under

- 24.** Unit shall send waste water to Common Spray Dryer of M/s. PETL, Panoli & Common MEE of M/s ACPTCL, Ankleshwar only after achieving inlet norms of Common Spray dryer and Common MEE ensuring content of effluent for COD/VOC in order to achieve no adverse impacts on Environment and Human Health.

3. Condition no.29 shall be read as under

- 29.** Unit shall provide adequate size buffer storage tank for storage of high COD effluent for purpose of any shutdown of Common Spray Dryer & Common MEE.

4. Condition no.30 shall be read as under

30. The unit will provide metering facility at the inlet and outlets of ETP maintain records for the same.

5. Condition no.31 shall be read as under

31. Proper logbooks of ETP & chemical consumption in Effluent treatment; quantity and quality of effluent send to Common Spray Dryer and Common MEE; power consumption etc. shall be maintained and shall be furnished to the GPCB from time to time.

6. Condition no.40 shall be read as under

40. All the hazardous waste management shall be taken care as mentioned below:

SR. NO.	TYPE/NAME OF HAZARDOUS WASTE	SPECIFIC SOURCE OF GENERATION	CATEGORY AND SCHEDULE AS PER HW RULES.	QUANTITY (MT/ANNUM)			MANAGEMENT OF HW (DISPOSAL METHOD)
				AS PER AS PER EC GRANTED DATED 09/10/2020 & EC AMENDMENT GRANT DATED 19/05/2021	PROPOSED	TOTAL PROPOSED	
1	Used/ Spent Oil	Machineries / Utility	SCH-I/5.1	0.5	0	0.5	Collection, Storage, Transportation & Sale to GPCB Registered Re-Processor.
2	Discarded Drums/Bags/ Liners	Raw Materials/ Products	SCH-I/33.1	50	0	50	Collection, Storage, Transportation, Decontamination & Sale to GPCB Approved Vendors.
3	ETP Sludge	ETP	SCH-I/35.3	120	0	120	Collection, Storage, Transportation and Disposal at common TSDF site.
4	Distillation Residue	Distillation	SCH-I/20.3	145	0	145	Collection, Storage, Transportation and sent for co-processing in cement

							industries or Disposal at common incineration site.
5	Spent Solvent	Process	SCH-I/28.6	4656.55	0	4656.55	Collections, Storage, distill and reuse in plant premises.
6	Spent solvent from Stripper	From Solvent Stripper	SCH-I/20.3	-180	- 180	0.00	Collection, Storage, Transportation and disposal at common incineration site.
7	Ammonium Bromide	By product in Process of Cis Bromo Benzoate	SCH-II/B15	236	0	236	Collection, Storage, Transportation and Sell to end user who is having Rule-9 Permission.
8	Sodium Bromide	By product in Process of N Bromo Succinimide	SCH-II/B15	348	0	348	Collection, Storage, Transportation and Sell to end user who is having Rule-9 Permission.
9	Potassium Bromide Solution	By product in (Product No. – 16)	SCH-II/B15	23	0	23	Collection, Storage, Transportation and Sell to end user who is having Rule-9 Permission.
10	Sodium Acetate	By product in (Product No. – 13 and 16)	SCH-II/B15	291	0	291	Collection, Storage, Transportation and Sell to end user who is having Rule-9 Permission.
11	Aluminum Hydroxide Solution (30%)	By product in (Product No. – 16)	SCH-II/B15	20	0	20	Collection, Storage, Transportation and Sell to end user who is having Rule-9 Permission.
12	Trityl Chloride	By product in (Product No. – 22)	SCH-II/B15	55	0	55	Collection, Storage and reuse in plant premises. (Total Requirement of

							Trityl Chloride in Product No 23 – 58.2 MT/Year)
13	Ammonium Chloride Solution (20%)	By product in (Product No. – 24)	SCH-II/B15	51	0	51	Collection, Storage, Transportation and Sell to end user who is having Rule-9 Permission.
14	Organic Residue	Process (Product No. 12,13,14 &27)	SCH-I/28.1	126	0	126	Collection, Storage, Transportation and sent for co-processing in cement industries or Disposal at common incineration site.
15	Spent Carbon	Process (Product No. 23)	SCH-I/28.3	13	0	13	Collection, Storage, Transportation and sent for co-processing in cement industries or Disposal at common incineration site.
16	Spent Catalyst	Process (Product No. 17)	SCH-I/28.2	3.5	0	3.5	Collection, Storage, Transportation and send to regenerator
17	Spent Hyflow	Process (Product No. 27)	SCH-I/28.3	3.0	0	3.0	Collection, Storage, Transportation and Sent to TSDf Site
18	Dil. HCl (28%)	Scrubber	SCH-II/B15	169	0	169	Collection, Storage Transportation and sell to end user who is having Rule-9 Permission.
19	Sodium Bi Sulphite (30%)	Scrubber	SCH-I/28.1	62	0	62	Collection, Storage, reuse in in plant premises. (Requirement of Sodium Bi Sulphite in

							Product No. 16 – 1.68 MT/Year) & remaining Sell to end user who is having Rule-9 Permission.
20	HBr Solution (30%)	Scrubber	SCH-I/28.1	66	0	66	Collection, Storage, & Sell to end user who is having Rule-9 Permission.
21	Liq. Ammonia (25%)	Scrubber	SCH-I/28.1	4	0	4	Collection, Storage and reuse in plant premises. (Total Requirement of Liq. Ammonia in Product No 20 – 21.96 MT/Year)
22	Off Specification Products	From mfg. Process (Batch failure)	SCH-I/28.4	5.0	0	5.0	Collection, Storage, Transportation and sent for co-processing in cement industries or (in case of non-operation of co-processing site) Disposal at common incineration site.

11	SIA/GJ/IND3/248359/2021	M/s. Ambica Pharma Chem Plot No. 121/15, GIDC-Kalol, Ta- Kalol, Dist- Panchmahal, Gujarat.	EC- Corrigendum
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Category of the unit: **5(f)**

Project status: **EC-Corrigendum**

This is a Greenfield project proposed for manufacturing of “Synthetic Organic Chemicals” for which Environmental Clearance was accorded vide letter no. SEIAA/GUJ/EC/5(f)/845/2020 DATED: 07.07.2020

Now, project proponent has applied online vide proposal no. SIA/GJ/IND3/248359/2021 for EC-Corrigendum in EC letter no. SEIAA/GUJ/EC/5(f)/845/2020 dated: 07.07.2020 in which there is typographical error and details are as under:

Based on the above request for change in EC conditions

Sr. no.	Condition no. in which Amendment is proposed.	As per EC	As per proposed amendment	Justification
1	Environmental Clearance on Page no.2 Section A.3 Air Condition No. 22.	Hot Water Generator with capacity of 600 KL/hr	Steam Boiler with capacity of 0.6 TPH	Typographical error

Project proponent submitted their presentation with relevant details and this proposal was considered in the SEAC meeting dated **03.02.2022**

During the meeting, Committee noted that there is a typographical error in Section A.3 Air Condition No. 22.

Committee noted that there is a typographical error in condition no-22 as mentioned above. Referring to the Form-1 and their presentation with relevant documents submitted before SEAC, Committee found that there was a typographical error, which was inadvertent.

After detailed deliberation, Committee unanimously decided to recommend grant of EC – Corrigendum to SEIAA, Gujarat with corrigendum in condition no A.3 (Air) 22 which shall be read as follows and remaining condition unchanged in EC granted by SEIAA, Gujarat vide Letter No. SEIAA/GUJ/EC/5(f)/845/2020 dated 07.07.2020.

Condition no A.3 (Air) 22 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)
1	Steam Boiler 0.6 TPH	15	LDO/Natural Gas	34 L/hr or 43 Nm ³ /hr	PM, SO ₂ , NO _x	Adequate stack height
2	D.G. Set 65 KVA	09	HSD	8L/hr	PM, SO ₂ , NO _x	Adequate stack height

The meeting ended with a vote of thanks to the chair.

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	