**F. No. J-11011/25/2019-IA-II(I)**

Government of India
Ministry of Environment, Forest & Climate Change
Impact Assessment Division

Indira Paryavaran Bhavan,
Vayu Wing, 3rd Floor, Aliganj,
Jor Bagh Road, New Delhi-110 003

Dated: 11th May, 2020

To,

M/s Cosmic Pigments & Intermediates (Unit-II),
Survey No. 238, Village Lunej,
Taluka Khambhat,
District **Anand**, (Gujarat)

Sub: Setting up of pigments, dyes and synthetic organic chemicals manufacturing unit by M/s Cosmic Pigments & Intermediates (Unit-II) at Survey No. 238, Village Lunej, Taluka Khambhat, District Anand (Gujarat) - Environmental Clearance - reg.

Sir,

This has reference to your online proposal No. IA/GJ/IND2/91049/2019, dated 1st February, 2020 for environmental clearance to the above mentioned project.

2. The Ministry of Environment, Forest and Climate Change has examined the proposal for environmental clearance to the project for Setting up of pigments, dyes and synthetic organic chemicals manufacturing unit of capacity 2900 TPM by M/s Cosmic Pigments & Intermediates (Unit-II) in an area of 20,538 sqm at Survey No. 238, Village Lunej, Taluka Khambhat, District Anand (Gujarat).

3. The details of proposed products are as under:-

Sr.N o.of Total Prod ucts	Cate gory wise Sr.N o. of Prod ucts	Gro up wis e Sr. No. of Pro duc ts	Name of the Products	CAS no. / CI no.	Quant ity MT/M onth	LD50 /LC50
1.Total No. of Products : Category : A+B+C+D+E+F+G+H+I+J+K+L = 274; Total Production capacity of All Products : 2900 MT/Month						
Category-A: Pigments (Group 1+2+3+4+5 = 106)						
Group-1: Pigment Red = 49						
1	1	1	Pigment Red 2	6041-94-7	200	LD50 Oral, Rat 8110 mg/kg
2	2	2	Pigment Red 3	2425-85-6		LD50 Oral, Rat 8180 mg/kg
3	3	3	Pigment Red 4	2814-77-9		LD50 Oral, Rat 8140 mg/kg
4	4	4	Pigment Red 5	6410-41-9		LD50 Oral, Rat 8190

					mg/kg
5	5	5	Pigment Red 12	6410-32-8	LD50 Oral, Rat 8160 mg/kg
6	6	6	Pigment Red 14	6471-50-7	NA
7	7	7	Pigment Red 38	6358-87-8	dermal route (LD50 > 2000 mg/kg bw)
8	8	8	Pigment Red 48:1	7585-41-3	LD50 Oral, Rat 8160 mg/kg
9	9	9	Pigment Red 48:2	7023-61-2	LD50 Oral, Rat 8190 mg/kg
10	10	10	Pigment Red 48:3	15782-05-5	LD50 Oral, Rat 8130 mg/kg
11	11	11	Pigment Red 48:4	5280-66-0	LD50 Oral, Rat 8160 mg/kg
12	12	12	Pigment Red 48:5	N.A.	NA
13	13	13	Pigment Red 49	1248-18-6	NA
14	14	14	Pigment Red 49:1	1103-38-4	NA
15	15	15	Pigment Red 49:2	1103-39-5	NA
16	16	16	Pigment Red 49:3	6371-67-1	NA
17	17	17	Pigment Red 52:1	17852-99-2	NA
18	18	18	Pigment Red 52:2	12238-31-2	NA
19	19	19	Pigment Red 53	2092-56-0	NA
20	20	20	Pigment Red 53:1	5160-02-1.	LD50 Oral, Rat 8190 mg/kg
21	21	21	Pigment Red 53:3	73263-40-8	L.D.50 ACUTE ORAL(RATS) : ABOUT 5,000mg/KG
22	22	22	Pigment Red 57:1	5281-04-9.	LD50 Oral, Rat 8140 mg/kg
23	23	23	Pigment Red 63:1	6417-83-0	NA
24	24	24	Pigment Red 63:2	35355-77-2	LD50 rat (oral): > 2.000 mg/kg
25	25	25	Pigment Red 81	12224-98-5	LD50 rat : 8260 mg/kg
26	26	26	Pigment Red 81:1	80083-40-5	LD50 rat (oral): > 2.000 mg/kg
27	27	27	Pigment Red 81:x	63022-06-0	LD50 rat (oral): > 2.000 mg/kg
28	28	28	Pigment Red 81:y	N.A.	LD50 rat (oral): > 2.000 mg/kg
29	29	29	Pigment Red 81:2	75627-12-2	LD50 rat (oral): > 2.000 mg/kg
30	30	30	Pigment Red 81:3	68310-07-6	LD50 rat (oral): > 2.000 mg/kg
31	31	31	Pigment Red 81:4	85959-61-1	LD50 rat (oral): > 2.000 mg/kg
32	32	32	Pigment Red 112	6535-46-2	LD50 Oral, Rat 8290

						mg/kg
33	33	33	Pigment Red 122	980-26-7		LD50 Oral, Rat 8290 mg/kg
34	34	34	Pigment Red 123	24108-89-2		LD50 rat (oral): > 2.000 mg/kg
35	35	35	Pigment Red 144	5280-78-4		LD50 Oral, Rat 8380 mg/kg
36	36	36	Pigment Red 146	5280-68-2		LD50 Oral, Rat 8360 mg/kg
37	37	37	Pigment Red 168	4378-61-4		NA
38	38	38	Pigment Red 169	12237-63-7		LD50 Oral, Rat 5000 mg/kg
39	39	39	Pigment Red 170	2786-76-7		LD50 Oral, Rat 8270 mg/kg
40	40	40	Pigment Red 175	6985-92-8		LD50 Oral, Rat 8350 mg/kg
41	41	41	Pigment Red 176	12225-06-8		LD50 Oral, Rat 8380 mg/kg
42	42	42	Pigment Red 177	4051-63-2		LD50 Oral, Rat 8340 mg/kg
43	43	43	Pigment Red 178	3049-71-6		LD50 Species: rat Value: > 5,000 mg/kg
44	44	44	Pigment Red 179	5521-31-3		LD50 Oral, Rat 8290 mg/kg
45	45	45	Pigment Red 188	61847-48-1		LD50 rat (oral): > 2.000 mg/kg
46	46	46	Pigment Red 202	3089-17-6		LD50 Oral, Rat 8360 mg/kg
47	47	47	Pigment Red 254	122390-98-1		LD50 Oral, Rat 8380 mg/kg
48	48	48	Pigment Red 256	79102-65-1		Oral LD50: >10 g/kg (rats) practically non-toxic
49	49	49	Pigment Red 264	122390-98-1		LD50 Oral, Rat 8320 mg/kg
Group-2: Pigment Yellow = 32						
50	50	1	Pigment Yellow 1	2512-29-0		LD50 Oral, Rat. >10000mg/kg
51	51	2	Pigment Yellow 3	6486-23-3		LD50 Oral, Rat 8252mg/kg
52	52	3	Pigment Yellow 12	6358-85-6		LD50 Oral, Rat .>5000mg/kg
53	53	4	Pigment Yellow 13	5102-83-0		LD50 Oral, Rat .>5000mg/kg
54	54	5	Pigment Yellow 14	5468-75-7	200	LD50 Oral, Rat .>5000mg/kg
55	55	6	Pigment Yellow 16	5979-28-2		Not Listed
56	56	7	Pigment Yellow 17	4531-49-1		LD50 Oral, Rat 8230 mg/kg
57	57	8	Pigment Yellow 61	12286-65-6		LD50 Oral, Rat 8160 mg/kg
58	58	9	Pigment Yellow 62	12286-66-7		LD50 rat (oral): > 5,000 mg/kg

59	59	10	Pigment 63	Yellow	14569-54-1	200	Not Listed		
60	60	11	Pigment 65	Yellow	6528-34-3		LD50 Oral, mg/kg	Rat	8230
61	61	12	Pigment 73	Yellow	13515-40-7		LD50 Oral, mg/kg	Rat	8190
62	62	13	Pigment 74	Yellow	6358-31-2		LD50 Oral, mg/kg	Rat	8260
63	63	14	Pigment 83	Yellow	5567-15-7		LD50 Oral, mg/kg	Rat	8390
64	64	15	Pigment 93	Yellow	5580-57-4		LD50 Oral, mg/kg	Rat	14000
65	65	16	Pigment 97	Yellow	12225-18-2		LD50 Oral, mg/kg	Rat	8250
66	66	17	Pigment 101	Yellow	2387-03-3.		LD50 rat (oral): > 2.000 mg/kg		
67	67	18	Pigment 120	Yellow	29920-31-8		oral route (LD50 > 15 000 mg/kg bw)		
68	68	19	Pigment 121	Yellow	61968-85-2		NA		
69	69	20	Pigment 138	Yellow	30125-47-4		LD50 rat (oral): > 5.000 mg/kg		
70	70	21	Pigment 139	Yellow	36888-99-0		LD50 Oral, mg/kg	Rat	2000
71	71	22	Pigment 151`	Yellow	31837-42-0		LD50 Oral, mg/kg	Rat	8330
72	72	23	Pigment 153	Yellow	68859-51-8		NA		
73	73	24	Pigment 154	Yellow	68134-22-5		LD50 Oral, mg/kg	Rat	8250
74	74	25	Pigment 155	Yellow	68516-73-4		NA		
75	75	26	Pigment 174	Yellow	78952-72-4		LD50 Oral, Rat =980mg/kg		
76	76	27	Pigment 180	Yellow	77804-81-0		LD50 Oral, Rat 5000mg/kg		
77	77	28	Pigment 181	Yellow	74441-05-7		oral route (LD50 > 5000 mg/kg bw)		
78	78	29	Pigment 182	Yellow	67906-31-4		NA		
79	79	30	Pigment 183	Yellow	23792-68-9		LD50 Species: rat (male/female) Value: > 5,000 mg/kg		
80	80	31	Pigment 191	Yellow	129423-54-7		Oral LD50 value of 5 mg/kg or greater in rats.		
81	81	32	Pigment 191:1	Yellow	154946-66-4		LD50 Oral, Rat 2000mg/kg		
Group-3: Pigment Orange = 8									
82	82	1	Pigment 5	Orange	3468-63-1	200	LD50 Oral, mg/kg	Rat	8120
83	83	2	Pigment 13	Orange	3520-72-7		LD50 Oral, mg/kg	Rat	8190
84	84	3	Pigment	Orange	6505-28-8		LD50 Oral, Rat	8120	

			16			mg/kg
85	85	4	Pigment Orange 34	15793-73-4		LD50 Oral, Rat 8250 mg/kg
86	86	5	Pigment Orange 36	12236-62-3		LD50 Oral, Rat 8210 mg/kg
87	87	6	Pigment Orange 43	4424-06-0		LD50 Oral, Rat 2000 mg/kg
88	88	7	Pigment Orange 62	52846-56-7		LD50 Oral, Rat 8370 mg/kg
89	89	8	Pigment Orange 64	72102-84-2		LD50 Oral, Rat 8270 mg/kg
Group-4: Pigment Blue = 10						
90	90	1	Pigment Blue 1	1325-87-7		NA
91	91	2	Pigment Blue 15	147-14-8		LD50 Oral, Rat. >3200mg/kg
92	92	3	Pigment Blue 15:1	147-14-8		LD50 Oral, Rat. >3200mg/kg
93	93	4	Pigment Blue 15:2	147-14-8		LD50 Oral, Rat. >3200mg/kg
94	94	5	Pigment Blue 15:3	147-14-8	200	LD50 Oral, Rat 2000mg/kg
95	95	6	Pigment Blue 15:4	147-14-8		LD50 Oral, Rat 2000mg/kg
96	96	7	Pigment Blue 15:6	147-14-8		LD50 Oral, Rat 2000mg/kg
97	97	8	Pigment Blue 16	574-93-6		LD50 Oral, Rat 2000mg/kg
98	98	9	Pigment Blue 60	81-77-6		LD50 Oral, Rat > 980 mg/kg
99	99	10	Pigment Blue 62	57485-98-0		LD50 Oral, Rat 2000mg/kg
Group-5: Pigment Violet = 7						
100	100	1	Pigment Violet 1	1326-03-0		LD50 Oral, Rat 2000mg/kg
101	101	2	Pigment Violet 1x	N.A.		LD50 Oral, Rat 2000mg/kg
102	102	3	Pigment Violet 3	1325-82-2		LD50 Oral, Rat 2000mg/kg
103	103	4	Pigment Violet 19	1047-16-1	200	LD50 Oral, Rat 8420 mg/kg
104	104	5	Pigment Violet 23	6358-30-1		LD50 Oral, Rat 2000mg/kg
105	105	6	Pigment Violet 27	12237-62-6		LD50 Oral, Rat. >3200mg/kg
106	106	7	Pigment Violet 29	81-33-4		LD50 Oral, Rat 2000mg/kg
Total of Category-A (Group 1 + 2 + 3 + 4 + 5) = 106					1000	
Category-B: Solvent Dyes						
Group-1: Red Solvent Dyes = 13						
107	1	1	Solvent Red 19E	6368-72-5		NA
108	2	2	Solvent Red 23	85-86-9		NA
109	3	3	Solvent Red 24	85-83-6	100	Acute oral toxicity: LD50(Rat): 8110mg/kg
110	4	4	Solvent Red 52	81-39-0		Acute oral toxicity: LD50(Rat): 8160mg/kg

111	5	5	Solvent Red 111	82-38-2	Acute Toxicity: Oral-dog LD 50:>8 g/kg
112	6	6	Solvent Red 135	20749-68-2	Acute oral toxicity: LD50(Rat): 8260mg/kg
113	7	7	Solvent Red 151	144013-41-1	NA
114	8	8	Solvent Red 168	71832-19-4	Acute oral toxicity: LD50(Rat): 8220mg/kg
115	9	9	Solvent Red 169	27354-18-3	Acute oral toxicity: LD50(Rat): 8230mg/kg
116	10	10	Solvent Red 179	479-27-6	Acute oral toxicity: LD50(Rat): 8260mg/kg
117	11	11	Solvent Red 197	52372-39-1	Acute oral toxicity: LD50(Rat): 8190mg/kg
118	12	12	Solvent Red 207	15958--69-6	NA
119	13	13	Solvent Red 227	2944-28-7	NA
Group-2: Yellow Solvent Dyes = 12					
120	14	1	Solvent Yellow 2	6370-43-0	NA
121	15	2	Solvent Yellow 14	842-07-9	NA
122	16	3	Solvent Yellow 18	6407-78-9	NA
123	17	4	Solvent Yellow 33	8003-22-3	Skin, rabbit: LD50 = >2 gm/kg.
124	18	5	Solvent Yellow 43	19125-99-6	NA
125	19	6	Solvent Yellow 44	2478-20-8	NA
126	20	7	Solvent Yellow 72	61813-98-7	NA
127	21	8	Solvent Yellow 114	7576-65-0	NA
128	22	9	Solvent Yellow 131	71819-82-4	NA
129	23	10	Solvent Yellow 157	27908-75-4	Acute oral toxicity: LD50(Rat): 8200mg/kg
130	24	11	Solvent Yellow 163	106768-99-4	LD50 rat (oral): > 2,000 mg/kg (OECD Guideline 423)
131	25	12	Solvent Yellow 167	N.A.	NA
Group-3: Orange Solvent Dyes = 3					
132	26	1	Solvent Orange 60	61969-47-9	Acute oral toxicity: LD50(Rat): 8090mg/kg
133	27	2	Solvent Orange 63	16294-75-0	Acute oral toxicity: LD50(Rat): 8190mg/kg
134	28	3	Solvent Orange 105	31482-56-1	LD50 Intraperitoneal Rat=3060 MG/KG
Group-4: Blue Solvent Dyes = 6					
135	29	1	Solvent Blue 35	17354-14-	NA

				2		
136	30	2	Solvent Blue 36	14233-37-5		Acute oral toxicity: LD50(Rat): 8080mg/kg
137	31	3	Solvent Blue 97	61969-44-6		Acute oral toxicity: LD50(Rat): 8200mg/kg
138	32	4	Solvent Blue 101	6737-68-8		NA
139	33	5	Solvent Blue 102	15403-56-2		NA
140	34	6	Solvent Blue 104	116-75-6		Not acutely toxic via the oral route (LD50 > 5000 mg/kg bw)
		Group-5: Violet Solvent Dyes = 4				
141	35	1	Solvent Violet 13	81-88-1		LD50 Oral, Rat. >500mg/kg
142	36	2	Solvent Violet 14	67577-84-8		Acute oral toxicity: LD50(Rat): 8110mg/kg
143	37	3	Solvent Violet 38	63512-14-1		NA
144	38	4	Solvent Violet 59	6408-72-6		Acute oral toxicity: LD50(Rat): 8220mg/kg
		Group-6: Green Solvent Dyes = 3				
145	39	1	Solvent Green 3	128-80-3		LD50 = 3660 mg/kg (Rat)
146	40	2	Solvent Green 28	71839-01-5		LD50 = 3660 mg/kg (Rat)
147	41	3	Solvent Green 33	10671-57-8		NA
	Total of Category-B (Group 1 + 2 + 3 + 4 + 5 + 6) = 41				100	
	Category-C: Solvent Dyes					
		Group-1: Red Acid Dyes = 3				
148	1	1	Acid Red 34	6360-67-1		NA
149	2	2	Acid Red 88	1658-31-7		NA
150	3	3	Acid Red 183	6408-31-7		NA
		Group-2: Yellow Acid Dyes = 3				
151	4	1	Acid Yellow 36	587-98-4		ORAL LD50 Rat > 2000 mg/k
152	5	2	Acid Yellow 151	12715-61-6		NA
153	6	3	Acid Yellow 194	61814-52-6	100	NA
		Group-3: Orange Acid Dyes = 2				
154	7	1	Acid Orange 33	6507-77-3		NA
155	8	2	Acid Orange 61	6408-33-9		NA
		Group-4: Blue Acid Dyes = 3				
156	9	1	Acid Blue 40	4474-24-7		NA
157	10	2	Acid Blue 49	N.A.		NA
158	11	3	Acid Blue 80	4474-24-2		Oral, rat: LD50 = 3350

						mg/kg.
			Group-5: Black Acid Dyes = 1			
159	12	1	Acid Black 210	99576-15-5		Rat Oral LD50 (mg/kg) >5000
			Group-6: Brown Acid Dyes=5			
160	13	1	Acid Brown 58	12269-87-3		NA
161	14	2	Acid Brown 126	N.A.		NA
162	15	3	Acid Brown 362	61931-13-3		Acute oral toxicity: LD50(Rat): 8300mg/kg
163	16	4	Acid Brown 425	119509-49-8		NA
164	17	5	Acid Brown 432	119509-50-1		NA
	Total Of Category C =(Group 1+2+3+4+5+6) = 17				100	
	Category-D:Basic Dyes					
			Group-1: Red Basic Dyes=3			
165	1	1	Basic Red 12	6320-14-5		NA
166	2	2	Basic Red 14	12217-48-0		NA
167	3	3	Basic Red 18	14097-03-01		NA
			Group-2: Yellow Basic Dyes=2			
168	4	1	48054	54060-92-3		Acute oral toxicity: LD50(Rat): 200mg/kg
169	5	2	N.A	78181-99-4	100	NA
			Group-3: Orange Basic Dyes=2			
170	6	1	Basic Orange 30	12217-45-7		NA
171	7	2	Basic Orange 33	12217-46-8		NA
			Group-4: Blue Basic Dyes			
172	8	1	Basic Blue 140	61724-62-4		NA
			Group-5: Black Basic Dyes			
173	9	1	Basic Mix Black	NA		NA
	Total Of Category D =(Group 1+2+3+4+5) = 9				100	
	Category-E: Direct Dyes					
			Group-1: Red Basic Dyes=3			
174	1	1	Direct Red 16	07/02/6227		NA
175	2	2	Direct Red 80	08/10/2610		NA
176	3	3	Direct Red 81	09/11/2610	100	NA
			Group-2: Yellow Direct Dyes			
177	4	1	Direct Yellow 11	1325-37-7		NA
178	5	2	Direct Yellow 27	10190-68-		NA

				8		
179	6	3	Direct Yellow 147	71838-49-8		NA
			Group-3: Orange Direct Dyes			
180	7	1	Direct Orange 15	1325-35-5		NA
181	8	2	Direct Orange 102	6598-63-6		NA
			Group-4: Blue Direct Dyes			
182	9	1	Direct Blue 80	12222-00-3		NA
183	10	2	Direct Blue 86	1330-38-7		ORAL RAT LD50:>5 g/kg
			Group-5: Black Direct Dyes			
184	11	1	Direct Black 168	3818-60-8		NA
	Total Of Category E =(Group 1+2+3+4+5) = 11				100	
			Category-f: Disperse Dyes			
			Group-1: Red Disperse Dyes			
185	1	1	Disperse Red 50	12223-35-7		NA
186	2	2	Disperse Red 60	12223-37-9		NA
187	3	3	Disperse Red 91	12223-46-0		NA
188	4	4	Disperse Red 92	12236-11-2		NA
189	5	5	Disperse Red 167	61968-52-3		NA
			Group-2: Yellow Disperse Dyes			
190	6	1	Disperse Yellow 54	12223-85-7		NA
191	7	2	Disperse Yellow 56	54077-16-6		NA
192	8	3	Disperse Yellow 114	61968-66-9		NA
193	9	4	Disperse Yellow 119	57308-41-5	100	NA
194	10	5	Disperse Yellow 211	86836-02-4		NA
			Group-3: Orange Disperse Dyes			
195	11	1	Disperse Orange 25	12223-22-2		Oral (rat) LD50: >2000 mg/kg
196	12	2	Disperse Orange 30	12223-23-3		NA
			Group-4: Blue Disperse Dyes			
197	13	1	Disperse Blue 56	12217-79-7		NA
198	14	2	Disperse Blue 79	12239-34-8		NA
199	15	3	Disperse Blue F2RX (mix)	N.A.		NA
200	16	4	Disperse Blue	N.A.		NA

			F2GX (mix)			
201	17	5	Disperse Blue F2IX (mix)	N.A.		NA
		Group-5: Black Disperse Dyes				
202	18	1	Disperse Black R (mix)	N.A.		NA
203	19	2	Disperse Black RLX (mix)	N.A.		NA
204	20	3	Disperse Black XPX (mix)	N.A.		NA
		Group-6: Green Disperse Dyes				
205	21	1	Disperse Green 2B (mix)	NA		NA
		Group-7: Brown Disperse Dyes				
206	22	1	Disperse Brown 3BS(mix)	NA		NA
		Group-8: Gray Disperse Dyes				
207	23	1	Disperse Gray RBB (mix)	NA		NA
	Total Of Category f			=(Group 1+2+3+4+5+6+7+8) = 23	100	
	Category-G: Reactive Dyes					
		Group-1: Red Reactive Dyes				
208	1	1	Reactive Red 45	12226-22-1		Rat Oral LD50 (mg/kg) >5000
209	2	2	Reactive Red 65	12226-32-3		NA
210	3	3	Reactive Red 111	88232-20-6		NA
211	4	4	Reactive Red 152	71870-80-5		NA
212	5	5	Reactive Red 194	23354-52-1		NA
		Group-2: Yellow Reactive Dyes				
213	6	1	Reactive Yellow 18	12226-48-1		Rat Oral LD50 (mg/kg) >5000
214	7	2	Reactive Yellow 57	61969-35-3	100	NA
215	8	3	Reactive Yellow 81	59112-78-6		Rat Oral LD50 (mg/kg) >5000
216	9	4	Reactive Yellow 135	77907-38-1		NA
217	10	5	Reactive Yellow 160	129898-77-7		NA
		Group-3: Orange Reactive Dyes				
218	11	1	Reactive Orange 12	35642-64-9		NA
219	12	2	Reactive Orange 13	12225-85-3		Rat Oral LD50 [mg/kg] : > 5000
220	13	3	Reactive Orange 84	91261-29-9		NA
221	14	4	Reactive Orange	12220-12-		NA

			122	1		
			Group-4: Blue Reactive Dyes			
222	15	1	Reactive Blue 49	12236-92-9		Rat Oral LD50 (mg/kg) >5000
223	16	2	Reactive Blue 50	12225-61-5		Rat Oral LD50 (mg/kg) >5000
224	17	3	Reactive Blue 69	59800-32-7		NA
225	18	4	Reactive Blue 198	124448-55-1		Rat Oral LD50 (mg/kg) >5000
			Group-5: Black Reactive Dyes			
226	19	1	Reactive Black 5	12225-25-1		LD50 > 2,000 mg/kg (rat)
			Total Of Category G =(Group 1+2+3+4+5) = 19			100
			Category-H: Vat Dyes			
			Group-1: Red Vat Dyes			
227	1	1	Vat Red 1	2379-74-0		NA
			Group-2: Yellow Vat Dyes			
228	2	1	Vat Yellow 2	129-09-9		NA
229	3	2	Vat Yellow 4	128-66-5		NA
230	4	3	Golden Yellow GK	1324-11-4		NA
			Group-3: Orange Vat Dyes			
231	5	1	Vat Orange 1	1324-11-4		NA
232	6	2	Vat Orange 5	3263-31-8		NA
			Group-4: Blue Vat Dyes			
233	7	1	Vat Blue 5	2475-31-2		ipr-rat LD50:5700 mg/kg
			Group-5: Brown Vat Dyes			
234	8	1	Vat Brown 5	398-75-1		NA
			Total Of Category H =(Group 1+2+3+4+5) = 8			100
			Category-I: Naphtho			
235	1	1	NAPHTHOL - AS	92-77-3		NA
236	2	2	NAPHTHOL - ASBO	132-68-3		ipr-rat LD50:7320 mg/kg
237	3	3	NAPHTHOL - ASD	135-61-5		NA
238	4	4	NAPHTHOL - ASOL	135-62-6		NA
239	5	5	NAPHTHOL - ASBS	132-65-9		NA
240	6	6	NAPHTHOL - ASE	92-78-4		NA
241	7	7	NAPHTHOL - ASCL (ASCA)	132-65-9		NA
242	8	8	NAPHTHOL - ASKB	135-63-7		NA
			Total Of Category I = 8			100
			Category-J: Fast Basis			
243	1	1	Bordeaux GP	96-96-8		Oral, rat: LD50 = 14100 mg/kg.
244	2	2	Orange GC	17333-85-		NA

				5		
245	3	3	Red B	97-52-9		Oral, rat: LD50 = 997 mg/kg
246	4	4	Red RC	93-34-5		NA
247	5	5	Red TR	97-35-8		NA
248	6	6	Scarlet RC	27165-17-9		LD50 Oral - Rat - 400 mg/kg
249	7	7	Yellow GC	17333-83		NA
250	8	8	Blue B	119-90-4		NA
251	9	9	Garnet GBC	97-56-3		NA
252	10	10	Black K	64071-88-9		NA
253	11	11	Red KB	2780-35-4		NA
254	12	12	Blue BB	5486-84-0		NA
255	13	13	Red 3GL	89-63-4		LD50 Oral - Rat - 400 mg/kg(4-Chloro-2-nitroaniline)
256	14	14	Orange RD	29362-18-3		NA
257	15	15	Corinth V	47300-91-4		NA
258	16	16	Fast Red G Base	89-62-3		NA
259	17	17	Fast Scarlet R Base	99-59-2		Oral, rat: LD50 = 2250 mg/kg;
Total Of Category J = 17					100	
Category-K: Pyrazolone						
260	1	1	2,5-Dichloro SPMP	84-57-1	100	NA
261	2	2	Ortho Chloro SPMP	88-76-6		NA
262	3	3	1,3-SPMP	119-17-5		NA
263	4	4	1,4-SPMP	89-36-1		NA
264	5	5	PMP	89-25-8		Oral, rat: LD50 = 1915 mg/kg;
Total Of Category K = 5					100	
Category-L: Fast Basis						
65	1	1	3,3-Dichloro Benzidine Dihydrochloride [3,3-DCB]	612-83-9	500	Oral LD50 5628 mg/kg (rat)
266	2	2	Tobias Acid	81-16-3	150	Oral LD50 19400 mg/kg (rat)
267	3	3	4B- Acid	88-44-8	50	LD50 = 11700 mg/kg (Rat)
268	4	4	2B-Acid	88-51-7	50	Oral LD50 1230 mg/kg (rat)
269	5	5	Quinizarine	81-64-1	25	ORAL LD50 Rat > 5000 mg/kg
270	6	6	Chloranil	118-52-2	25	NA
271	7	7	DMSS	6289-46-9	25	LD50 > 15000 mg/kg (Rat)
272	8	8	1-Chloro-1,8-Naphthalic	01/08/4053	25	Oral LD50 3460 mg/kg (rat)

			Anhydride			
273	9	9	1, 8-Diamino Naphthalene	479-27-6	25	Acute oral toxicity (LD50): 800 mg/kg [Rat].
274	10	10	1,5-Dichloro Anthraquinone	82-46-2	25	NA
	Total Of Category L				900	
	Grand Total				2900	

4. Total land area is estimated to be 20,538 sqm. Green belt will be developed in 6,356 sqm out of total project area. The estimated project cost of proposed unit is Rs.20 crore. Total capital cost earmarked towards environmental pollution control measures is Rs. 2.5 Crores and the recurring cost (operation and maintenance) will be about Rs. 3.5 Crores per annum. Total Employment will be 100 persons as direct & indirect for project.

5. There are no National parks, Wildlife sanctuaries, Biosphere reserves, Tiger/Elephant reserves, Wildlife corridors, rivers etc. within 10 km from the project site.

6. The project/activity is covered under category A of item 5(f) 'Synthetic organic chemicals industry' of schedule to the Environment Impact Assessment (EIA) Notification, 2006, and requires appraisal at Central level in the Ministry.

7. The standard ToR for the project was granted on 26th February, 2019. Public hearing for the project was conducted by the State Pollution Control Board on 21st August, 2019. The public hearing was presided over by Additional District Magistrate.

8. Total water requirement is 1001 m³/day of which fresh water requirement of 313 m³/day and will be met from Ground Water. Total wastewater generation will be 720 KL/day (Industrial: 705 KL/day + Domestic: 15 KL/day). 310 KLD of dilute stream of effluent will be sent to RO and RO permeate @ 210 KLD will be reused in process. 490 KLD of Concentrated stream of effluent (Process: 390 KLD + RO Reject: 100 KLD) will be treated in ETP and sent to own MEE, 473 KLD MEE condensate will recycled. 5 KLD of wastewater from cooling will be reuse within premises. Domestic wastewater will be disposed through Septic Tank/Soak Pit.

Power requirement for proposed project will be 2000 KVA and will be met from MGVL. 2 Nos. DG set of 250 KVA capacity shall be used as standby during power failure. Stack (height 11 m) will be provided as per CPCB norms to the proposed DG sets of 250 KVA which will be used as standby during power failure.

Unit shall have one Briquette/Coal fired boiler of 5 TPH and four PNG fired boilers of capacity 2 LakhKcal/Hr, 1 Nos. of 2 LakhKcal/Hr Briquette Thermopack Boiler will be installed. Multi cyclone separator, Dust Collector & Bag filter + Water Scrubber with a stack of height of 32 m will be installed for controlling the Particulate emissions (within statutory limit of 150 mg/Nm³) respectively.

Ten Categories of Hazardous/Solid Wastes shall be generated from this Unit. ETP Dry Sludge @ 480 MT/Annum will be Collected, Stored, Transported and Disposal at nearest TSDF site. Spent Oil @ 1.8KL/Annum will be Collected, Stored, Transported & sale out to registered refineries. Discarded Bags/ containers/ Drums @ 3,60,000Nos./Annum will be Collected, Stored, Decontaminated & Used for in-house packing of some intermediates & ETP wastes, & return back to Raw Material suppliers for same products. MEE Salt @ 3600 MT/Annum will be Collected, Stored, Transported and Disposal at nearest TSDF site. Spent Acid @ 7500 MT/Annum, Spent HCl @ 22800 MT/Annum, Ammonium Carbonate Solution @ 8760 MT/Annum, Sodium Hypo chloride Solution @ 9360 MT/Annum Collected, Stored,

Transported & Reuse in own premises in manufacturing process / Sale to actual user having Rule 9 Permission, Fly Ash from Boiler @ 3600 MT/Annum Collected, Stored, Transported & sent to brick manufacture & Spent Solvent @ 480 MT/Annum Collected, Stored, Transported & Sale to actual user having Rule 9 Permission.

9. The proposal for environmental clearance was considered by the EAC (Industry-2) in its meetings held on 20-22 November, 2019 and 13-15 April, 2020. The project proponent and their consultant M/s Aqua-Air Environmental Engineers Pvt. Ltd. (Hon'ble High Court of Gujarat stay order), made a detailed presentation through Video Conferencing (VC) and have presented the EIA/EMP report. The Committee found the EIA/EMP report to be satisfactory, complying with the ToR, and recommended the project for grant of environmental clearance.

10. The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with EIA/EMP report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent. The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

11. The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data and incremental GLC due to the proposed project within NAAQ standards. The Committee has also deliberated on the public hearing issues, action plan and CER plan and found to be addressing the issues in the study area and the issues raised during the public hearing. Additional information submitted by the project proponent to be satisfactory and addressing the concerns of the Committee. The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have recommended for grant of Environmental Clearance (EC).

12. Based on the proposal submitted by the project proponent and recommendations of the EAC (Industry-2), Ministry of Environment, Forest and Climate Change hereby accords environmental clearance to the project for **setting up of pigments, dyes and synthetic organic chemicals manufacturing unit of capacity 2900 TPM by M/s Cosmic Pigments & Intermediates (Unit-II)** at Survey No. 238, Village Lunej, Taluka Khambhat, District Anand (Gujarat), under the provisions of the EIA Notification, 2006, and the amendments therein, subject to compliance of the terms and conditions as under:-

A. Specific Condition

- (i) Necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, shall be obtained from the State Pollution Control Board.

- (ii) As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises. All the waste water to be collected and to be reused after treatment.
- (iii) Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.
- (iv) National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R.608(E) dated 21st July, 2010 and amended from time to time shall be followed.
- (v) Volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.997% with effective chillers/modern technology.
- (vi) No raw material/solvent prohibited by the concerned regulatory authorities from time to time, shall be used.
- (vii) To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.
- (viii) Solvent management shall be carried out as follows:
 - (a) Reactor shall be connected to chilled brine condenser system.
 - (b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages.
 - (c) Solvents shall be stored in a separate space specified with all safety measures.
 - (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
 - (e) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.
 - (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.
- (ix) Total fresh water requirement shall not exceed 313 cum/day, proposed to be met from ground water. Prior permission in this regard shall be obtained from the concerned regulatory authority/CGWA.
- (x) Process effluent/any wastewater shall not be allowed to mix with storm water. The storm water from the premises shall be collected and discharged through a separate conveyance system. All the vent pipes should be above the roof level.
- (xi) Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps. Raw material and products should be stored in leak proof containers. Spent acid to be stored over the ground tank and to be sent to TSDF.
- (xii) Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.
- (xiii) The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time

to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.

- (xiv) Fly ash should be stored separately as per CPCB guidelines so that it may not adversely affect the air quality. Direct exposure of workers to fly ash and dust should be avoided.
- (xv) The company shall undertake waste minimization measures as below:-
 - (a) Metering and control of quantities of active ingredients to minimize waste.
 - (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
 - (c) Use of automated filling to minimize spillage.
 - (d) Use of Close Feed system into batch reactors.
 - (e) Venting equipment through vapour recovery system.
 - (f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.
- (xvi) The green belt of at least 5-10 m width shall be developed in in not less than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.
- (xvii) As proposed 5% of the total project cost shall be allocated towards Corporate Environment Responsibility (CER). As proposed, and the CER allocation shall be spent mainly for addressing the issues (social, health, employment, infrastructure, Drinking water facility, skill development, plantation etc) raised during public consultation/hearing.
- (xviii) Preference shall be given to local villagers for employment in the unit. For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
- (xix) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.
- (xx) Occupational health surveillance including dental check up of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- (xxi) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For ZLD, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

B. General Conditions:

- (i) The Project Proponent shall obtain all other statutory/necessary permissions/recommendations/NOCs prior to start of construction/operation of the project, which *inter alia* include, permission/approvals under the Forest (Conservation) Act, 1980; the Wildlife (Protection) Act, 1972; the Coastal Regulation Zone Notification, 2019, as amended from time to time, and other Office

Memoranda/Circular issued by the Ministry of Environment, Forest and Climate Change from time to time, as applicable to the project.

- (ii) The project proponent shall ensure compliance of 'National Emission Standards', as applicable to the project, issued by the Ministry from time to time. The project proponent shall also abide by the rules/regulations issued by the CPCB/SPCB for control/abatement of pollution.
- (iii) The project authorities shall adhere to the stipulations made by the State Pollution Control Board/Committee, Central Pollution Control Board, State Government and any other statutory authority.
- (iv) The project proponent shall prepare a site specific conservation plan and wildlife management plan in case of the presence of Schedule-1 species in the study area, as applicable to the project, and submit to Chief Wildlife Warden for approval. The recommendations shall be implemented in consultation with the State Forest/Wildlife Department in a time bound manner.
- (v) No further expansion or modifications in the plant, other than mentioned in the EIA Notification, 2006 and its amendments, shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
- (vi) The energy source for lighting purpose shall be preferably LED based, or advance having preference in energy conservation and environment betterment.
- (vii) The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one station each is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.
- (viii) The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.
- (ix) The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
- (x) The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and to utilize the same for process requirements.
- (xi) Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.
- (xii) The company shall also comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.
- (xiii) The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CER activities shall be undertaken by involving local villages and administration and shall be implemented.
- (xiv) The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
- (xv) A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area)

equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

- (xvi) The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.
- (xvii) A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.
- (xviii) The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.
- (xix) The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.
- (xx) The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry and at <https://parivesh.nic.in/>. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.
- (xxi) The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.
- (xxii) This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.

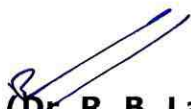
13. The Ministry reserves the right to stipulate additional conditions, if found necessary at subsequent stages and the project proponent shall implement all the said conditions in a time bound manner. The Ministry may revoke or suspend the environmental clearance, if implementation of any of the above conditions is not found satisfactory.

14. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

15. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

16. The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 read with subsequent amendments therein.

17. This issues with the approval of the competent authority.


(Dr. R. B. Lal)
Scientist 'E'/Additional Director
(Dr. R. B. Lal)
वैज्ञानिक 'ई' / Scientist 'E'
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
Min. of Environment, Forest and Climate Change
भारत सरकार, नई दिल्ली
Govt. of India, New Delhi

Copy to: -

1. The Principal Secretary, Forests & Environment Department, Government of Gujarat, Sachivalaya, 8th Floor, **Gandhi Nagar** - 382 010 (Gujarat)
2. The Dy. Director General of Forest (Western Zone), MoEF&CC, Regional Office, E-5, Arera Colony, Link Road -3, Ravishankar Nagar, **Bhopal** - 462 016 (MP)
3. The Member Secretary, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, **Delhi** -32
4. The Member Secretary, Gujarat Pollution Control Board, Paryavaran Bhawan, Sector 10 A, **Gandhi Nagar**-382 043 (Gujarat)
5. Monitoring Cell, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, **New Delhi** - 3
6. Member Secretary, Central Ground Water Authority, 18/11, Jamnagar House, Man Singh Road, **New Delhi**-110011
7. District Collector, **Anand**, (Gujarat)
8. Guard File/Record File/Monitoring File/Website of MoEF&CC


(Dr. R. B. Lal)
Scientist 'E'/Additional Director