TAGROS CHEMICALS INDIA PVT. LTD.

385601 LOG SHEET OF MEE 1st STAGE

DATE - 11/11/2021

5599

Time	S.P.G.R		Feed rate (M3/hr)	PH	Steam flow rate	Steam totalizer	Cond Out ltr/hr	Steam Hader Pr.	Steam Pressure
	Initial	Final							TVR
7:00	1.10	1.22	385626	8.40	4070	628691	326257	6.3	6.6
8:00	1.10	1.22	385652	8.62	4082	632776	326279	6.4	6.1
9:00	1.10	1.22	385678	8.55	4065	636815	326300	6.3	6.1
10:00	1.10	1.22	385701	8.60	4072	640897	326321	6.5	6.2
11:00	1.10	1.22	385726	8.30	4052	644967	326343	6.5	6.2
12:00	1.10	1.22	385751	8.43	4065	649092	326365	6.6	6.0
13:00	1.10	1.22	385777	8.25	4043	653134	326386	6.4	5.8
14:00	1.10	1.22	385803	8.41	4082	657072	326407	6.6	5.8
15:00	1.10	1.22	385828	8.83	4085	661176	326430	6.5	6.1
16:00	1.10	1.22	385854	8.12	4073	665267	326453	6.3	6.2
17:00	1.10	1.22	385880	8.12	4029	669370	326476	6.6	6.0
18:00	1.10	1.22	385906	8.25	4055	673471	326496	6.4	5.9
19:00	1.10	1.22	385932	8.30	4043	677575	326522	6.3	5.9
20:00	1.10	1.22	385958	8.43	4082	681609	326544	6.2	5.8
21:00	1.10	1.22	385985	8.30	4070	685647	326566	6.4	5.9
22:00	1.10	1.22	386011	8.42	4043	689708	326588	6.4	6.0
23:00	1.10	1.22	386037	8.52	4029	693768	326610	6.3	6.1
0:00	1.10	1.22	386063	8.42	4070	697838	326633	6.5	6.0
1:00	1.10	1.22	386089	8.60	4065	701903	326655	6.4	5.9
2:00	1.10	1.22	386115	8.48	4062	705965	326678	6.3	5.8
3:00	1.10	1.22	386142	8.51	4039	710033	326701	6.5	5.9
4:00	1.10	1.22	386168	8.56	4120	714098	326723	6.5	6.1
5:00	1.10	1.22	386195	8.49	4065	718163	326745	6.4	6.0
6:00	1.10	1.22	386221	8.36	4081	722244	326768	6.3	6.0

	1st Shift	2nd Shift	3rd Shift	Sup. Sign
Operator Name	Rakesh	Ambika	Rakesh	
Supervisor Name	Sanjay	Amit yadav	Anil Rai	

REMARK -

TAGROS CHEMICALS INDIA PVT. LTD.

LOG SHEET OF MEE 1st STAGE

DATE - 11/11/2021

Time	Calendriya Temperature					Cooling Tower Temp °C		Vaccum in mm Hg				
	1	2	3	4	5	In	Out	VLS1	VLS2	VLS3	VLS4	VLS5
7:00	99	96	84	76	64	32	42	90	260	360	440	580
8:00	98	95	83	77	63	32	42	90	250	370	450	580
9:00	98	94	84	76	64	33	42	80	250	360	660	570
10:00	99	94	84	77	64	33	43	80	250	360	440	570
11:00	98	95	83	76	64	33	43	80	250	360	430	570
12:00	98	95	84	76	64	34	43	90	260	350	430	580
13:00	99	95	83	76	65	33	42	90	260	350	440	580
14:00	98	95	84	77	65	34	42	80	260	350	440	580
15:00	98	94	83	77	64	34	43	90	260	350	450	570
16:00	99	94	83	76	63	34	44	90	250	350	450	570
17:00	99	93	84	76	63	34	44	80	250	350	450	570
18:00	98	94	84	76	63	34	44	80	250	360	450	580
19:00	99	94	84	77	64	34	44	80	260	360	450	570
20:00	99	94	83	77	64	33	43	80	260	360	440	570
21:00	98	93	83	77	63	33	44	90	260	360	440	570
22:00	98	95	84	76	63	32	43	90	250	358	450	580
23:00	97	94	83	76	63	32	43	90	250	350	440	580
0:00	99	95	85	76	64	32	42	80	260	360	440	580
1:00	98	94	84	77	62	32	42	80	250	356	460	570
2:00	97	93	86	75	63	33	43	90	250	350	652	580
3:00	100	95	82	76	63	33	44	80	240	350	660	580
4:00	99	92	81	77	64	33	44	70	260	340	640	570
5:00	97	91	85	74	63	32	42	90	250	360	650	580
6:00	98	92	82	75	62	32	42	80	250	350	660	580

SUMMARY	1st Shift	2nd Shift	3rd Shift	TOTAL	
TOTAL FEED -	209 kl	208 kl	210 kl	620 kl	
TOTAL STEAM -	33.643 MT	32.636 M.T	32.536 MT	98815 MT	
TOTAL CONDENCE	150 kl	181 kl	224 kl	555 kl	
TOTAL ML	88 kl	60 kl	19 kl	164 kl	
RECOVERY	64.1.	75.1.	92.1.	77.1.	

5600

TAGROS CHEMICALS INDIA PVT. LTD.

LOG SHEET OF MEE 1st STAGE

DATE - 12.1.21

5601

Time	S.P.G.R Initial	S.P.G.R Final	Feed rate (M3/hr) 386221	PH	Steam flow rate	Steam totalizer 722244	Cond. Out ltr/hr 326768	Steam Hader Pr.	Steam Pressure TVR
7:00	1.10	1.22	388244	7.84	4108	726352	326790	6.4	5.4
8:00	1.10	1.22	386268	7.92	4112	730464	326812	6.4	5.4
9:00	1.10	1.22	386292	8.06	4096	734576	326832	6.3	5.3
10:00	1.10	1.22	386317	8.14	4083	738672	326856	6.4	5.4
11:00	1.10	1.22	386342	8.11	4031	742755	326878	6.5	5.4
12:00	1.10	1.22	386367	8.19	3878	746786	326901	6.4	5.4
13:00	1.10	1.22	386392	8.21	4016	750664	326924	6.4	5.3
14:00	1.10	1.22	386417	8.32	4068	754680	326942	6.4	5.3
15:00	1.10	1.22	386442	8.01	4068	758735	326969	6.4	5.8
16:00	1.10	1.22	386467	8.21	4063	762870	326991	6.5	5.4
17:00	1.10	1.22	386492	8.4	4155	767003	327013	6.4	5.5
18:00	1.10	1.22	386517	8.24	4170	771138	327035	6.3	5.9
19:00	1.10	1.22	386542	8.10	4133	775219	327057	6.5	5.4
20:00	1.10	1.22	386567	8.38	4081	779351	327080	6.4	5.8
21:00	1.10	1.22	386592	8.40	4112	783432	327103	6.5	5.4
22:00	1.10	1.22	386617	8.12	4092	787547	327125	6.4	5.8
23:00	1.10	1.22	386642	8.40	4012	791617	327148	6.3	5.5
0:00	1.10	1.22	386667	8.25	4138	795747	327171	6.2	5.6
1:00	1.10	1.22	386692	8.38	4065	799812	327194	6.4	5.7
2:00	1.10	1.22	386718	8.41	4045	803724	327217	6.5	5.6
3:00	1.10	1.22	386743	8.25	4030	807634	327240	6.6	5.7
4:00	1.10	1.22	386768	8.40	4038	811559	327263	6.4	6.5
5:00	1.10	1.22	386793	8.25	4025	815474	327286	6.3	6.5
6:00	1.10	1.22	386819	8.18	4098	819374	327309	6.4	6.6

	1st Shift	2nd Shift	3rd Shift	Sup. Sign
Operator Name	Ankit K9	Rakesh	Rakesh	
Supervisor Name	Amit	Sanjay	Amit	

REMARK -

TAGROS CHEMICALS INDIA PVT. LTD.

LOG SHEET OF MEE 1st STAGE

DATE - 12/11/21

Time	Calendriya Temperature					Cooling Tower Temp °C		Vaccum in mm Hg				
	1	2	3	4	5	In	Out	VLS1	VLS2	VLS3	VLS4	VLS5
7:00	98	93	84	76	64	32	45	80	230	360	460	590
8:00	101	92	83	75	63	32	45	90	210	380	470	570
9:00	99	94	85	76	64	32	45	80	220	370	450	560
10:00	101	92	82	75	62	32	45	90	240	380	490	580
11:00	100	93	84	74	64	32	45	80	210	360	460	590
12:00	99	91	83	76	66	31	45	90	230	380	440	580
13:00	99	90	81	78	65	31	45	90	240	370	460	580
14:00	101	93	82	76	64	31	45	80	210	360	450	580
15:00	99	92	82	76	69	31	45	90	220	380	460	590
16:00	99	92	81	75	68	31	45	80	230	380	470	580
17:00	100	92	82	75	68	31	45	80	230	380	460	590
18:00	100	92	82	75	69	32	45	90	230	370	470	590
19:00	101	93	81	76	70	32	45	90	220	370	470	580
20:00	100	92	83	77	70	32	46	80	220	380	480	580
21:00	99	93	81	76	70	32	45	80	230	370	480	580
22:00	100	92	81	76	70	32	45	80	220	380	480	590
23:00	99	91	80	75	70	32	45	90	230	370	480	580
0:00	99	92	82	76	70	32	45	90	240	360	450	590
1:00	99	92	81	76	69	32	45	80	240	360	470	590
2:00	98	93	81	76	70	32	45	90	230	380	470	580
3:00	99	93	86	77	71	32	45	90	230	380	480	580
4:00	99	91	82	77	71	32	45	90	230	390	450	590
5:00	100	92	83	76	70	32	45	80	240	360	460	590
6:00	99	92	81	76	70	32	45	80	230	370	470	580

SUMMARY	1st Shift	2nd Shift	3rd Shift	TOTAL
TOTAL FEED -	196	200	202	598
TOTAL STEAM -	33436	32.867	31.827	97.130
TOTAL CONDENCE	198	179	184	541
TOTAL ML	50.23	53.87	50.17	154.48
RECOVERY	74.26 %	73.07 %	75.33 %	74.22 %

5602

5603

TAGROS CHEMICALS INDIA PVT. LTD.

LOG SHEET OF MEE 1st STAGE

DATE - 13/11/2021

Time	Calendriya Temperature					Cooling Tower Temp °C		Vaccum in mm Hg				
	1	2	3	4	5	In	Out	VLS1	VLS2	VLS3	VLS4	VLS5
7:00	100	92	82	76	70	32	45	90	240	360	460	580
8:00	100	93	82	77	69	32	45	90	230	380	470	590
9:00	99	91	83	77	69	33	44	80	230	360	460	580
10:00	98	91	81	76	70	32	44	80	220	370	460	580
11:00	99	92	81	75	69	32	44	80	230	360	470	590
12:00												
13:00												
14:00												
15:00												
16:00				CIP Done								
17:00												
18:00												
19:00				Plant Start at 2:30AM								
20:00												
21:00												
22:00												
23:00												
0:00												
1:00												
2:00												
3:00	95	87	78	70	64	31	44	90	220	340	450	570
4:00	96	89	78	68	63	31	44	90	216	340	460	570
5:00	96	89	78	70	64	31	44	80	210	330	460	580
6:00	97	90	79	71	63	32	45	80	220	350	450	570

SUMMARY	1st Shift	2nd Shift	3rd Shift	TOTAL
TOTAL FEED -	128 KL		95 KL	223 KL
TOTAL STEAM -	20.289 m·T		15.355 m·T	35.644 m·T
TOTAL CONDENCE	96 KL		90 KL	186 KL
TOTAL ML	52 KL		20 KL	73 KL
RECOVERY	65%		82%	72%

TAGROS CHEMICALS INDIA PVT. LTD.

386819 LOG SHEET OF MEE 1st STAGE 819374 DATE - 13/11/2021

Time	S.P.G.R Initial	S.P.G.R Final	Feed rate (M3/hr)	PH	Steam flow rate	Steam totalizer	Cond Out ltr/hr 327409	Steam Hader Pr.	Steam Pressure TVR
7:00	1.10	1.22	386845	8.41	4073	823319	327409	6.3	5.8
8:00	1.10	1.22	386870	8.25	4118	827279	327432	6.2	5.7
9:00	1.10	1.22	386896	8.36	4093	831529	327456	6.5	5.6
10:00	1.10	1.22	386922	8.57	4125	835633	327480	6.4	5.4
11:00	1.10	1.22	386947	8.42	4038	839663	327505	6.5	5.4
12:00									
13:00			Plant stab.	Time -	(11:15)		CIP		
14:00									
15:00									
16:00									
17:00									
18:00			CIP Done						
19:00									
20:00									
21:00			Plant to stat at 9:30 P.M.						
22:00									
23:00									
0:00									
1:00									
2:00	—	—	387142	8.32		841416	327548	6.3	6.0
3:00	1.10	1.22	387161	8.30	3140	844544	327570	6.4	5.9
4:00	1.10	1.22	387187	8.32	4055	848564	327593	6.5	6.2
5:00	1.10	1.22	387212	8.64	4070	852635	327615	6.5	6.2
6:00	1.10	1.22	387237	8.38	4038	856771	327638	6.4	6.3

	1st Shift	2nd Shift	3rd Shift	Sup. Sign
Operator Name	Rakesh.	Ambika	Ambika	
Supervisor Name	Anil	Sanjay	Amit	

REMARK -

5604

5605

TAGROS CHEMICALS INDIA PVT. LTD.

LOG SHEET OF MEE 1st STAGE

DATE - 14/11/2021

Time	S.P.G.R Initial	S.P.G.R Final	Feed rate (M3/hr) 387237	PH	Steam flow rate	Steam totalizer	Cond Out ltr/hr 327688	Steam Hader Pr.	Steam Pressure TVR
7:00	1.10	1.22	387260	8.3	3955	860726	327680	6.5	6.5
8:00	1.10	1.22	387283	8.3	3957	864683	327683	6.5	6.5
9:00	1.11	1.23	387307	8.4	3955	868638	327705	6.5	6.5
10:00	1.11	1.23	387332	8.4	4016	872654	327723	6.4	6.5
11:00	1.10	1.22	387357	8.4	3992	876646	327745	6.4	6.4
12:00	1.10	1.22	387383	8.5	4066	880712	327768	6.4	6.4
13:00	1.11	1.23	387410	8.5	4072	884784	327790	6.5	6.5
14:00	1.11	1.22	387435	8.4	4031	888815	327812	6.3	6.5
15:00	1.10	1.22	387460	8.3	4020	892887	327834	6.4	6.5
16:00	1.10	1.23	387484	8.2	4112	896999	327857	6.5	6.4
17:00	1.10	1.22	387511	8.3	3820	900054	327880	6.4	6.5
18:00	1.10	1.22	387537	8.2	4125	904166	327903	6.3	6.5
19:00	1.10	1.22	387563	8.4	4210	908581	327926	6.2	6.4
20:00	1.10	1.22	387589	8.3	4155	913006	327949	6.5	6.5
21:00	1.10	1.22	387615	8.2	4170	917371	327971	6.3	6.4
22:00	1.10	1.22	387640	8.3	4220	921423	327994	6.5	6.3
23:00	1.10	1.22	387665	8.4	4078	925585	328016	6.3	5.7
0:00	1.10	1.22	387690	8.5	4112	929603	328038	6.4	5.4
1:00	1.10	1.22	387715	8.6	4015	933782	328059	6.5	5.5
2:00	1.10	1.22	387740	8.5	4112	937853	328080	6.4	5.6
3:00	1.10	1.22	387765	8.4	4162	941955	328102	6.5	5.7
4:00	1.10	1.22	387791	8.6	4110	946065	328124	6.3	5.4
5:00	1.10	1.22	387817	8.2	4112	950177	328145	6.5	5.6
6:00	1.10	1.22	387843	8.3	4140	954258	328167	6.3	5.2

	1st Shift	2nd Shift	3rd Shift	Sup. Sign
Operator Name	ANIKA	Rakesh	Rakesh	
Supervisor Name	Anil-ji	Sanjay	Anil	

REMARK -

TAGROS CHEMICALS INDIA PVT. LTD.

LOG SHEET OF MEE 1st STAGE

DATE - 14/11/2021

Time	Calendriya Temperature					Cooling Tower Temp °C		Vaccum in mm Hg				
	1	2	3	4	5	In	Out	VLS1	VLS2	VLS3	VLS4	VLS5
7:00	98	89	79	71	65	32	45	90	210	370	460	600
8:00	99	89	78	72	66	32	45	90	210	360	460	610
9:00	98	90	78	72	65	32	44	90	220	360	470	610
10:00	98	91	79	72	65	31	44	80	220	370	470	620
11:00	97	90	79	71	64	31	46	80	230	370	480	630
12:00	99	92	80	71	65	32	45	90	210	360	480	630
13:00	98	92	80	72	65	32	46	95	220	360	480	620
14:00	98	91	79	72	66	33	46	95	220	370	490	620
15:00	94	90	81	72	65	32	45	90	220	370	480	610
16:00	97	90	82	74	66	33	44	80	230	370	480	620
17:00	98	91	81	73	68	32	46	90	220	380	470	640
18:00	98	90	81	72	67	33	44	80	230	360	480	630
19:00	97	90	80	74	68	32	45	90	240	370	410	620
20:00	98	91	80	74	66	33	46	80	220	380	470	630
21:00	98	90	81	72	69	32	45	90	230	360	480	620
22:00	97	91	80	75	68	32	44	80	220	370	460	640
23:00	97	90	81	76	69	33	45	80	230	380	470	580
0:00	98	90	80	75	69	33	45	80	240	370	470	590
1:00	99	91	81	75	69	33	45	90	230	360	480	580
2:00	98	91	80	76	70	33	45	90	240	360	450	590
3:00	99	90	81	75	70	33	45	80	250	350	460	580
4:00	98	91	81	75	70	33	45	80	230	360	460	590
5:00	99	92	80	75	71	33	45	90	250	360	470	590
6:00	99	90	81	76	71	33	45	90	230	360	460	590

SUMMARY	1st Shift	2nd Shift	3rd Shift	TOTAL
TOTAL FEED -	198 KL	205 KL	203 KL	606 KL
TOTAL STEAM -	3244 MT	32.608 MT	32.835 MT	97.687 MT
TOTAL CONDENCE	3 174 KL	187 KL	173 KL	529 KL
TOTAL ML	56 KL	55.61 KL	62.84 KL	174.49 KL
RECOVERY	71.69 %	72.87 %	69.05 %	71.207 %

9095

5607

TAGROS CHEMICALS INDIA PVT. LTD.

LOG SHEET OF MEE 1st STAGE

DATE - 15/11/21

Time	Calendriya Temperature					Cooling Tower Temp °C		Vaccum in mm Hg				
	1	2	3	4	5	In	Out	VLS1	VLS2	VLS3	VLS4	VLS5
7:00	99	90	81	72	66	32	44	290	240	370	470	620
8:00	99	92	82	71	63	32	44	90	210	360	460	610
9:00	98	91	82	70	62	34	45	80	230	360	450	620
10:00	98	90	80	72	63	33	45	95	230	340	450	640
11:00	99	89	83	72	65	33	46	100	220	350	470	640
12:00	97	89	83	73	65	34	46	90	240	350	460	640
13:00	98	91	85	73	67	32	45	90	240	340	460	650
14:00	96	90	85	74	65	32	45	80	230	350	450	640
15:00	97	92	84	74	63	33	46	100	220	350	440	630
16:00	96	91	84	72	63	33	46	90	220	340	430	650
17:00	98	91	89	71	65	34	45	90	210	350	440	640
18:00	99	92	81	72	67	33	45	95	240	340	450	640
19:00	101	90	81	71	67	34	44	90	240	350	420	670
20:00	97	90	83	69	68	34	45	100	230	350	440	650
21:00	100	91	80	70	67	34	45	90	240	370	450	660
22:00	99	93	82	72	69	33	44	80	240	350	450	670
23:00	100	92	81	71	67	32	44	90	220	360	460	640
0:00	101	92	82	70	68	32	44	90	230	350	450	650
1:00	99	91	80	70	67	34	46	80	220	340	440	640
2:00	98	90	81	72	69	33	45	90	240	350	450	650
3:00	99	91	83	73	66	33	45	100	220	350	450	650
4:00	96	90	82	74	65	33	44	90	210	340	440	640
5:00	97	89	80	72	67	32	44	80	230	360	460	660
6:00	98	88	82	71	65	32	45	80	220	340	440	650

SUMMARY	1st Shift	2nd Shift	3rd Shift	TOTAL
TOTAL FEED -	186 KL	190 KL	196 KL	572 KL
TOTAL STEAM -	31735 MT	32464 MT	32288 MT	96527 MT
TOTAL CONDENCE	176 KL	170 KL	168 KL	514 KL
TOTAL ML	39 KL	52 KL	61 KL	152 KL
RECOVERY	85 %.	85 %.	85 %.	85 %.

TAGROS CHEMICALS INDIA PVT. LTD.

LOG SHEET OF MEE 1st STAGE

DATE - 15/11/21

Time	S.P.G.R		387843 Feed rate (M3/hr)	PH	Steam flow rate	954258 Steam totalizer	328167 Cond Out ltr/hr	Steam Hader Pr.	Steam Pressure
	Initial	Final							TVR
7:00	1.10	1.22	387864	8.41	4012	958170	328189	6.4	6.4
8:00	1.10	1.22	387885	8.42	4055	962132	328211	6.4	6.4
9:00	1.11	1.21	387906	8.51	4048	965699	328234	6.5	6.5
10:00	1.10	1.22	387931	8.55	4112	969821	328256	6.5	6.5
11:00	1.11	1.23	387956	8.37	4055	973893	328279	6.4	6.4
12:00	1.10	1.22	387980	8.38	4091	977985	328300	6.4	6.5
13:00	1.10	1.21	388004	8.41	4112	981973	328322	6.5	6.5
14:00	1.11	1.21	388029	8.43	4062	986033	328345	6.5	6.5
15:00	1.12	1.22	388054	8.21	4081	990114	328367	6.5	5.5
16:00	1.10	1.21	388077	8.29	4116	994230	328389	6.4	5.3
17:00	1.12	1.23	388102	8.31	4084	998314	328410	6.5	5.3
18:00	1.11	1.22	388126	8.34	4084	002377	328431	6.4	5.4
19:00	1.10	1.22	388150	8.36	4065	006448	328453	6.4	5.3
20:00	1.10	1.21	388173	8.29	4015	010459	328473	6.4	5.4
21:00	1.10	1.22	388196	8.34	4023	014474	328494	65	5.3
22:00	1.11	1.22	388219	8.41	3992	018497	328515	6.4	5.3
23:00	1.11	1.22	388243	8.25	3967	22489	328535	6.5	5.5
0:00	1.10	1.21	388267	8.30	4012	26482	328556	6.6	5.6
1:00	1.11	1.21	388292	8.36	3990	30472	328577	6.5	5.5
2:00	1.11	1.22	388317	8.28	3991	34468	328599	6.4	5.4
3:00	1.12	1.23	388341	8.38	4078	38546	328620	6.4	5.4
4:00	1.11	1.22	388366	8.15	4097	42607	328641	6.5	5.5
5:00	1.11	1.22	388391	8.24	4061	46704	328662	6.5	5.5
6:00	1.10	1.22	388415	8.29	4081	50785	328683	6.5	5.4

	1st Shift	2nd Shift	3rd Shift	Sup. Sign
Operator Name	Ambika	Rakesh	Rakesh	
Supervisor Name	Sanjay	Amit	Amit	

REMARK -

5608

5609

TAGROS CHEMICALS INDIA PVT. LTD.

LOG SHEET OF MEE 1st STAGE

DATE - 16/11/2021

Time	Calendriya Temperature					Cooling Tower Temp °C		Vaccum in mm Hg				
	1	2	3	4	5	In	Out	VLS1	VLS2	VLS3	VLS4	VLS5
7:00	100	93	81	75	70	33	44	90	230	360	460	590
8:00	101	94	82	76	71	32	42	80	220	350	450	580
9:00	101	92	80	74	70	32	42	90	240	360	450	580
10:00	99	91	81	74	69	33	44	90	230	370	460	570
11:00	98	92	82	75	69	33	43	80	220	340	450	540
12:00	99	95	83	76	71	32	43	80	240	350	440	530
13:00	100	94	82	73	70	32	42	90	230	350	460	550
14:00	101	91	80	72	68	32	42	80	220	360	460	540
15:00	100	90	80	72	68	33	42	90	220	370	450	520
16:00	98	92	81	73	69	33	44	80	240	360	450	540
17:00	97	93	83	74	70	32	44	90	230	360	470	550
18:00	97	94	83	75	71	32	43	80	220	350	470	550
19:00	98	91	80	72	68	32	43	90	230	340	460	560
20:00	99	93	81	74	69	33	42	90	230	360	460	570
21:00	100	95	82	75	69	32	44	80	240	350	450	550
22:00	98	92	82	75	70	33	42	80	220	340	440	540
23:00	97	93	86	72	65	32	43	86	230	350	430	596
0:00	99	95	82	73	6.5	33	42	90	230	340	450	580
1:00	99	92	80	73	6.6	33	43	90	220	350	440	560
2:00	98	91	81	70	65	32	43	80	230	340	450	570
3:00	100	92	82	73	64	32	44	90	230	340	450	580
4:00	99	92	82	73	66	33	42	80	230	350	440	560
5:00	101	93	80	72	67	32	43	90	220	350	450	570
6:00	98	92	81	73	67	33	42	90	220	340	450	580

SUMMARY	1st Shift	2nd Shift	3rd Shift	TOTAL	
TOTAL FEED -	189 KL	200 KL	191 KL	580 KL	
TOTAL STEAM -	32.011 M.T	32.250 M.T	31.824 M.T	96.184 M.T	
TOTAL CONDENCE	41 KL	Not Working	163 KL	204 KL	
TOTAL ML			60 KL		
RECOVERY			73%		

TAGROS CHEMICALS INDIA PVT. LTD.

LOG SHEET OF MEE 1st STAGE

DATE - 16/11/2021

Time	S.P.G.R		Feed rate (M3/hr)	PH	Steam flow rate	Steam totalizer	Cond Out lit/hr	Steam Hader Pr.	Steam Pressure
	Initial	Final							TVR
7:00	1.10	1.22	388439	8.16	4036	544821	328703	6.5	5.4
8:00	1.10	1.22	388463	8.14	4038	58859	328724	6.4	5.3
9:00	1.10	1.22	388488	8.25	4038	62897		6.6	5.6
10:00	1.10	1.22	388512	8.20	4063	66960		6.5	5.4
11:00	1.10	1.22	388537	8.18	4081	71041		6.5	5.4
12:00	1.10	1.22	388561	8.14	3942	74983		6.4	5.5
13:00	1.10	1.22	388586	8.21	4017	79000		6.6	5.6
14:00	1.10	1.22	388604	8.26	3796	82796		6.3	5.4
15:00	1.10	1.22	388633	8.35	4092	86878		6.5	5.5
16:00	1.10	1.22	388657	8.42	4061	90938		6.4	5.3
17:00	1.10	1.22	388682	8.30	4047	94938		6.5	5.4
18:00	1.10	1.22	388707	8.26	4012	98995		6.3	5.5
19:00	1.10	1.22	388731	8.21	4063	103020		6.3	5.3
20:00	1.10	1.22	388755	8.19	4044	107042		6.5	5.5
21:00	1.10	1.22	388780	8.36	4077	111034		6.4	5.2
22:00	1.10	1.22	388804	8.26	4038	115046	328801	6.5	5.3
23:00	1.10	1.22	388827	8.35	3820	118864	328821	6.5	5.5
0:00	1.10	1.22	388850	8.42	3945	122764	328843	6.4	5.3
1:00	1.10	1.22	388874	8.33	3820	126884	328861	6.4	5.4
2:00	1.10	1.22	388895	8.35	3925	131120	328882	6.5	5.3
3:00	1.10	1.22	388921	8.60	4035	135150	328903	6.5	5.4
4:00	1.10	1.22	388947	8.35	4025	138630	328922	6.4	5.3
5:00	1.10	1.22	388971	8.42	3120	142950	328943	6.3	5.2
6:00	1.10	1.22	388995	8.32	3820	146876	328964	6.2	5.2

Cond Meter not working

	1st Shift	2nd Shift	3rd Shift	Sup. Sign
Operator Name	Rakesh	Rakesh	Ambika	
Supervisor Name	Sanjay	Amit	Amit	

REMARK - Cond Meter not working

5610

TAGROS CHEMICALS INDIA PVT. LTD.

LOG SHEET OF MEE 1st STAGE

DATE - 17/11/21

5611

Time	S.P.G.R		Feed rate (M3/hr)	PH	Steam flow rate	Steam totalizer	Cond Out ltr/hr	Steam Hader Pr.	Steam Pressure
	Initial	Final							TVR
7:00	1.10	1.22	389024	8.11	4120	150920	328984	6.4	5.3
8:00	1.10	1.22	389047	8.14	4220	155220	329003	6.4	5.3
9:00	1.10	1.22	389070	8.19	4170	159420	329023	6.5	5.4
10:00	1.10	1.22	389093	8.22	3920	163540	329044	6.4	5.3
11:00	1.10	1.22	389116	8.11	3645	167660	329065	6.4	5.3
12:00	1.10	1.22	389139	8.24	3342	171880	329085	6.3	5.4
13:00	1.10	1.22	389163	8.21	3920	175805	329107	6.4	5.4
14:00	1.10	1.22	389187	8.29	3645	179520	329128	6.4	5.3
15:00	1.10	1.22	389217	8.35	3342	182254	329148	4.8	5.2
16:00	1.10	1.22	389240	8.41	3742	185994	329169	5.3	5.8
17:00	1.10	1.22	389262	8.50	4053	190049	329190	6.4	3.7
18:00	1.10	1.22	389284	8.50	4085	194134	329210	6.5	3.7
19:00	1.10	1.22	389307	8.21	3812	197924	329232	6.9	5.8
20:00	1.10	1.22	389330	8.40	3870	201722	329252	6.5	5.7
21:00	1.10	1.22	389353	8.41	4015	205805	329273	6.3	5.7
22:00	1.10	1.22	389377	8.29	4055	209517	329295	6.3	5.1
23:00	1.10	1.22	389402	8.20	4060	213577	329316	6.5	5.6
0:00	1.10	1.22	389426	8.32	4064	217741	329338	6.5	5.5
1:00	1.10	1.22	389457	8.41	4058	221699	329356	6.4	5.4
2:00	1.10	1.22	389476	8.36	4081	225761	329371	6.5	5.5
3:00	1.10	1.22	389500	8.25	4018	229842	329393	6.3	5.3
4:00	1.10	1.22	389524	8.19	4015	233867	329414	6.5	5.7
5:00	1.10	1.22	389549	8.28	4028	237873	329428	6.3	5.4
6:00	1.10	1.22	389573	8.22	4032	241901	329447	6.4	5.5

	1st Shift	2nd Shift	3rd Shift	Sup. Sign
Operator Name				
Supervisor Name				

REMARK -

TAGROS CHEMICALS INDIA PVT. LTD.

LOG SHEET OF MEE 1st STAGE

DATE - 17/11/21

Time	Calendriya Temperature					Cooling Tower Temp °C		Vaccum in mm Hg				
	1	2	3	4	5	In	Out	VLS1	VLS2	VLS3	VLS4	VLS5
7:00	100	88	84	71	63	99	45	90	220	360	430	540
8:00	99	89	83	75	65	32	44	60	220	350	420	530
9:00	99	89	83	75	65	33	45	90	230	360	430	560
10:00	98	88	84	74	66	32	44	80	230	350	440	580
11:00	99	90	85	75	68	33	45	90	240	360	450	580
12:00	100	91	85	75	65	32	45	90	240	380	450	590
13:00	99	91	84	76	65	32	44	80	230	350	450	590
14:00	98	88	81	75	62	33	46	90	230	350	450	580
15:00	99	87	86	74	62	32	46	90	220	360	440	580
16:00	98	88	84	79	63	33	45	100	230	350	450	590
17:00	98	89	83	75	63	33	44	90	240	350	450	590
18:00	99	90	85	76	60	32	41	90	220	360	450	590
19:00	100	90	85	75	63	32	45	80	220	370	460	580
20:00	97	89	85	76	65	33	48	90	220	340	450	590
21:00	98	88	84	78	65	31	45	90	230	350	450	580
22:00	98	87	83	78	64	32	46	90	210	340	440	590
23:00	99	89	84	78	66	33	46	80	220	340	440	540
0:00	98	90	85	79	67	33	45	80	220	330	430	530
1:00	97	88	84	78	66	32	45	90	230	350	450	520
2:00	99	89	85	79	67	32	44	90	240	350	450	580
3:00	100	90	86	76	66	32	44	80	220	340	440	590
4:00	98	89	85	75	65	33	45	90	210	330	430	580
5:00	101	89	84	74	64	33	45	80	220	350	450	580
6:00	99	90	85	75	65	32	44	90	230	350	450	580

SUMMARY	1st Shift	2nd Shift	3rd Shift	TOTAL
TOTAL FEED -	192 kL	190 kL	196 kL	578 kL
TOTAL STEAM -	32.770 M.T	29.997 MT	32.384 MT	95.151 M.T
TOTAL CONDENCE	164 kL	167 kL	152 kL	483 kL
TOTAL ML	60 kL	52 kL	76 kL	190 kL
RECOVERY	73.1.	76.1.	66.1.	72.1.

5612

TAGROS CHEMICALS INDIA PVT. LTD.

389573 LOG SHEET OF MEE 1st STAGE 241901

DATE - 18/11/2021

5613

Time	S.P.G.R		Feed rate (M3/hr)	PH	Steam flow rate	Steam totalizer	329447 Cond Out ltr/hr	Steam Hader Pr.	Steam Pressure
	Initial	Final							TVR
7:00	1.10	1.22	389597	8.36	4080	245981	329468	6.4	5.5
8:00	1.10	1.22	389621	8.25	4082	250063	329480	6.5	5.4
9:00	1.10	1.22	389646	8.32	4079	254142	329501	6.5	5.3
10:00	1.10	1.22	389670	8.27	4063	258205	329525	6.4	5.4
11:00	1.10	1.22	389694	8.20	4053	262258	329545	6.5	5.4
12:00	1.10	1.22	389719	8.28	4068	266326	329566	6.6	5.5
13:00	1.10	1.22	389743	8.19	4163	270560	329588	6.4	5.5
14:00	1.10	1.22	389767	8.05	4025	274727	329607	6.4	5.4
15:00	1.10	1.22	389790	8.27	3920	278943	329626	6.5	5.5
16:00	1.10	1.22	389814	8.21	4120	283063	329646	6.2	5.3
17:00	1.10	1.22	389838	8.11	4220	287283	329666	5.9	5.2
18:00	1.10	1.22	389886	8.40	3935	291205	329687	5.8	5.2
19:00	1.10	1.22	389910	8.32	3820	295325	329706	6.0	5.4
20:00	1.10	1.22	389934	8.20	4125	299365	329725	6.2	5.5
21:00	1.10	1.22	389957	8.28	4136	303125	329744	6.3	5.6
22:00	1.10	1.22	389984	8.31	4015	307145	329765	6.5	5.4
23:00	1.10	1.22	390008	8.55	4100	309454	329786	5.5	5.4
0:00	1.10	1.22	390032	8.24	4015	313354	329808	5.6	5.6
1:00	1.10	1.22	390057	8.35	4025	317369	329828	5.8	5.6
2:00	1.10	1.22	390082	8.38	4072	321441	329850	5.2	4.8
3:00	1.10	1.22	390106	8.41	3412	324653	329873	5.1	4.9
4:00	1.10	1.22	390131	8.30	3375	327742	329895	5.4	5.5
5:00	1.10	1.22	390131	8.17	3712	331582	329915	5.1	5.5
6:00	1.10	1.22	390155	8.29	3915	335594	329937	5.8	5.6

	1st Shift	2nd Shift	3rd Shift	Sup. Sign
Operator Name	Rupesh	Ambika	Rakesh	
Supervisor Name	Amit Yadav	Sanjay Vasava	Anil	

REMARK -

TAGROS CHEMICALS INDIA PVT. LTD.

LOG SHEET OF MEE 1st STAGE

DATE - 18/11/21

Time	Calendriya Temperature					Cooling Tower Temp °C		Vaccum in mm Hg				
	1	2	3	4	5	In	Out	VLS1	VLS2	VLS3	VLS4	VLS5
7:00	99	92	81	75	70	33	45	90	220	350	460	580
8:00	98	91	80	74	70	33	46	80	230	340	450	570
9:00	99	92	81	75	69	32	46	80	220	320	420	560
10:00	99	92	81	75	69	32	45	90	240	340	460	570
11:00	98	91	80	74	71	32	46	100	220	320	470	590
12:00	97	90	80	74	71	33	45	90	230	330	460	580
13:00	96	90	81	75	72	32	45	80	230	330	450	600
14:00	95	89	80	74	69	33	46	80	240	320	440	580
15:00	97	90	80	74	68	33	46	90	220	330	430	560
16:00	98	91	81	75	70	32	44	80	220	320	450	570
17:00	99	92	82	76	71	33	45	90	230	350	440	590
18:00	100	93	83	77	72	32	42	90	220	320	430	580
19:00	101	93	84	77	71	32	42	90	220	330	460	560
20:00	99	92	83	76	70	33	44	80	230	340	460	570
21:00	98	91	82	75	69	32	42	80	240	340	450	580
22:00	97	90	81	74	68	33	43	90	220	330	460	590
23:00	98	89	82	73	65	32	45	90	210	330	450	590
0:00	98	90	80	75	65	32	44	90	210	340	460	590
1:00	97	90	81	76	64	33	44	90	220	340	460	580
2:00	94	92	81	74	67	33	45	80	210	350	480	570
3:00	99	91	81	74	66	33	45	100	210	350	480	580
4:00	97	90	82	75	65	33	45	90	220	340	480	590
5:00	97	90	82	74	64	32	44	80	210	350	470	580
6:00	98	91	83	75	64	32	44	90	220	350	440	540

SUMMARY	1st Shift	2nd Shift	3rd Shift	TOTAL
TOTAL FEED -	194 KL	217 KL	171 KL	582 KL
TOTAL STEAM -	32.822 MT	30.449 MT	30.449 MT	93.693 MT
TOTAL CONDENCE	168 KL	158 KL	172 KL	490 KL
TOTAL ML				
RECOVERY				

5614

5615

TAGROS CHEMICALS INDIA PVT. LTD.

LOG SHEET OF MEE 1st STAGE

DATE - 19/11/2021

Time	S.P.G.R Initial	S.P.G.R Final	390155 Feed rate (M3/hr)	PH	Steam flow rate	335594 Steam totalizer	329937 Cond Out ltr/hr	Steam Hader Pr.	Steam Pressure TVR
7:00	1.10	1.22	390180	8.4	4132	335614	329957	6.7	6.6
8:00	1.10	1.22	390205	8.4	4137	343729	329977	6.6	6.5
9:00	1.10	1.22	390230	8.4	4142	347903	329998	6.6	6.4
10:00	1.10	1.22	390255	8.5	4075	351975	330018	6.7	6.3
11:00	1.10	1.22	390280	8.5	4028	355987	330038	6.5	6.4
12:00	1.10	1.22	390305	8.5	4117	360097	330059	6.7	6.2
13:00	1.10	1.22	390331	8.4	4012	364081	330080	6.7	6.3
14:00	1.10	1.22	390353	8.3	4003	367958	330099	6.4	6.3
15:00	1.10	1.22	390376	8.3	3920	371678	330119	6.5	6.4
16:00	1.10	1.22	390399	8.3	4120	375758	330140	6.4	6.3
17:00	1.10	1.22	390423	8.2	3920	379778	330160	6.3	6.2
18:00	1.10	1.22	390446	8.3	4120	383840	330181	6.4	6.3
19:00	1.10	1.22	390470	8.4	3920	387960	330201	6.4	6.3
20:00	1.10	1.22	390493	8.4	4125	392180	330221	6.3	6.2
21:00	1.10	1.22	390518	8.5	3920	395639	330240	6.4	6.3
22:00	1.10	1.22	390542	8.8	3860	399759	330261	6.3	6.2
23:00	1.10	1.22	390575	8.6	4347	404136	330280	6.6	6.2
0:00	1.10	1.22	390600	8.25	4025	408161	330300	6.5	6.4
1:00	1.10	1.22	390629	8.26	4053	408214	330319	6.4	6.5
2:00	1.10	1.22	390629	8.28	4056	412284	330340	6.5	6.2
3:00	1.10	1.22	390640	8.21	4056	412864	330359	6.3	5.8
4:00	1.10	1.22	390673	8.51	4048	416320	330378	6.4	5.9
5:00	1.10	1.22	390698	8.48	4058	420368	330391	6.4	5.8
6:00	1.10	1.22	390723	8.29	4052	428426	330411	6.5	5.5

	1st Shift	2nd Shift	3rd Shift	Sup. Sign
Operator Name	Ambika	Ambika	Rakesh	
Supervisor Name	Amit	Sanjay	Anil	

REMARK -

TAGROS CHEMICALS INDIA PVT. LTD.

LOG SHEET OF MEE 1st STAGE

DATE - 19/11/21

Time	Calendriya Temperature					Cooling Tower Temp °C		Vaccum in mm Hg				
	1	2	3	4	5	In	Out	VLS1	VLS2	VLS3	VLS4	VLS5
7:00	99	91	82	73	65	32	42	90	220	370	450	610
8:00	98	90	81	74	67	33	43	90	230	350	450	620
9:00	98	96	80	74	67	33	43	100	230	350	470	620
10:00	99	89	81	73	65	32	44	80	220	340	450	620
11:00	99	91	82	74	64	32	44	90	230	370	460	620
12:00	97	92	83	72	64	32	43	90	230	340	450	640
13:00	96	90	84	72	65	32	42	95	220	380	450	640
14:00	96	91	84	73	65	32	43	90	220	350	460	630
15:00	97	92	84	74	66	33	42	100	230	320	450	620
16:00	96	93	83	75	67	33	43	90	230	340	480	610
17:00	98	92	83	74	65	33	43	90	240	340	480	650
18:00	99	91	82	73	65	33	43	100	230	350	450	640
19:00	99	90	84	72	66	32	42	90	240	320	440	600
20:00	98	91	83	71	67	35	43	80	230	320	450	640
21:00	97	92	81	72	67	33	42	80	250	310	480	650
22:00	99	91	83	73	65	33	42	90	230	350	460	670
23:00	100	92	83	75	66	32	43	90	240	360	450	610
0:00	99	91	82	74	65	32	42	80	250	340	440	670
1:00	98	90	81	73	64	33	42	80	250	350	440	620
2:00	97	92	82	74	67	32	43	90	220	350	460	640
3:00	99	91	80	72	65	32	43	80	230	340	450	650
4:00	98	92	81	75	66	33	44	90	240	360	440	650
5:00	97	91	82	74	64	32	42	80	230	350	480	620
6:00	99	92	81	71	65	32	42	80	220	340	450	640

SUMMARY	1st Shift	2nd Shift	3rd Shift	TOTAL
TOTAL FEED -	198 KL	189 KL	181 KL	568 KL
TOTAL STEAM -	31.964 MT	32.201 MT	28.667 MT	93.400 MT
TOTAL CONDENCE	162 KL	162 KL	150 KL	474 KL
TOTAL ML	68 KL	59 KL	60 KL	187 KL
RECOVERY	70%	73%	71%	72%

5616

TAGROS CHEMICALS INDIA PVT. LTD.

390747 LOG SHEET OF MEE 1st STAGE 432488

DATE - 20/11/24

5617

Time	S.P.G.R		Feed rate (M3/hr)	PH	Steam flow rate	Steam totalizer	Cond Out ltr/hr	Steam Hader Pr.	Steam Pressure
	Initial	Final					330411		TVR
7:00	1.10	1.22	390771	8.36	4101	436589	330420	6.3	5.3
8:00	1.10	1.22	390795	8.28	4117	440706	330453	6.5	5.3
9:00	1.10	1.22	390820	8.29	4109	444815	330473	6.5	5.4
10:00	1.10	1.22	390844	8.38	4026	448857	330494	6.4	5.3
11:00	1.10	1.22	390869	8.42	4044	452895	330515	6.6	5.6
12:00	1.10	1.22	390893	8.26	4016	456911	330534	6.4	5.5
13:00	1.10	1.22	390918	8.32	4339	460250	330555	6.4	5.5
14:00	1.10	1.22	390940	8.19	3930	464180	330575	6.5	5.4
15:00	1.10	1.22	390962	8.60	3875	468052	330595	6.3	5.3
16:00	1.10	1.22	390986	8.44	3721	471364	330615	6.4	5.2
17:00	1.10	1.22	391010	8.38	3840	474346	330636	6.5	5.4
18:00	1.10	1.22	391034	8.51	4122	478441	330657	6.6	5.5
19:00	1.10	1.22	391058	8.60	4012	482931	330672	6.5	5.4
20:00	1.10	1.22	391080	8.42	4012	487043	330692	6.5	5.5
21:00	1.10	1.22	391101	8.28	4025	489795	330720	6.4	5.3
22:00	1.10	1.22	391124	8.25	4075	493810	330740	6.3	5.3
23:00	1.10	1.22	391148	8.24	4070	497822	330759	6.4	6.5
0:00	1.10	1.22	391172	8.21	4012	501904	330780	6.3	5.3
1:00									
2:00		Plant Stop	00:30	Due to	CIP.				
3:00									
4:00									
5:00									
6:00									

	1st Shift	2nd Shift	3rd Shift	Sup. Sign
Operator Name	Ambika	Rakesh	Rupesh	
Supervisor Name	Sanjay	Amit	Anil	

REMARK -

TAGROS CHEMICALS INDIA PVT. LTD.

LOG SHEET OF MEE 1st STAGE

DATE - 20/11/21

Time	Calendriya Temperature					Cooling Tower Temp °C		Vaccum in mm Hg				
	1	2	3	4	5	In	Out	VLS1	VLS2	VLS3	VLS4	VLS5
7:00	99	92	81	75	70	33	46	80	260	360	460	560
8:00	98	91	80	74	69	32	46	90	280	380	440	580
9:00	99	92	82	75	68	32	45	100	260	360	460	560
10:00	97	90	80	74	65	33	45	80	280	380	450	570
11:00	98	91	81	73	66	32	45	80	250	350	440	580
12:00	100	94	84	75	67	32	46	90	260	360	420	540
13:00	101	95	85	75	69	33	45	80	240	340	430	580
14:00	99	92	82	72	68	32	46	80	270	370	440	590
15:00	102	93	83	75	66	32	46	90	280	360	460	570
16:00	100	91	80	74	65	33	44	90	260	360	450	560
17:00	99	91	81	75	67	32	45	80	270	370	460	580
18:00	97	90	80	73	66	32	44	90	280	380	420	560
19:00	98	91	82	76	64	33	43	90	260	360	440	580
20:00	96	90	81	75	65	32	44	80	240	340	450	570
21:00	99	92	82	74	66	33	44	90	260	360	440	560
22:00	98	91	81	75	65	32	42	80	280	360	460	580
23:00	94	91	83	71	63	32	45	90	260	350	420	590
0:00	96	93	82	73	64	33	43	90	240	330	460	550
1:00												
2:00			plant stop at 00:30 Due to (SLP.									
3:00												
4:00												
5:00												
6:00												

SUMMARY	1st Shift	2nd Shift	3rd Shift	TOTAL
TOTAL FEED -	169 KL	184 KL	48 KL	401 KL
TOTAL STEAM -	27.591 MT	28.830 MT	8.094 MT	64.515 MT
TOTAL CONDENCE	164 KL	165 KL	40 KL	369 KL
TOTAL ML	33 KL	48 KL	16 KL	97 KL
RECOVERY	83 %	77 %	71	79 %

5618

5619

TAGROS CHEMICALS INDIA PVT. LTD.

LOG SHEET OF MEE 1st STAGE

DATE - 21/11/21

Time	S.P.G.R		Feed rate (M3/hr)	PH	Steam flow rate	Steam totalizer	Cond Out ltr/hr	Steam Hader Pr.	Steam Pressure
	Initial	Final							TVR
7:00									
8:00									
9:00									
10:00	-								
11:00									
12:00									
13:00			CIP Done at 16:00 plant started at 16:00						
14:00									
15:00									
16:00									
17:00	1.10	1.22	391439	8.42	4020	512393	330800	6.4	5.2
18:00	1.16	1.22	391464	8.29	4021	516153	330820	6.3	5.4
19:00	1.16	1.22	391490	8.36	4021	520174	330840	6.5	5.3
20:00	1.10	1.22	391514	8.54	4110	524280	330859	6.3	5.4
21:00	1.10	1.22	391537	8.53	4111	528390	330879	6.5	5.3
22:00	1.10	1.22	391560	8.32	4082	532506	330900	6.7	5.2
23:00	1.10	1.22	391584	8.31	4082	536588	330919	6.5	5.3
0:00	1.10	1.22	391608	8.28	4063	540657	330939	6.4	5.5
1:00	1.10	1.22	391632	8.21	4112	544774	330950	6.5	5.4
2:00	1.10	1.22	391657	8.39	4138	548864	330981	6.6	5.6
3:00	1.10	1.22	391681	8.30	4154	552998	331002	6.5	5.5
4:00	1.10	1.22	391705	8.48	4129	557134	331021	6.5	5.5
5:00	1.10	1.22	391729	8.26	4082	561241	331040	6.4	5.4
6:00	1.10	1.22	391753	8.37	4095	565296	331060	6.3	5.2

	1st Shift	2nd Shift	3rd Shift	Sup. Sign
Operator Name	Rupesh	Ambika	Ambika	
Supervisor Name	Anil	Amit	Amit	

REMARK -

TAGROS CHEMICALS INDIA PVT. LTD.

LOG SHEET OF MEE 1st STAGE

DATE - 21/11/21

Time	Calendriya Temperature					Cooling Tower Temp °C		Vaccum in mm Hg				
	1	2	3	4	5	In	Out	VLS1	VLS2	VLS3	VLS4	VLS5
7:00												
8:00												
9:00												
10:00												
11:00												
12:00												
13:00												
14:00			CF Done Plant start time						16:00			
15:00												
16:00												
17:00	97	90	84	72	62	33	43	90	220	330	440	560
18:00	98	92	83	73	63	32	44	90	230	340	460	580
19:00	98	91	83	73	63	32	44	80	240	340	450	570
20:00	99	93	82	75	64	33	43	90	240	360	470	550
21:00	98	92	82	74	63	33	43	100	220	350	450	580
22:00	99	92	84	75	64	34	45	90	260	360	460	590
23:00	97	93	83	74	63	34	45	80	270	370	470	570
0:00	95	91	82	73	65	33	44	80	260	360	460	580
1:00	96	92	84	74	62	33	44	90	260	360	470	570
2:00	99	93	85	75	64	32	43	90	280	380	480	560
3:00	98	81	82	72	65	34	43	80	290	390	460	570
4:00	97	93	86	74	62	32	44	70	270	370	470	568
5:00	99	92	84	75	65	32	44	90	270	370	480	560
6:00	98	92	84	75	65	32	42	80	260	360	460	570

SUMMARY	1st Shift	2nd Shift	3rd Shift	TOTAL
TOTAL FEED -		121 KL	193 KL	314 KL
TOTAL STEAM -	CF	20.173 MT	32.790 MT	52.963 MT
TOTAL CONDENCE		100 KL	160 KL	260 KL
TOTAL ML		41 KL	66 KL	107 KL
RECOVERY		71%	71%	71%

5620

SUN FARBEN INCORPORATION

Plot No. CH/11, Dahej Industrial Estate, Dahej, Dist. Bharuch.
Tel. : +91 96877 46464 Email : sunfarbeninc.ch11@gmail.com

From:
M/s. Sun Farben Incorporation (old name – alex industries)
Plot No.CH-11, GIDC Dahej,
Ta.Vagra,
Dist. Bharuch.
GPCB – ID: 30343

Gujarat Pollution Control Board
RECEIVED ON
28 JUL 2022
22863

Dated: 21st July 2022

To

The Member Secretary,

The Gujarat Pollution Control Board

Gandhinagar

Dear Sir,

Subject : Objections against proposed EDC in report of Joint Committee of May 2022 submitted to National Green Tribunal

Reference:
1. Order dated 02.02.2022 of National Green Tribunal, Western Zone Bench, Pune passed in O A 60/2021
2. Report of Joint Committee May 2022 submitted to NGT
3. Order dated 06.07.2022 of National Green Tribunal, Western Zone Bench, Pune passed in O A 60/2021

We refer to the order dated 02.02.2022 of Hon NGT- Western Bench passed in O A 60/2021 whereby Joint Committee was appointed. We also refer to the report of Joint Committee as also order dated 06.07.2022 of Hon NGT- Western Bench passed in O A 60/2021.

SUN FARBEN INCORPORATION
Plot No. CH/11, Dahej Industrial Estate, Dahej, Dist. Bharuch.
Tel. : +91 96877 46464 Email : sunfarbeninc.ch11@gmail.com

As per the direction given in para 7(ii), we are submitting present objections as we are one of the so called defaulting industry named in said report.

We have strong objections against following:

1. Collection of samples from pumping station A where we are discharging our liquid effluent in common sump is done and not from outlet of our unit. The data of COD is average and not necessarily contributed by our unit. Therefore it is not correct measure to levy any compensation on us.
2. As per Joint Committee's calculation they have calculated based on GPCB Total number of collected samples from our unit from 2017 to till date is 10 (**Out of 10 sample 1 sample is FAILED**). 1 Failed sample result was 86 ppm higher than standard limit (i.e. 336 ppm) in Year 2018. 86 ppm higher results then standard which may be analytical error and not even call us for joint testing.
3. We are manufacturing pigment blue, COD of our effluent stream is as such below standard limits without any primary treatment even though we are performing primary and secondary treatment at our premises itself. We have installed online TOC meter with 3 way return valve for our treated discharge line of effluent.
4. As per round the clock monitoring system of GIDC, They have collected samples of our treated effluent randomly, we have attached available collected samples reports of 80 samples from Jan 2020 to till dates from that not even single sample failed in COD.
5. Joint Committee has not considered samples collected by GIDC monitoring authority for calculation of EDC.

Plot No. CH/11, Dahej Industrial Estate, Dahej, Dist. Bharuch.
Tel. : +91 96877 46464 Email : sunfarbeninc.ch11@gmail.com

6. Committee has to consider GIDC monitoring authority's sample data for calculation of EDC and that is the way of natural justice.
7. We declare that we have not discharged any effluent directly to any river, pond, sea etc. and have discharged only in the designated sump of GIDC through pipeline.
8. We further declare that we have not resorted to any ghost connection to discharge any effluent.
9. The committee has not attempted at determining actual quantum of damage to environment and cost of its remediation. Quantification of compensation can neither be presumptive nor assumptive. It must be based on actual facts and figures.
10. Without prejudice to above, the analysis of such samples can take maximum 3-5 days depending on whether 3-day or 5-day BOD is measured. It was obligatory for GPCB/ Joint committee to communicate and share these results with the concerned industry, immediately if GPCB had noticed any major deviation or noncompliance.
11. Quality of effluent is not part of the formula relied upon by the committee. There cannot be same criteria for our unit which is applied to units indulging in manufacture of pigments.
12. Thus, we are challenging the EDC imposed on us in the report of the Joint Committee and say that no EDC can be levied on us.

SUN FARBEN INCORPORATION

Plot No. CH/11, Dahej Industrial Estate, Dahej, Dist. Bharuch.

Tel. : +91 96877 46464 Email : sunfarbeninc.ch11@gmail.com

Thanking you,

For, Sun Farben Incorporation, Dahej

Authorized Signatory

CC: Unit Head GPCB Bharuch, Bharuch.

Dahej Industrial Association, Dahej.

5625

Gujarat Industrial Development Corporation- Bharuch, Dahej	Result of M/s.SUN FARBEN INCORPORATION	W.O No.GIDC/EE/BRH/LAB/17 W.O Date:31/08/2018

MONTH - JANUARY - 2020				M/s.SUN FARBEN INCORPORATION						
				Plot.No. CH-11, Dahej						
Date				01.01.2020	07.01.2020	11.01.2020	18.01.2020	22.01.2020	28.01.2020	30.01.2020
Sample ID No.				20/01/0017	20/01/0274	20/01/0410	20/01/0669	20/01/0878	20/01/1072	20/01/1202
Sr. No	Parameter	UNIT	GIDC Limits	Results						
1	pH @ 25 °C	--	5.5 - 9.0	7.35	7.48	7.18	7.27	6.82	6.06	5.75
2	Colour/Odur	Hazen Unit (APHA)	--	80/Unobjectionable	60/Unobjectionable	80/Unobjectionable	60/Unobjectionable	80/Unobjectionable	60/Unobjectionable	80/Unobjectionable
3	Temperature	°C	45	29	28	29	28	29	30	29
4	Total Dissolved Solids	mg/L	--	5000	695	425	805	565	1060	1055
5	Total Suspended Solids (TSS)	mg/L	100	5	BDL(MDL:4.0)	BDL(MDL:4.0)	BDL(MDL:4.0)	BDL(MDL:4.0)	30	35
6	Particulate Size of Suspended	-	--	--	--	--	--	--	--	--
7	Oil and Grease	mg/L	20	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)
8	Fluorides	mg/L	15	2.14	0.86	0.65	0.96	0.75	0.96	0.85
9	Sulphides	mg/L	5	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
10	Total Kjeldahl Nitrogen	mg/L	100	6.9	2.3	8.6	5.7	3.3	5.2	3.6
11	Ammonical Nitrogen	mg/L	50	BDL(MDL:2.0)	BDL(MDL:2.0)	3.1	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)
12	Free Ammonia (as NH3)	mg/L	5	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)
13	Copper	mg/L	3	0.089	0.054	0.051	0.074	0.062	0.081	0.077
14	Zinc	mg/L	15	0.117	0.078	0.065	0.086	0.071	0.093	0.089
15	Biochemical Oxygen Demand	mg/L	100	3	2	5	9	4	7	6
16	Chemical Oxygen Demand (C	mg/L	250	14.2	8.2	20.4	32.6	15.4	24.5	20.3
17	Total Residual Chlorine	mg/L	1	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)
18	Arsenic (as As)	mg/L	0.2	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)
19	Mercury (as Hg)	mg/L	0.01	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)
20	Lead (as Pb)	mg/L	1	0.093	0.059	0.036	0.057	0.042	0.065	0.059
21	Cadmium (as Cd)	mg/L	2	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)
22	Hexavalent Chrmium (as Cr	mg/L	1	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
23	Total Chromium (as Cr)	mg/L	2	0.097	0.056	0.051	0.078	0.063	0.084	0.078
24	Nickel	mg/L	5	0.104	0.069	0.047	0.069	0.052	0.074	0.069
25	Cyanide (as CN)	mg/L	0.2	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
26	Phenolic Compounds (as C6	mg/L	5	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
27	Selenium (as Se)	mg/L	0.05	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
28	Manganese (as Mn)	mg/L	2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
29	Iron (as Fe)	mg/L	3	0.492	0.167	0.111	0.237	0.141	0.223	0.174
30	Vanadium (as V)	mg/L	0.2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
31	Nitrate Nitrogen	mg/L	20	7.8	1.2	0.6	2.1	0.9	1.5	2.1
32	Bio-assay Test	%	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.
33	Pesticides	ppb	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent

ENVIRONMENT & RESEARCH LABS PVT. LTD. GUJARAT VAPI

Unistar Environment & Research Labs Pvt. Ltd.

J. J. V

Authorised signatory

Gujarat Industrial Development Corporation- Bharuch, Dahej	Result of M/s.SUN FARBEN INCORPORATION	W.O.No. GIDC/EE/BRU/AB917 W.O Date:31/05/2019

MONTH - FEBRUARY - 2020				M/s.SUN FARBEN INCORPORATION					
				Plot.No. CH-11, Dahej					
Date				04.02.2020	13.02.2020	20.02.2020	22.02.2020	24.02.2020	28.02.2020
Sample ID No.				20/02/0090	20/02/0493	20/02/0729	20/02/0798	20/02/0870	20/02/1014
Sr.No	Parameter	UNIT	GIDC Limits	Results					
1	pH @ 25°C	--	5.5 - 9.0	5.93	6.97	7.52	7.52	7.35	7.36
2	Colour/Odur	Hazen Unit (APHA)	--	60/Unobjectionable	80/Unobjectionable	60/Unobjectionable	50/Unobjectionable	60/Unobjectionable	80/Unobjectionable
3	Temperature	°C	45	30	29	29	29	29	30
4	Total Dissolved Solids	mg/L	---	865	890	775	530	545	890
5	Total Suspended Solids (TSS)	mg/L	100	BDL(MDL:4.0)	25	BDL(MDL:4.0)	BDL(MDL:4.0)	10	BDL(MDL:4.0)
6	Particulate Size of Suspended	-	--	--	--	--	--	--	--
7	Oil and Grease	mg/L	20	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)
8	Fluorides	mg/L	15	0.85	1.02	0.98	0.72	0.89	0.97
9	Sulphides	mg/L	5	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
10	Total Kjeldahl Nitrogen	mg/L	100	2.3	3.4	3.9	4.8	5.4	6.9
11	Ammonical Nitrogen	mg/L	50	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)
12	Free Ammonia (as NH3)	mg/L	5	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)
13	Copper	mg/L	3	0.062	0.069	0.071	0.065	0.056	0.067
14	Zinc	mg/L	15	0.076	0.082	0.068	0.064	0.075	0.091
15	Biochemical Oxygen Demand	mg/L	100	16	12	2	11	10	4
16	Chemical Oxygen Demand (C	mg/L	250	53.6	39.2	8.2	40.2	36.2	14.2
17	Total Residual Chlorine	mg/L	1	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)
18	Arsenic (as As)	mg/L	0.2	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)
19	Mercury (as Hg)	mg/L	0.01	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)
20	Lead (as Pb)	mg/L	1	0.044	0.051	0.048	0.041	0.052	0.065
21	Cadmium (as Cd)	mg/L	2	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)
22	Hexavalent Chrmium (as Cr	mg/L	1	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
23	Total Chromium (as Cr)	mg/L	2	0.065	0.073	0.074	0.071	0.065	0.074
24	Nickel	mg/L	5	0.056	0.061	0.055	0.052	0.055	0.065
25	Cyanide (as CN)	mg/L	0.2	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
26	Phenolic Compounds (as C6	mg/L	5	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
27	Selenium (as Se)	mg/L	0.05	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
28	Manganese (as Mn)	mg/L	2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
29	Iron (as Fe)	mg/L	3	0.124	0.206	0.188	0.184	0.178	0.247
30	Vanadium (as V)	mg/L	0.2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
31	Nitrate Nitrogen	mg/L	20	1.4	2.1	1.9	1.2	1.8	2.5
32	Bio-assay Test	%	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.
33	Pesticides	ppb	Absent	Absent	Absent	Absent	Absent	Absent	Absent

5626

UNISTAR ENVIRONMENT & RESEARCH LAB PVT. LTD. GUJARAT VAPI

Unistar Environment & Research Labs Pvt. Ltd.

Authorised signatory

5627

Gujarat Industrial Development Corporation- Bharuch, Dahej	Result of M/s.SUN FARBEN INCORPORATION	W.O.No.GIDC/EE/BRH/AB/817 W.O Date:31/08/2018

MONTH - MARCH - 2020				M/s.SUN FARBEN INCORPORATION			
				Plot.No.D-2, Dahej			
Date				03.03.2020	14.03.2020	19.03.2020	21.03.2020
Sample ID No.				20/03/0066	20/03/0484	20/03/0701	20/03/0823
Sr. No.	Parameter	UNIT	GIDC Limits	Results			
1	pH @ 25 °C	--	5.5 - 9.0	7.18	7.68	7.72	8.73
2	Colour/Odur	Hazen Unit (ALPHA)	--	60/Unobjectionable	50/Unobjectionable	60/Unobjectionable	60/Unobjectionable
3	Temperature	°C	45	31	31	31	31
4	Total Dissolved Solids	mg/L	---	385	355	350	760
5	Total Suspended Solids (TSS)	mg/L	100	BDL(MDL:4.0)	10	BDL(MDL:4.0)	5
6	Particulate Size of Suspended Solids	-	--	--	--	--	--
7	Oil and Grease	mg/L	20	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)
8	Fluorides	mg/L	15	0.65	0.62	0.63	0.69
9	Sulphides	mg/L	5	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
10	Total Kjeldahi Nitrogen	mg/L	100	2.6	4.8	4.9	5.4
11	Ammonical Nitrogen	mg/L	50	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)
12	Free Ammonia (as NH3)	mg/L	5	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)
13	Copper	mg/L	3	0.052	0.055	0.056	0.059
14	Zinc	mg/L	15	0.077	0.068	0.069	0.076
15	Biochemical Oxygen Demand (BOD)	mg/L	100	2	3	2	6
16	Chemical Oxygen Demand (COD)	mg/L	250	8.2	12.3	8.2	18.6
17	Total Residual Chlorine	mg/L	1	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)
18	Arsenic (as As)	mg/L	0.2	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)
19	Mercury (as Hg)	mg/L	0.01	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)
20	Lead (as Pb)	mg/L	1	0.046	0.041	0.039	0.042
21	Cadmium (as Cd)	mg/L	2	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)
22	Hexavalent Chrmium (as Cr+6)	mg/L	1	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
23	Total Chromium (as Cr)	mg/L	2	0.057	0.055	0.056	0.062
24	Nickel	mg/L	5	0.044	0.042	0.044	0.055
25	Cyanide (as CN)	mg/L	0.2	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
26	Phenolic Compounds (as C6H5OH)	mg/L	5	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
27	Selenium (as Se)	mg/L	0.05	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
28	Manganese (as Mn)	mg/L	2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
29	Iron (as Fe)	mg/L	3	0.135	0.134	0.138	0.146
30	Vanadium (as V)	mg/L	0.2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
31	Nitrate Nitrogen	mg/L	20	1	1.2	1.6	1.9
32	Bio-assay Test	%	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.
33	Pesticides	ppb	Absent	Absent	Absent	Absent	Absent

UNISTAR ENVIRONMENT & RESEARCH LABS PVT. LTD. GUJARAT VAPI

Unistar Environment & Research Labs Pvt. Ltd.

Authorised signatory

5628

Gujarat Industrial Development Corporation- Bharuch, Dahej	Result of M/s.SUN FARBEN INCORPORATION	W.O.No.GIDC/EE/BRH/AB/817 W.O Date:31/08/2019

MONTH - APRIL - 2020				M/s.SUN FARBEN INCORPORATION Plot.No. CH-11, Dahej	
Date				26.04.2020	29.04.2020
Sample ID No.				20/04/0046	20/04/0125
Sr. No	Parameter	UNIT	GIDC Limits	Results	
1	pH @ 25 °C	--	5.5 - 9.0	8.05	7.68
2	Colour/Odur	Hazen Unit (APHA)	--	50/Unobjectionable	60/Unobjectionable
3	Temperature	°C	45	31	31
4	Total Dissolved Solids	mg/L	---	540	460
5	Total Suspended Solids (TSS)	mg/L	100	75	45
6	Particulate Size of Suspended Solids	-	--	--	--
7	Oil and Grease	mg/L	20	BDL(MDL:2.0)	BDL(MDL:2.0)
8	Fluorides	mg/L	15	0.61	0.52
9	Sulphides	mg/L	5	BDL(MDL:0.05)	BDL(MDL:0.05)
10	Total Kjeldahl Nitrogen	mg/L	100	5.5	5.4
11	Ammonical Nitrogen	mg/L	50	BDL(MDL:2.0)	BDL(MDL:2.0)
12	Free Ammonia (as NH3)	mg/L	5	BDL(MDL:0.2)	BDL(MDL:0.2)
13	Copper	mg/L	3	0.055	0.054
14	Zinc	mg/L	15	0.071	0.068
15	Biochemical Oxygen Demand (BOD)	mg/L	100	10	6
16	Chemical Oxygen Demand (COD)	mg/L	250	36.8	24.8
17	Total Residual Chlorine	mg/L	1	BDL(MDL:0.2)	BDL(MDL:0.2)
18	Arsenic (as As)	mg/L	0.2	BDL(MDL:0.01)	BDL(MDL:0.01)
19	Mercury (as Hg)	mg/L	0.01	BDL(MDL:0.001)	BDL(MDL:0.001)
20	Lead (as Pb)	mg/L	1	0.038	0.035
21	Cadmium (as Cd)	mg/L	2	BDL(MDL:0.003)	BDL(MDL:0.003)
22	Hexavalent Chrmium (as Cr+6)	mg/L	1	BDL(MDL:0.05)	BDL(MDL:0.05)
23	Total Chromium (as Cr)	mg/L	2	0.059	0.055
24	Nickel	mg/L	5	0.054	0.056
25	Cyanide (as CN)	mg/L	0.2	BDL(MDL:0.05)	BDL(MDL:0.05)
26	Phenolic Compounds (as C6H5OH)	mg/L	5	BDL(MDL:0.1)	BDL(MDL:0.1)
27	Selenium (as Se)	mg/L	0.05	BDL(MDL:0.1)	BDL(MDL:0.1)
28	Manganese (as Mn)	mg/L	2	BDL(MDL:0.1)	BDL(MDL:0.1)
29	Iron (as Fe)	mg/L	3	0.132	0.112
30	Vanadium (as V)	mg/L	0.2	BDL(MDL:0.1)	BDL(MDL:0.1)
31	Nitrate Nitrogen	mg/L	20	1.5	1.4
32	Bio-assay Test	%	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.
33	Pesticides	ppb	Absent	Absent	Absent

UNISTAR ENVIRONMENT & RESEARCH LABS PVT. LTD. GUJARAT VAPI

Unistar Environment & Research Labs Pvt. Ltd.

J.J.Lad

Authorised signatory

5629

MONTH - MAY - 2020				M/s.SUN FARREN INCORPORATION							
Date				Plot.No. CH-11, Dahej							
Sample ID No.				07.05.2020	11.05.2020	13.05.2020	15.05.2020	20.05.2020	27.05.2020		
				20/05/0134	20/05/0173	20/05/0202	20/05/0241	20/05/0365	20/05/0558		
Sr. No.	Parameter	UNIT	GIDC Limits	Results							
1	pH @ 25 °C	--	5.5 - 9.0	8.1	7.62	7.73	7.56	8.14	7.81		
2	Colour/Odur	Hazen Unit (APHA)	--	50/Unobjectionable	60/Unobjectionable	50/Unobjectionable	60/Unobjectionable	60/Unobjectionable	60/Unobjectionable		
3	Temperature	°C	45	31	31	31	31	31	31		
4	Total Dissolved Solids	mg/L	--	580	490	530	760	510	320		
5	Total Suspended Solids (TSS)	mg/L	100	10	5	10	25	BDL(MDL:4.0)	60		
6	Particulate Size of Suspended Solids	-	--	--	--	--	--	--	--		
7	Oil and Grease	mg/L	20	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)		
8	Fluorides	mg/L	15	0.55	0.54	0.59	0.62	0.58	0.55		
9	Sulphides	mg/L	5	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)		
10	Total Kjeldahl Nitrogen	mg/L	100	5.6	5.5	5.8	5.5	5.5	5.6		
11	Ammonical Nitrogen	mg/L	50	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)		
12	Free Ammonia (as NH3)	mg/L	5	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)		
13	Copper	mg/L	3	0.056	0.054	0.057	0.059	0.056	0.054		
14	Zinc	mg/L	15	0.072	0.064	0.069	0.072	0.067	0.061		
15	Biochemical Oxygen Demand (BOD)	mg/L	100	3	3	13	4	7	11		
16	Chemical Oxygen Demand (COD)	mg/L	250	12.6	13.4	45.6	16.2	24.6	38.5		
17	Total Residual Chlorine	mg/L	1	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)		
18	Arsenic (as As)	mg/L	0.2	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)		
19	Mercury (as Hg)	mg/L	0.01	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)		
20	Lead (as Pb)	mg/L	1	0.054	0.053	0.058	0.063	0.061	0.058		
21	Cadmium (as Cd)	mg/L	2	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)		
22	Hexavalent Chromium (as Cr+6)	mg/L	1	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)		
23	Total Chromium (as Cr)	mg/L	2	0.056	0.055	0.059	0.062	0.058	0.056		
24	Nickel	mg/L	5	0.059	0.054	0.058	0.066	0.059	0.055		
25	Cyanide (as CN)	mg/L	0.2	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)		
26	Phenolic Compounds (as C6H5OH)	mg/L	5	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)		
27	Selenium (as Se)	mg/L	0.05	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)		
28	Manganese (as Mn)	mg/L	2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)		
29	Iron (as Fe)	mg/L	3	0.118	0.108	0.112	0.119	0.103	0.098		
30	Vanadium (as V)	mg/L	0.2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)		
31	Nitrate Nitrogen	mg/L	20	1.8	1.5	1.9	2.6	2.1	2		
32	Bio-assay Test	%	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.		
33	Pesticides	ppb	Absent	Absent	Absent	Absent	Absent	Absent	Absent		

UNISTAR ENVIRONMENT & RESEARCH LABS PVT. LTD. GUJARAT VAPI

Unistar Environment & Research Labs Pvt. Ltd.

Authorised signatory

5630

Gujarat Industrial Development Corporation Bharuch, Dahej

Result of M/s.SUN FARBEN INCORPORATION

W.O.No.GIDC/EE/BRH/ADP/917
W.O Date:31/05/2019

MONTH - JUNE - 2020				M/s.SUN FARBEN INCORPORATION					
				Plot.No. CH-11, Dahej					
Date				01.06.2020	08.06.2020	16.06.2020	18.06.2020	24.06.2020	27.06.2020
Sample ID No.				20/06/0016	20/06/0152	20/06/0396	20/06/0489	20/06/0734	20/06/0826
Sr. No.	Parameter	UNIT	GIDC Limits	Results					
1	pH @ 25 ^{0}C	--	5.5 - 9.0	7.65	7.67	8.12	7.78	7.87	7.65
2	Colour/Odur	Hazen Unit (APHA)	--	60/Unobjectionable	60/Unobjectionable	60/Unobjectionable	60/Unobjectionable	60/Unobjectionable	60/Unobjectionable
3	Temperature	°C	45	30	31	28	29	31	31
4	Total Dissolved Solids	mg/L	---	570	770	650	640	645	440
5	Total Suspended Solids (TSS)	mg/L	100	5	15	5	5	BDL(MDL:4.0)	5
6	Particulate Size of Suspended Solid	-	--	--	--	--	--	--	--
7	Oil and Grease	mg/L	20	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)
8	Fluorides	mg/L	15	0.64	0.69	0.65	0.61	0.61	0.66
9	Sulphides	mg/L	5	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
10	Total Kjeldahi Nitrogen	mg/L	100	5.5	5.4	5.5	5.4	5.6	5.5
11	Ammonical Nitrogen	mg/L	50	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)
12	Free Ammonia (as NH3)	mg/L	5	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)
13	Copper	mg/L	3	0.059	0.063	0.061	0.063	0.068	0.062
14	Zinc	mg/L	15	0.067	0.072	0.066	0.064	0.069	0.056
15	Biochemical Oxygen Demand (BOD	mg/L	100	7	18	21	5	2	3
16	Chemical Oxygen Demand (COD)	mg/L	250	24.5	65.4	76.5	18.6	8.3	12.4
17	Total Residual Chlorine	mg/L	1	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)
18	Arsenic (as As)	mg/L	0.2	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)
19	Mercury (as Hg)	mg/L	0.01	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)
20	Lead (as Pb)	mg/L	1	0.063	0.068	0.061	0.056	0.057	0.054
21	Cadmium (as Cd)	mg/L	2	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)
22	Hexavalent Chrmium (as Cr+6)	mg/L	1	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
23	Total Chromium (as Cr)	mg/L	2	0.068	0.072	0.066	0.064	0.062	0.059
24	Nickel	mg/L	5	0.064	0.077	0.059	0.059	0.055	0.054
25	Cyanide (as CN)	mg/L	0.2	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
26	Phenolic Compounds (as C6H5OH)	mg/L	5	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
27	Selenium (as Se)	mg/L	0.05	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
28	Manganese (as Mn)	mg/L	2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
29	Iron (as Fe)	mg/L	3	0.106	0.112	0.108	0.103	0.092	0.084
30	Vanadium (as V)	mg/L	0.2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
31	Nitrate Nitrogen	mg/L	20	3.1	3.9	3.1	3.5	3.4	3.1
32	Bio-assay Test	%	90 % survival of fish after 48 hrs	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.
33	Pesticides	ppb	Absent	Absent	Absent	Absent	Absent	Absent	Absent

UNISTAR ENVIRONMENT & RESEARCH LABS PVT. LTD. GUJARAT VAPI

Unistar Environment & Research Labs Pvt. Ltd.

Authorised signatory

5631

Gujarat Industrial Development Corporation- Bharuch, Dahej	Result of M/s.SUN FARBEN INCORPORATION	W.O.No.GIDC/EE/BRH/AB/817 W.O Date:31/08/2018

MONTH - JULY - 2020				M/s.SUN FARBEN INCORPORATION Plot.No. CH-11, Dahej					
Date				03.07.2020	13.07.2020	19.07.2020	22.07.2020	25.07.2020	29.07.2020
Sample ID No.				20/07/0129	20/07/0429	20/07/0581	20/07/0708	20/07/0862	20/07/0974
Sr. No.	Parameter	UNIT	GIDC Limits	Results					
1	pH @ 25 ^{0}C	--	5.5 - 9.0	7.68	7.4	7.15	7.16	7.54	7.9
2	Colour/Odur	Pt. Co. Scale	--	50/Unobjectionable	60/Unobjectionable	60/Unobjectionable	60/Unobjectionable	60/Unobjectionable	60/Unobjectionable
3	Temperature	°C	45	30	31	30	31	33	31
4	Total Dissolved Solids	mg/L	---	635	885	2825	3015	2400	2465
5	Total Suspended Solids (TSS)	mg/L	100	5	10	90	20	12	BDL(MDL:2.0)
6	Particulate Size of Suspended Solids	-	--	--	--	--	--	--	--
7	Oil and Grease	mg/L	20	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)
8	Fluorides	mg/L	15	0.64	0.62	0.77	0.71	0.71	0.68
9	Sulphides	mg/L	5	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
10	Total Kjeldahi Nitrogen	mg/L	100	5.6	5.5	5.6	66.4	77.6	5.5
11	Ammonical Nitrogen	mg/L	50	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	59.6	70.9	BDL(MDL:2.0)
12	Free Ammonia (as NH3)	mg/L	5	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)
13	Copper	mg/L	3	0.066	0.072	0.079	0.081	0.077	0.071
14	Zinc	mg/L	15	0.059	0.066	0.074	0.088	0.071	0.079
15	Biochemical Oxygen Demand (BOD)	mg/L	100	6	6	10	5	3	3
16	Chemical Oxygen Demand (COD)	mg/L	250	23.4	24.5	35.6	20.5	8.2	12.3
17	Total Residual Chlorine	mg/L	1	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)
18	Arsenic (as As)	mg/L	0.2	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)
19	Mercury (as Hg)	mg/L	0.01	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)
20	Lead (as Pb)	mg/L	1	0.059	0.066	0.074	0.071	0.073	0.078
21	Cadmium (as Cd)	mg/L	2	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)
22	Hexavalent Chrmium (as Cr+6)	mg/L	1	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
23	Total Chromium (as Cr)	mg/L	2	0.066	0.069	0.079	0.082	0.074	0.081
24	Nickel	mg/L	5	0.061	0.068	0.081	0.088	0.088	0.093
25	Cyanide (as CN)	mg/L	0.2	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
26	Phenolic Compounds (as C6H5OH)	mg/L	5	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
27	Selenium (as Se)	mg/L	0.05	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
28	Manganese (as Mn)	mg/L	2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
29	Iron (as Fe)	mg/L	3	0.088	0.095	0.102	0.111	0.103	0.114
30	Vanadium (as V)	mg/L	0.2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
31	Nitrate Nitrogen	mg/L	20	3.9	4.6	8.3	8.5	4.1	5.5
32	Bio-assay Test	%	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.
33	Pesticides	ppb	Absent	Absent	Absent	Absent	Absent	Absent	Absent

Unistar Environment & Research Labs Pvt. Ltd.

UNISTAR ENVIRONMENT & RESEARCH LABS PVT. LTD. GUJARAT VAPI

Authorised signatory

Gujarat Industrial Development Corporation- Bharuch, Dahej	Result of M/s.SUN FARBEN INCORPORATION	W.O.No.GIDC/EE/BRH/AB/817 W.O Date:31/08/2018

MONTH - AUGUST - 2020				M/s.SUN FARBEN INCORPORATION Plot.No. CH-11, Dahej					
Date				01.08.2020	08.08.2020	19.08.2020	24.08.2020	26.08.2020	26.08.2020
Sample ID No.				20/08/L-0013	20/08/L-0172	20/08/L-0336	20/08/L-0438	20/08/L-0485	20/08/L-0529
Sr. No.	Parameter	UNIT	GIDC Limits	Results					
1	pH @ 25 °C	--	5.5 - 9.0	7.32	7.56	7.03	7.61	7.29	7.39
2	Colour/Odur	Pt. Co. Scale	--	50/Unobjectionable	60/Unobjectionable	80/Unobjectionable	60/Unobjectionable	150/Unobjectionable	80/Unobjectionable
3	Temperature	°C	45	30	29	30	29	29	30
4	Total Dissolved Solids	mg/L	--	2305	2220	2055	2110	1900	1805
5	Total Suspended Solids (TSS)	mg/L	100	20	10	25	15	10	BDL(MDL:4.0)
6	Particulate Size of Suspended Solids	-	--	--	--	--	--	--	--
7	Oil and Grease	mg/L	20	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)
8	Fluorides	mg/L	15	0.62	0.51	0.44	0.41	0.56	0.67
9	Sulphides	mg/L	5	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
10	Total Kjeldahi Nitrogen	mg/L	100	52.3	31.1	10.7	5.3	6.2	7.9
11	Ammonical Nitrogen	mg/L	50	46.5	25.2	5	BDL(MDL:2.0)	BDL(MDL:2.0)	2.2
12	Free Ammonia (as NH3)	mg/L	5	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)
13	Copper	mg/L	3	0.075	0.068	0.059	0.061	0.056	0.061
14	Zinc	mg/L	15	0.073	0.07	0.065	0.067	0.062	0.07
15	Biochemical Oxygen Demand (BOD)	mg/L	100	5	11	5	3	7	2
16	Chemical Oxygen Demand (COD)	mg/L	250	21.4	36.5	20.4	12.4	24.8	8.4
17	Total Residual Chlorine	mg/L	1	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)
18	Arsenic (as As)	mg/L	0.2	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)
19	Mercury (as Hg)	mg/L	0.01	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)
20	Lead (as Pb)	mg/L	1	0.074	0.067	0.061	0.065	0.054	0.047
21	Cadmium (as Cd)	mg/L	2	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)
22	Hexavalent Chrmium (as Cr+6)	mg/L	1	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
23	Total Chromium (as Cr)	mg/L	2	0.08	0.071	0.063	0.069	0.062	0.056
24	Nickel	mg/L	5	0.092	0.085	0.077	0.087	0.079	0.071
25	Cyanide (as CN)	mg/L	0.2	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
26	Phenolic Compounds (as C6H5OH)	mg/L	5	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
27	Selenium (as Se)	mg/L	0.05	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
28	Manganese (as Mn)	mg/L	2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
29	Iron (as Fe)	mg/L	3	0.108	0.125	0.112	0.115	0.103	0.126
30	Vanadium (as V)	mg/L	0.2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
31	Nitrate Nitrogen	mg/L	20	5.1	3.9	4.7	5	3.9	4.5
32	Bio-assay Test	%	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.
33	Pesticides	ppb	Absent	Absent	Absent	Absent	Absent	Absent	Absent

5632

Unistar Environment & Research Labs Pvt. Ltd.

Authorised signatory

5633

Gujarat Industrial Development Corporation- Bharuch, Dahej	Result of M/s. SUN FARBEN INCORPORATION.	W.O.No.GIDC/EE/BRH/AB/817 W.O Date:31/08/2018

MONTH - SEPTEMBER - 2020				M/s. SUN FARBEN INCORPORATION					
				Plot No. CH/11, Dahej.					
Date of Sampling				04.09.2020	12.09.2020	19.09.2020	24.09.2020	26.09.2020	29.09.2020
Sample ID No.				20/09/0137	20/09/0361	20/09/0611	20/09/0729	20/09/0838	20/09/0896
Sr. No.	Parameter	UNIT	GIDC Limits	Results					
				PHYSIO-CHEMICAL PARAMETERS					
1	pH @ 25 °C	-	5.5 - 9.0	6.96	6.85	7.26	7.33	7.15	7.24
2	Colour/Odur	Pt. Co. Scale	-	60/Unobjectionable	80/Unobjectionable	60/Unobjectionable	50/Unobjectionable	60/Unobjectionable	50/Unobjectionable
3	Temperature	°C	45	29	30	29	30	29	30
4	Total Dissolved Solids	mg/L	-	1890	1720	1616	1810	1600	1386
5	Total Suspended Solids (TSS)	mg/L	100	BDL(MDL:4.0)	10	20	6	20	BDL(MDL:4.0)
6	Particulate Size of Suspended Solids	-	-	-	-	-	-	-	-
				GENERAL CHEMICAL PARAMETERS					
7	Oil & Grease	mg/L	20	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)
8	Fluoride	mg/L	15	0.85	0.72	0.65	0.61	0.55	0.55
9	Sulphide	mg/L	5	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
10	TKN	mg/L	100	4.8	3.2	6.7	5.5	5.1	4.4
11	Ammonical Nitrogen	mg/L	50	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)
12	Free Ammonia	mg/L	5	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)
13	Copper	mg/L	3	0.068	0.057	0.052	0.055	0.058	0.055
14	Zinc	mg/L	15	0.079	0.068	0.063	0.068	0.059	0.061
15	BOD (3 days at 27 °C)	mg/L	100	7	9	7	2	3	5
16	COD	mg/L	250	25.4	32.5	24.7	8.3	10.4	18.6
17	Arsenic	mg/L	0.2	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)
18	Mercury	mg/L	0.01	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)
19	Lead	mg/L	1	0.055	0.047	0.041	0.049	0.055	0.058
20	Cadmium	mg/L	2	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)
21	Hexavalent Chromium	mg/L	1	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
22	Total Chromium	mg/L	2	0.062	0.056	0.051	0.055	0.054	0.052
23	Nickel	mg/L	5	0.079	0.067	0.063	0.067	0.061	0.056
24	Cyanide	mg/L	0.2	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
25	Phenolic Compound	mg/L	5	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
26	Iron	mg/L	3	0.178	0.144	0.123	0.127	0.115	0.112
27	Nitrate	mg/L	20	6.5	5.1	4.5	5.1	4.8	4.5
28	Total Residual Chlorine	mg/L	1	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)
29	Selenium	mg/L	0.05	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
30	Manganese	mg/L	2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
31	Vanadium	mg/L	0.2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
32	Bio Assay test	%	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.
33	Pesticides	µg/L	Absent	Absent	Absent	Absent	Absent	Absent	Absent

Note: BDL= Below Detection Limit, MDL = Minimum Detection Limit

UNISTAR ENVIRONMENT AND RESEARCH LABS PVT. LTD. VAPI GUJARAT

Unistar Environment & Research Labs Pvt. Ltd.

Authorised Signatory

5634

Gujarat Industrial Development Corporation- Bharuch, Dahej	Result of M/s. SUN FARBEN INCORPORATION.	W.O.No.GIDC/EE/BRH/AB/817 W.O Date:31/08/2018

MONTH - OCTOBER - 2020			M/s. SUN FARBEN INCORPORATION Plot No. CH/11, Dahej.					
Date of Sampling			04.10.2020	06.10.2020	13.10.2020	26.10.2020	27.10.2020	30.10.2020
Sample ID No.			20/10/0111	20/10/0173	20/10/0439	20/10/0676	20/10/0851	20/10/0906
Sr. No.	Parameter	UNIT	GIDC Limits	Results				
			PHYSIO-CHEMICAL PARAMETERS					
1	pH @ 25 °C	-	5.5 - 9.0	7.36	7.59	7.35	7.21	6.82	7.08
2	Colour/Odur	Pt. Co. Scale	-	60/Unobjectionable	80/Unobjectionable	60/Unobjectionable	80/Unobjectionable	60/Unobjectionable	50/Unobjectionable
3	Temperature	°C	45	30	31	30	31	30	31
4	Total Dissolved Solids	mg/L	-	1546	1216	1500	2120	2176	2810
5	Total Suspended Solids (TSS)	mg/L	100	10	6	BDL(MDL:4.0)	BDL(MDL:4.0)	6	10
6	Particulate Size of Suspended Solids	-	-	-	-	-	-	-	-
			GENERAL CHEMICAL PARAMETERS						
7	Oil & Grease	mg/L	20	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)
8	Fluoride	mg/L	15	0.74	0.67	0.82	1.45	1.12	1.22
9	Sulphide	mg/L	5	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
10	TKN	mg/L	100	44.9	28.8	5.9	4.3	4.5	9.2
11	Ammonical Nitrogen	mg/L	50	35.5	22.5	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	3.3
12	Free Ammonia	mg/L	5	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)
13	Copper	mg/L	3	0.056	0.052	0.061	0.078	0.068	0.074
14	Zinc	mg/L	15	0.067	0.061	0.074	0.091	0.084	0.089
15	BOD (3 days at 27 °C)	mg/L	100	BDL(MDL:1.0)	BDL(MDL:1.0)	BDL(MDL:1.0)	BDL(MDL:1.0)	BDL(MDL:1.0)	BDL(MDL:1.0)
16	COD	mg/L	250	42.4	16.5	36.2	14.2	23.6	22.5
17	Arsenic	mg/L	0.2	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)
18	Mercury	mg/L	0.01	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)
19	Lead	mg/L	1	0.046	0.037	0.044	0.059	0.059	0.063
20	Cadmium	mg/L	2	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)
21	Hexavalent Chromium	mg/L	1	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
22	Total Chromium	mg/L	2	0.057	0.063	0.075	0.086	0.089	0.094
23	Nickel	mg/L	5	0.071	0.057	0.064	0.077	0.082	0.088
24	Cyanide	mg/L	0.2	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
25	Phenolic Compound	mg/L	5	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
26	Iron	mg/L	3	0.123	0.104	0.157	0.307	0.312	0.324
27	Nitrate	mg/L	20	4.7	3.9	5.2	6.5	6.9	7.6
28	Total Residual Chlorine	mg/L	1	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
29	Selenium	mg/L	0.05	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
30	Manganese	mg/L	2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
31	Vanadium	mg/L	0.2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
32	Bio Assay test	%	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.
33	Pesticides	µg/L	Absent	Absent	Absent	Absent	Absent	Absent	Absent

Note: BDL= Below Detection Limit, MDL = Minimum Detection Limit

VAPI GUJARAT

Gujarat Environment & Research Labs Pvt. Ltd.

Authorised signatory

5635

Gujarat Industrial Development Corporation- Bharuch, Dahej	Result of M/s. SUN FARBEN INCORPORATION.	W.O.No.GIDC/EE/BRH/AB/817 W.O Date:31/08/2018

MONTH - NOVEMBER - 2020				M/s. SUN FARBEN INCORPORATION				
Date of Sampling				Plot No. CH/11, Dahej.				
Sample ID No.				03.11.2020	13.11.2020	16.11.2020	24.11.2020	27.11.2020
Sr. No.	Parameter	UNIT	GIDC Limits	20/11/0053	20/11/0362	20/11/0386	20/11/0575	20/11/0677
				Results				
	PHYSIO-CHEMICAL PARAMETERS							
1	pH @ 25°C	--	5.5 - 9.0	7.18	6.92	7.12	7.11	7.03
2	Colour/Odur	Pt. Co. Scale	--	40/Unobjectionable	50/Unobjectionable	40/Unobjectionable	50/Unobjectionable	40/Unobjectionable
3	Temperature	°C	45	31	30	31	30	31
4	Total Dissolved Solids	mg/L	--	2160	2480	2580	2554	2386
5	Total Suspended Solids (TSS)	mg/L	100	10	20	26	6	40
6	Particulate Size of Suspended Solids	--	--	--	--	--	--	--
	GENERAL CHEMICAL PARAMETERS							
7	Oil & Grease	mg/L	20	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)
8	Fluoride	mg/L	15	0.96	0.98	0.89	0.75	0.71
9	Sulphide	mg/L	5	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
10	TKN	mg/L	100	5.8	10.4	16.4	19.7	22.4
11	Ammonical Nitrogen	mg/L	50	2.2	3.9	8.4	15.1	16.8
12	Free Ammonia	mg/L	5	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)
13	Copper	mg/L	3	0.067	0.069	0.064	0.057	0.055
14	Zinc	mg/L	15	0.076	0.081	0.075	0.069	0.065
15	BOD (3 days at 27 °C)	mg/L	100	10	4	5	4	6
16	COD	mg/L	250	33.7	18.6	20.6	16.3	24.5
17	Arsenic	mg/L	0.2	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)
18	Mercury	mg/L	0.01	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)
19	Lead	mg/L	1	0.055	0.059	0.055	0.051	0.052
20	Cadmium	mg/L	2	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)
21	Hexavalent Chromium	mg/L	1	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
22	Total Chromium	mg/L	2	0.087	0.091	0.087	0.079	0.072
23	Nickel	mg/L	5	0.075	0.082	0.074	0.068	0.064
24	Cyanide	mg/L	0.2	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
25	Phenolic Compound	mg/L	5	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
26	Iron	mg/L	3	0.267	0.274	0.269	0.223	0.214
27	Nitrate	mg/L	20	5.7	5.9	5.1	4.3	4.1
28	Total Residual Chlorine	mg/L	1	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
29	Manganese	mg/L	2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
30	Selenium	mg/L	0.05	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
31	Vanadium	mg/L	0.2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
32	Bio Assay test	%	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.
33	Pesticides	µg/L	Absent	Absent	Absent	Absent	Absent	Absent

Note: BDL= Below Detection Limit, MDL = Minimum Detection Limit

VAPI GUJARAT

Gujarat Environment & Research Labs Pvt. Ltd.

Authorized signatory

5636

Gujarat Industrial Development Corporation- Bharuch, Dahej	Result of M/s. SUN FARBEN INCORPORATION.	W.O.No.GIDC/EE/BRH/AB/817 W.O Date:31/08/2018

MONTH - DECEMBER - 2020				M/s. SUN FARBEN INCORPORATION			
				Plot No. CH/11, Dahej.			
Date of Sampling				02.12.2020	07.12.2020	14.12.2020	26.12.2020
Sample ID No.				20/12/0085	20/12/0244	20/12/0445	20/12/0920
Sr. No.	Parameter	UNIT	GIDC Limits	Results			
			PHYSIO-CHEMICAL PARAMETERS				
1	pH @ 25 °C	--	5.5 - 9.0	7.15	7.16	7.15	7.2
2	Colour/Odur	Pt. Co. Scale	--	40/Unobjectionable	50/Unobjectionable	150/Unobjectionable	80/Unobjectionable
3	Temperature	°C	45	29	30	29	28
4	Total Dissolved Solids	mg/L	--	2470	2376	2236	1906
5	Total Suspended Solids (TSS)	mg/L	100	18	BDL(MDL:4.0)	16	20
6	Particulate Size of Suspended Solids	-	--	--	--	--	--
			GENERAL CHEMICAL PARAMETERS				
7	Oil & Grease	mg/L	20	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)
8	Fluoride	mg/L	15	0.98	0.86	0.72	0.89
9	Sulphide	mg/L	5	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
10	TKN	mg/L	100	14.6	13.7	3.9	2.6
11	Ammonical Nitrogen	mg/L	50	10	6.1	BDL(MDL:2.0)	BDL(MDL:2.0)
12	Free Ammonia	mg/L	5	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)
13	Copper	mg/L	3	0.061	0.059	0.052	BDL(MDL:0.05)
14	Zinc	mg/L	15	0.07	0.066	0.061	0.054
15	BOD (3 days at 27 °C)	mg/L	100	3	16	9	12
16	COD	mg/L	250	13.4	57.9	32.4	41.5
17	Arsenic	mg/L	0.2	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)
18	Mercury	mg/L	0.01	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)
19	Lead	mg/L	1	0.059	0.066	0.063	0.058
20	Cadmium	mg/L	2	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)
21	Hexavalent Chromium	mg/L	1	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
22	Total Chromium	mg/L	2	0.08	0.074	0.067	0.061
23	Nickel	mg/L	5	0.071	0.068	0.059	0.047
24	Cyanide	mg/L	0.2	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
25	Phenolic Compound	mg/L	5	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
26	Iron	mg/L	3	0.293	0.288	0.223	0.159
27	Nitrate	mg/L	20	6.5	6.1	4.8	3.1
28	Total Residual Chlorine	mg/L	1	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
29	Manganese	mg/L	2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
30	Selenium	mg/L	0.05	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
31	Vanadium	mg/L	0.2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
32	Bio Assay test	%	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.
33	Pesticides	µg/L	Absent	Absent	Absent	Absent	Absent

Note: BDL= Below Detection Limit, MDL = Minimum Detection Limit

Enviro Environment & Research Lab Pvt. Ltd.

Authorised signatory

5637

Gujarat Industrial Development Corporation- Bharuch, Dahej	Result of M/s. SUN FARBEN INCORPORATION.	W.O.No.GIDC/EE/BRH/AB/817 W.O Date:31/08/2018

MONTH - JANUARY - 2021				M/s. SUN FARBEN INCORPORATION				
Date of Sampling				Plot No. CH/11, Dahej.				
Sample ID No.				01.01.2021	06.01.2021	09.01.2021	23.01.2021	30.01.2021
				21/01/0043	21/01/0233	21/01/0311	21/01/0793	21/02/0014
Sr. No.	Parameter	UNIT	GIDC Limits	Results				
	PHYSIO-CHEMICAL PARAMETERS							
1	pH @ 25 °C	--	5.5 - 9.0	7.03	7.5	7.51	7.85	7.32
2	Colour/Odur	Pt. Co. Scale	--	60/Unobjectionable	50/Unobjectionable	40/Unobjectionable	50/Unobjectionable	60/Unobjectionable
3	Temperature	°C	45	29	30	31	29	28
4	Total Dissolved Solids	mg/L	--	2380	2146	1946	2696	3226
5	Total Suspended Solids (TSS)	mg/L	100	20	12	6	40	12
6	Particulate Size of Suspended Solids	-	--	--	--	--	--	--
	GENERAL CHEMICAL PARAMETERS							
7	Oil & Grease	mg/L	20	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)
8	Fluoride	mg/L	15	0.97	0.89	0.77	1.05	1.3
9	Sulphide	mg/L	5	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
10	TKN	mg/L	100	3.7	5.3	42.1	29.4	4.3
11	Ammonical Nitrogen	mg/L	50	BDL(MDL:2.0)	BDL(MDL:2.0)	35.8	24.5	BDL(MDL:2.0)
12	Free Ammonia	mg/L	5	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)
13	Copper	mg/L	3	0.052	0.055	0.054	0.066	0.072
14	Zinc	mg/L	15	0.063	0.059	0.057	0.071	0.084
15	BOD (3 days at 27 °C)	mg/L	100	16	19	15	18	21
16	COD	mg/L	250	56.4	61.8	52.3	65.2	72.2
17	Arsenic	mg/L	0.2	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)
18	Mercury	mg/L	0.01	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)
19	Lead	mg/L	1	0.066	0.062	0.061	0.078	0.086
20	Cadmium	mg/L	2	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)
21	Hexavalent Chromium	mg/L	1	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
22	Total Chromium	mg/L	2	0.072	0.068	0.062	0.075	0.067
23	Nickel	mg/L	5	0.054	0.056	0.055	0.063	0.079
24	Cyanide	mg/L	0.2	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
25	Phenolic Compound	mg/L	5	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
26	Iron	mg/L	3	0.271	0.266	0.246	0.317	0.404
27	Nitrate	mg/L	20	5.2	5.1	4.8	5.9	6.5
28	Total Residual Chlorine	mg/L	1	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
29	Manganese	mg/L	2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
30	Selenium	mg/L	0.05	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
31	Vanadium	mg/L	0.2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
32	Bio Assay test	%	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.
33	Pesticides	µg/L	Absent	Absent	Absent	Absent	Absent	Absent

Note: BDL= Below Detection Limit, MDL = Minimum Detection Limit

Unistar Environment & Research Labs Pvt. Ltd.

Authorised signatory

5638

Gujarat Industrial Development Corporation- Bharuch, Dahej	Result of M/s. SUN FARBEN INCORPORATION.	W.O.No.GIDC/EE/BRH/AB/817 W.O Date:31/08/2018

MONTH - FEBRUARY - 2021				M/s. SUN FARBEN INCORPORATION					
				Plot No. CH/11, Dahej.					
Date of Sampling				01.02.2021	09.02.2021	17.02.2021	22.02.2021	25.02.2021	27.02.2021
Sample ID No.				21/02/0040	21/02/0266	21/02/0546	21/02/0694	21/02/0808	21/03/0016
Sr. No.	Parameter	UNIT	GIDC Limits	Results					
			PHYSIO-CHEMICAL PARAMETERS						
1	pH @ 25 °C	--	5.5 - 9.0	7.7	7.28	6.93	6.67	6.85	6.97
2	Colour/Odur	Pt. Co. Scale	--	50/Unobjectionable	100/Unobjectionable	50/Unobjectionable	60/Unobjectionable	50/Unobjectionable	60/Unobjectionable
3	Temperature	°C	45	29	28	29	28	29	30
4	Total Dissolved Solids	mg/L	--	3246	2786	2580	2456	2350	2210
5	Total Suspended Solids (TSS)	mg/L	100	16	BDL(MDL:4.0)	BDL(MDL:4.0)	36	15	8
6	Particulate Size of Suspended Solids	-	--	--	--	--	--	--	--
			GENERAL CHEMICAL PARAMETERS						
7	Oil & Grease	mg/L	20	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)
8	Fluoride	mg/L	15	1.38	1.31	1.38	1.25	1.1	0.95
9	Sulphide	mg/L	5	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
10	TKN	mg/L	100	4.4	18.1	12.4	4.1	3.3	2.1
11	Ammonical Nitrogen	mg/L	50	BDL(MDL:2.0)	11.7	5.6	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)
12	Free Ammonia	mg/L	5	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)
13	Copper	mg/L	3	0.079	0.072	0.069	0.058	0.052	BDL(MDL:0.05)
14	Zinc	mg/L	15	0.087	0.079	0.074	0.067	0.061	0.057
15	BOD (3 days at 27 °C)	mg/L	100	23	18	22	24	11	15
16	COD	mg/L	250	81.5	64.7	74.9	82	37.5	49.2
17	Arsenic	mg/L	0.2	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)
18	Mercury	mg/L	0.01	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)
19	Lead	mg/L	1	0.089	0.082	0.074	0.069	0.062	0.054
20	Cadmium	mg/L	2	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)
21	Hexavalent Chromium	mg/L	1	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
22	Total Chromium	mg/L	2	0.071	0.066	0.064	0.058	0.049	0.041
23	Nickel	mg/L	5	0.084	0.076	0.072	0.067	0.059	0.052
24	Cyanide	mg/L	0.2	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
25	Phenolic Compound	mg/L	5	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
26	Iron	mg/L	3	0.412	0.402	0.398	0.311	0.265	0.211
27	Nitrate	mg/L	20	6.7	6.1	5.5	4.8	4.1	3.5
28	Total Residual Chlorine	mg/L	1	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
29	Manganese	mg/L	2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
30	Selenium	mg/L	0.05	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
31	Vanadium	mg/L	0.2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
32	Bio Assay test	%	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.
33	Pesticides	µg/L	Absent	Absent	Absent	Absent	Absent	Absent	Absent

Note: BDL = Below Detection Limit, MDL = Minimum Detection Limit

GUJARAT VAPI

5639

Gujarat Industrial Development Corporation- Bharuch, Dahej	Result of M/s. SUN FARBEN INCORPORATION.	W.O.No.GIDC/EE/BRH/AB/817 W.O Date:31/08/2018

MONTH - MARCH - 2021				M/s. SUN FARBEN INCORPORATION				
				Plot No. CH/11, Dahej.				
Date of Sampling				02.03.2021	06.03.2021	16.03.2021	19.03.2021	22.03.2021
Sample ID No.				21/03/0099	21/03/0301	21/03/0630	21/03/0751	21/03/0800
Sr. No.	Parameter	UNIT	GIDC Limits	Results				
	PHYSIO-CHEMICAL PARAMETERS							
1	pH @ 25 °C	–	5.5 - 9.0	7.26	7.9	6.79	7.09	6.71
2	Colour/Odur	Pt. Co. Scale	–	60/Unobjectionable	50/Unobjectionable	60/Unobjectionable	50/Unobjectionable	60/Unobjectionable
3	Temperature	°C	45	30	29	30	31	30
4	Total Dissolved Solids	mg/L	–	2180	2086	1750	2050	1720
5	Total Suspended Solids (TSS)	mg/L	100	6	BDL(MDL:4.0)	10	26	22
6	Particulate Size of Suspended Solids	-	–	–	–	–	–	–
	GENERAL CHEMICAL PARAMETERS							
7	Oil & Grease	mg/L	20	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)	BDL(MDL:2.0)
8	Fluoride	mg/L	15	0.93	0.91	0.82	0.95	0.82
9	Sulphide	mg/L	5	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
10	TKN	mg/L	100	BDL(MDL:2.0)	39.4	4.6	5.7	6.4
11	Ammonical Nitrogen	mg/L	50	BDL(MDL:2.0)	32.6	BDL(MDL:2.0)	2.2	2.8
12	Free Ammonia	mg/L	5	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)	BDL(MDL:0.2)
13	Copper	mg/L	3	0.056	0.055	0.051	0.062	0.057
14	Zinc	mg/L	15	0.069	0.064	0.058	0.069	0.061
15	BOD (3 days at 27 °C)	mg/L	100	20	12	9	17	11
16	COD	mg/L	250	66.6	41.7	33.3	59.6	37.3
17	Arsenic	mg/L	0.2	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)	BDL(MDL:0.01)
18	Mercury	mg/L	0.01	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)	BDL(MDL:0.001)
19	Lead	mg/L	1	0.054	0.057	0.048	0.055	0.049
20	Cadmium	mg/L	2	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)	BDL(MDL:0.003)
21	Hexavalent Chromium	mg/L	1	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
22	Total Chromium	mg/L	2	0.041	0.044	0.039	0.045	0.038
23	Nickel	mg/L	5	0.052	0.054	0.047	0.059	0.052
24	Cyanide	mg/L	0.2	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)	BDL(MDL:0.05)
25	Phenolic Compound	mg/L	5	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
26	Iron	mg/L	3	0.209	0.202	0.157	0.206	0.148
27	Nitrate	mg/L	20	3.3	3.1	3.6	4.5	3.9
28	Total Residual Chlorine	mg/L	1	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
29	Manganese	mg/L	2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
30	Selenium	mg/L	0.05	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
31	Vanadium	mg/L	0.2	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)	BDL(MDL:0.1)
32	Bio Assay test	%	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.	90 % survival of fish after 48 hrs.
33	Pesticides	µg/L	Absent	Absent	Absent	Absent	Absent	Absent

Note: BDL= Below Detection Limit, MDL = Minimum Detection Limit

Gujarat Environment & Research Labs Pvt. Ltd.

Authorised signatory

5640

SUN FARBEN INCORPORATION

Plot No. CH/11, Dahej Industrial Estate, Dahej, Dist. Bharuch.
Tel. : +91 96877 46464 Email : sunfarbeninc.ch11@gmail.com

From:
M/s. SUN FARBEN INCORPORATION
(OLD NAME- ALEX INDUSTRIES)
Plot No. CH-11, CH-11-A, CH-11- B
GIDC BHARUCH
Ta. Vagra,
Dist. Bharuch.
GPCB-ID 30343
Dated: 10th July 2025

To
The Unit head, Bharuch,
The Gujarat Pollution Control Board
Gandhinagar

G. P. C. BOARD
BHARUCH
Inward No. 50097
17.07.25

Subject: Objections in calculation of EDC in Joint Committee Report during personal hearing on 10th July 2025.

Dear Sir/Madam,

We would like to formally submit our objections regarding the Environment Damage Charge (EDC) calculations outlined in the Joint Committee report, as presented to the National Green Tribunal. The following points were also raised during our personal hearing on 10th July 2025 and are critical to our request for reconsideration:

1. **Incomplete Sample Consideration:**

   Between 2017 and 2021, GPCB collected 10 samples, while the GIDC monitoring team collected samples. Considering only 10 samples does not reflect accurate monitoring over five years. We request that all samples be considered, which would revise the failure ratio.

2. **Quality Deviation of Failed Samples:**

   The current calculation accounts only for the number of failed samples, not the extent of deviation. Two industries may have identical failure ratios but vastly different pollutant concentrations (e.g., 100 ppm vs. 1000 ppm). Applying

Dtd-2
14.07.25
14/7/25

SUN FARBEN INCORPORATION
Plot No. CH/11, Dahej Industrial Estate, Dahej, Dist. Bharuch.
Tel. : +91 96877 46464 Email : sunfarbeninc.ch11@gmail.com

uniform EDC without considering deviation is unjust. We urge you to include quality deviation as a parameter in the calculation.

3. COD Treatment Cost Overestimation:

The report estimates COD treatment cost at ₹62 per unit, based on international standards. This is not reflective of actual costs in India. For reference, Dahej CETP charges ₹67 for 3000 ppm COD per KL including pumping costs, as per our opinion treatment cost would be about ₹7–8 per unit. We request recalculation using domestic cost benchmarks.

4. Effluent Quantity for Non-Compliance:

The calculation assumes continuous non-compliance over five years, which is incorrect. The discharge quantity should reflect only the actual duration of non-compliance, not the entire five-year period.

5. No Regulatory Notices Received:

Our unit did not receive any Closure Notice till date regarding environment deviation. We have installed an online TOC meter with a three-way valve and live data connected to CPCB and GPCB portals. Additionally, our discharge pipeline connects directly to the pumping station, ensuring control and compliance.

6. Scientific Assessment of COD Impact:

A study commissioned by MOEF and CPCB (conducted by CSMCRI and NIO) concluded that COD levels up to 1000 ppm do not damage the deep-sea environment. However, we have been charged ₹1,73,46,745/- at only 336 ppm COD, which contradicts this finding and appears unreasonable.

5642

SUN FARBEN INCORPORATION

Plot No. CH/11, Dahej Industrial Estate, Dahej, Dist. Bharuch.
Tel. : +91 96877 46464 Email : sunfarbeninc.ch11@gmail.com

In light of the above, we humbly request the Joint Committee to re-evaluate and revise the EDC calculation. We trust the committee will consider these technical and factual points carefully.

Thanking You,

For, Sun Farben Incorporation, Dahej

For Sun Farben Incorporation
Authorised Signatory

Authorized Signatory

COPY TO,

1. **RO OFFICE GPCB BHARUCH,**
2. **DAHEJ INDUSTRIAL ASSOCIATION, DAHEJ**

5643

THE DHARAMSI MORARJI CHEMICAL CO. LTD.

CIN NUMBER: L24110MH1919PLC000564

GPCB: 29503

Date:27-07-2022

Gujarat Pollution Control Board
RECEIVED ON
05 AUG 2022
24501 | 2

To
The Member Secretary,
The Gujarat Pollution Control Board
Gandhinagar

Subject: Objections against proposed EDC in report of Joint Committee of May 2022 submitted to National Green Tribunal

Reference: 1 Order dated 02.02.2022 of National Green Tribunal, Western Zone Bench, Pune passed in O A 60/2021

2 NGT Order dated 06.07.2022 Western Zone Bench, Pune passed in Org. Application No. 60/2021(WZ)

3 GPCB email Dated 13th July 2022

Respected Sir,

With reference to above mentioned subject Honorable NGT western bench Pune in its order Dated 06-07-2022 has instructed that.

1 *It would be appropriate that the defaulting industries against whom EDC amount has been determined by the Joint Committee, may first approach the State PCB and place their grievances, if any, regarding the quantum of EDC determined within a period of one month.*

We have strong objections against following:

The Dharamsi Morarji Chemical Co. Ltd.

Authorised Signature

REGD. OFFICE : PROSPECT CHAMBERS, 317/21, DR. D. N. ROAD, FORT, MUMBAI - 400 001. INDIA
PHONES : 2204 8881-2-3 | Fax : 2285 2232 | E-mail ID: info@dmcc.com | Website : www.dmcc.com
FACTORY DAHEJ: PLOT NO. CH-5/1, DAHEJ INDUSTRIAL ESTATE, GIDC-PHASE 1. DAHEJ, GUJARAT - 392130.

1. Collection of samples from pumping station D where we are discharging our liquid effluent in common sump is done and not from outlet of our unit. The data of COD is average and not necessarily contributed by our unit. Therefore it is not correct measure to levy any compensation on us.
2. The committee has not attempted at determining actual quantum of damage to environment and cost of its remediation. Quantification of compensation can neither be presumptive nor assumptive. It must be based on actual facts and figures.

1 Consideration of the 1st January 2017 to 31st December 2021 is not acceptable for the following reasons

- It is arbitrary and assumptive.
- No valid reasons for consideration of this period are given by Joint Monitoring committee.
- Had the period been considered from 1st January 2019 to 31st March 2022 we were under compliance and as per Joint committee calculations step 1 to step 5 our EDC would have been zero.
- If the Joint committee report had stretched the period from 1st January 2010 to 31st March 2022 many more industries would have come under non compliance and the quantum of EDC should have been levied on them as well.
- Even considering the period 2017 -2021 in which many industries are considered complying will become noncomplying when the period is considered from 2010-2022 and accordingly they will also come under the purview of EDC.

2 Two formulas and two different methods are adopted for calculation of EDC by Joint Monitoring committee in its report Dated 22-12-2021 and May 2022 which

The Dharamsi Morarji Chemical Co. Ltd.

Authorised Signature

cannot be accepted as they have no legal base and have strong human intervention in EDC levied.

- In Report Dated 22-12-2021 it is

$$EC1 = PI \times N \times R \times S \times LF$$

Where PI = Pollution Index

N = Number of days of Violation

R = EC factor Rs 250

S = scale of operation

LF = Location factor

and is based on monitoring of 34 industries and pumping stations

While the calculations in the second report are based on mathematical modelling of sampling Analysis reports considering period of 5 year that is 2017 to 2021 only of pumping stations. Quantification of compensation can neither be presumptive nor assumptive. It must be based on actual facts and figures.

3 Average COD of 1019.1 mg/l is considered at the final pumping station for EC calculations where as our average COD of the 12 samples collected from 2017 to 2021 is half of average COD and our EDC amount of Rs 57,83,068.This amount includes non compliance of COD treatment avoided by other industries. This is a major error in computation.

4 We are engaged mainly in production of inorganic chemicals. Same COD criteria is applied to our unit as is applied for highly polluting units like pesticides, pharma and dye intermediates. Quality of effluent is not part of the formula relied upon by the committee.

The Dharamsi Morarji Chemical Co. Ltd.

Authorised Signature

5 Out of 12 samples collected between 2017-2021 from final outlet of the industry one sample failed.The failed sample was collected on 04-10-2018.It was in reference to our CTE Amendment application and based on the failed sample our CTE amendment application was rejected by GPCB.

As we understand there cannot be action twice by same statutory authority for single default.

In the light of above statements/justification we kindly request you to take a lenient view and remove our name from Revised Joint Committee Report and Proposed list of penalty.

We assure you of our best co-operation and look forward for your favourable response into the matter.

Yours faithfully,

Copy to:The Regional officer
Gujarat Pollution Control Board
C-1/119/3, GIDC Estate, Phase-II,
Narmadanagar, Bharuch-392015..... for information please

The Dharamsi Morarji Chemical Co. Ltd.

Authorised Signature

5647

PCB ID:- 29503

DMCC
SMARTER CHEMISTRY

Date: 11.7.25

To,

RO office
GPCB
Bharuch.

Subject: Objections against proposed EDC in report of joint committee of May-22 submitted to NGT.

Respected sir,
With reference to above subject we have some objections like:

1. Collection of sample from pumping station D, where we are discharging our liquid effluent in common sump is done and not from outlet of our unit. The data of COD is average and not necessarily contributed by our unit. Therefore it is not correct measure to levy any compensation on us, as we are inorganic product manufacturer (Boric) and our final discharge COD all and average less than **160 Mg/ltr**, we have already installed TOC meter with three way valve with auto recycle mode. Apart from this GIDC takes random 2 sample twice in a week but no any sample fail in given period.
2. The committee has not attempted at determining actual quantum of damage to environment and cost of its remediation.Quantificationof compensation can neither be presumptive nor assumptive. It must be based on actual facts and figure.
3. Considering of 1st January 2017 to 31st December 2021 is not acceptable for the following reason.
   A. It is arbitrary and assumptive.
   B. No valid reason for considering of this period are given by joint monitoring committee.

4. Sampling analysis report considered period of 5 year that is 2017 to 2021 that was too much it should be from sampling date to date of submitting compliance report to authority or one month. It should be based on actual facts and figure.
5. Average COD of 1019.1 mg/l is considered at the final pumping station for EC calculation whereas our average COD was less than 250 mg/ltr during that period and our EDC amount of **Rs 57, 83,068**, this not justified.

In the light of above statement /justification we kindly request you to take a lenient view and remove our name from revised joint committee report and proposed list of penalty.

We assure you of our best co-operation and look forward for your favorable response into the matter.

Yours faithfully,

DMCC SPECIALITY CHEMICALS LTD, DAHEJ

For, DMCC SPECIALITY CHEMICALS LIMITED

Authorised Signature

M.M.Vora 16/07/2025

Dft-I

G. P. C. BOARD
BHARUCH
Inward No. 50091
15-07-25

13.07.25

DMCC SPECIALITY CHEMICALS LIMITED
(Formerly known as "The Dharamsi Morarji Chemical Company Limited")

DAHEJ FACTORY: Plot No.CH-5/1, Dahej Industrial Estate, GIDC-Phase 1, Dahej, Gujarat-392130, India.
T: +91 7043759100, **E:** info@dmcc.com, **W:** www.dmcc.com
CIN NUMBER:L24110MH1919PLC000564

ROHA: 105, MIDC Area, P.B. No.4, Audyogik Vasahat, Roha, Dist. Raigad-402116. India.
T: +912194 263553-4-5, **F:** +912194 263557,
E: esale@dmcc.com/fertsales@dmcc.com/ purchase@dmcc.com/corporate@dmcc.com

REGD. OFFICE: Prospect Chambers, 317/21 Dr. D.N. Road, Fort, Mumbai 400001, India.
T: +9122 2204 8882-3, **E:** info@dmcc.com

14/7/25

5648

MEGHMANI NOVOTECH PRIVATE LTD.

804, B- Wing, Siddhivinayak Tower, Nr. Kataria Arcade, Off S. G. Highway, Makarba, Ahmedabad – 380051,
Plant - Plot No. CH-22,, GIDC, Phase-2, Dahej, Tal. : Vagra, Bharuch– 392130, Gujarat, India

Ref : MNPL/NGT/22-23/001

04.08.2022

GPCB ID : 70267

To,
The Member Secretary,
The Gujarat Pollution Control Board
Gandhinagar .

Gujarat Pollution Control Board
RECEIVED ON
04 AUG 2022
24201

Dear Sir,

Subject : Objections against proposed EDC in report of Joint Committee of May 2022 submitted to National Green Tribunal

Reference:

1. Order dated 02.02.2022 of National Green Tribunal, Western Zone Bench, Pune passed in OA- 60/2021 (WZ)

2. Report of Joint Committee -May 2022 submitted to NGT

3. Order dated 06.07.2022 of National Green Tribunal, Western Zone Bench, Pune passed in OA 60/2021 , IA No.57/2022

In the captioned subject matter, we refer to the order dated 02.02.2022 of Honorable National Green Tribunal (WZ) passed in Original Application 60/2021 (WZ) whereby Joint Committee (JC) was constituted and it's report of May, 2022 submitted with NGT and consequent to that order of Honorable National Green Tribunal (WZ) dated 06.07.2022 passed in

Meghmani Novotech Private Limited Ahmedabad

MEGHMANI NOVOTECH PRIVATE LTD.

804, B- Wing, Siddhivinayak Tower, Nr. Kataria Arcade, Off S. G. Highway, Makarba, Ahmedabad – 380051,
Plant - Plot No. CH-22,, GIDC, Phase-2, Dahej, Tal. : Vagra, Bharuch– 392130, Gujarat, India

Original Application 60/2021 (WZ), IA No./ 57/2022 . The Honorable NGT in this order dated 06.07.2022 held that:

" 7. After having heard all the learned counsel, we deem it proper to issue the following directions :

i) .....

ii) It would be appropriate that the defaulting industries against whom EDC amount has been determined by the Joint Committee, may first approach the State PCB and place their grievances, if any, regarding the quantum of EDC determined within a period of one month.

iii) .....

iv) ....."

While we strongly disapprove of the finding of the Joint Committee, the basis and calculation of Environmental Damage Compensation (EDC) and its attempt to putting the onus of environment management almost completely on the industry, even in absence of the required infrastructure for disposal of industrial effluent and lack of supervision of the estate by GIDC to check and prevent the illegal and unauthorized effluent discharged by unscrupulous people and entities in its pipelines.

In compliance with the direction given in para 7(ii), as reproduced here in above, we, being one of the affected party, are before your good office with our following main grievances among others, without prejudice to one another, regarding the quantum of EDC assessed against us by the Joint Committee, which may please be considered in correct reassessment of the proposed EDC leviable on us.

Meghmani Novotech Private Limited Ahmedabad

MEGHMANI NOVOTECH PRIVATE LTD.

804, B- Wing, Siddhivinayak Tower, Nr. Kataria Arcade, Off S. G. Highway, Makarba, Ahmedabad – 380051,
Plant - Plot No. CH-22,, GIDC, Phase-2, Dahej, Tal. : Vagra, Bharuch– 392130, Gujarat, India

1. Very basis of EDC calculation and working is incorrect and based on improper assumptions. The proposed EDC is comprised of two components as mentioned in the Annexure-XII of the JC report - EC1 Revised = EC1(Old) or EC1(New), whichever is higher; and - EC2

The aggregate of EC1 (Revised) and EC2 is being proposed to be levied upon on all non-complying industries as EDC, as listed out in Annexure-XII of the JC report of May, 2022. The working of EDC is having following error and omissions and therefore, cannot be relied and acted upon.

(a) EC1 (New), calculation of Vt Errors : The total volume calculated is 56007016.81 Kl which might have included non-point source, seepage, illegal domestic sewage etc. so, this unaccounted waste water should not be considered and be subtracted from the total volume. Further, It's is based on booked quantity of the particular pumping station and not actual discharge quantity. Therefore in order to come to a correct working, data received from flow meters of the industry should only be taken into account

(b) GPCB is regularly monitoring our units and whenever non-compliance was found, GPCB had taken actions as per law by way of issuing showcase notices, directions and even closures. After issuing closure orders, if GPCB was satisfied with our compliances than revocation was issued and we resumed the

Meghmani Novotech Private Limited Ahmedabad

MEGHMANI NOVOTECH PRIVATE LTD.

804, B- Wing, Siddhivinayak Tower, Nr. Kataria Arcade, Off S. G. Highway, Makarba, Ahmedabad – 380051,
Plant - Plot No. CH-22,, GIDC, Phase-2, Dahej, Tal. : Vagra, Bharuch– 392130, Gujarat, India

production. Therefore, the non-compliance period shall be calculated based on **number of days from the date of inspection (based on which closure was issued) to the date of compliance verification (based on which Revocation was issued) and not simply by applying all the days of the given period of five years i.e. 2017-2021 resulting into 1825 days.** We are not operating our units on non-compliance status throughout all these days.

We have started our production activity from January-2021 and no notice, direction/closure was issued by GPCB during year 2021. A Screen shot of Legal section of GPCB XGN is enclosed herewith as **Annexure-A.** We have been granted CCA on 20.04.2021 after necessary EMS verification by GPCB during their visit on 25.01.2021 Even in the visit report of Joint team of CPCB & GPCB officials on 18.11.2021, it is admitted that, during their visit, ETP was operational, stream segregation was done, various flow meters provided and log books were updated, This indicates that EMS system is functioning properly.

In fact, we have hardly completed one year of operation till Dec. 2021, the period under consideration by the Joint committee. The GPCB have visited our plant once and have taken the samples of the treated effluent , where in COD level found to be only 375 mg/L, marginally higher than the permissible COD level.

Meghmani Novotech Private Limited Ahmedabad

MEGHMANI NOVOTECH PRIVATE LTD.

804, B- Wing, Siddhivinayak Tower, Nr. Kataria Arcade, Off S. G. Highway, Makarba, Ahmedabad – 380051,
Plant - Plot No. CH-22,, GIDC, Phase-2, Dahej, Tal. : Vagra, Bharuch– 392130, Gujarat, India

(c) The JC report estimates the Excess Organic Load (EOL) as difference between the average organic concentration in term of COD (CA) of all final pumping station minus COD discharge norms of 250 mg/l, which implies that organic concentration in terms of COD at pumping station is equally contributed by all units who are having the connection at that pumping station which is totally irrational. The COD load vary from industry to industry, which is based on their product, process and environment management system among other factors and therefore, the application of uniform COD level across all the industry for calculating EDC is not logical.

(d) EC1 (New), have calculation error in non-compliance factor NCj . The calculation of Rfj is only indicating the number of failed samples, while calculating the NCj, the **degree of non-compliance should be worked out based on the quality of samples of industry.** The due weightage to the quality of the effluent should be given. Further, The JC report have relied upon the results of samples collected from pumping station (PS) 'A', (where we are discharging our liquid effluent in common sump) and not from outlet of our unit. The data of COD is average and not necessarily contributed by our unit. Therefore it is not the correct measure to propose any EDC on us based on the results of PS.

(e) EC1(New) considers EC1 (old) calculation of EC on following formula

EC=PI x N x R x S x LF as per CPCB Guidelines

Where,

Meghmani Novotech Private Limited Ahmedabad

MEGHMANI NOVOTECH PRIVATE LTD.

804, B- Wing, Siddhivinayak Tower, Nr. Kataria Arcade, Off S. G. Highway, Makarba, Ahmedabad – 380051,
Plant - Plot No. CH-22,, GIDC, Phase-2, Dahej, Tal. : Vagra, Bharuch– 392130, Gujarat, India

EC is Environmental Compensation

in PI = Pollution Index of industrial sector

N = Number of days of violation took place

R = Factor in Rupees for deriving the EC, which may be aminimum of 100 and maximum of 500.

S = Factor for scale of operation which could be based onsmall/ medium/ large industry categorization, which may be 0.5 for micro or small, 1.0 for medium and 1.5 for largeunits

The formula calculates Environment damage compensation keeping in view the category of the industry that is Red, Orange and Green . It incorporates the scale of the industry that is large, The categorization of industries done during 2016 as Red, Orange, Green and white by CPCB for the purpose of consent management and monitoring by SPCB's. It was not for the purpose of levying Environment compensation on the industries. Therefore, formula is improper and cannot be the basis for proposed imposition of EDC on us.

We would also like to draw your kind attention that the Pollution Index itself is under challenge and its revision is already ordered. The Honorable Supreme Court has stayed the same.

(f) While working out and proposing the EC1 (Revised), the Joint Committee have taken the EDC - Higher of EC1 (old) and EC1 (new), without any justification. The method opted in working out

Meghmani Novotech Private Limited Ahmedabad

MEGHMANI NOVOTECH PRIVATE LTD.

804, B- Wing, Siddhivinayak Tower, Nr. Kataria Arcade, Off S. G. Highway, Makarba, Ahmedabad – 380051,
Plant - Plot No. CH-22,, GIDC, Phase-2, Dahej, Tal. : Vagra, Bharuch– 392130, Gujarat, India

the EC1 (old), is subjudice while EC1 (new) is not applicable in the present matter. The joint committee's reliance on the decision in the matters of MC Mehta, (1987) 1 SCC 595, Sterlite, (2013) 4 SCC 575, Goel Ganga (2018) 18 SCC 257 and order of this Tribunal dated 24.01.2022 in O.A No. 64/2016 (WZ), Akhil Bhartiya Mengela Samaj Parishad & Ors. v. Maharashtra Pollution Control Board & Ors , for working out the EC1(new), is misplaced as facts and circumstance of the present case are not same and therefore, can't be relied upon.

MC Mehta case – The case deals with liability of industries involved in hazardous or dangerous activities which leads to deaths. The company not indulging in any such activity nor has there been any report of any accidental death on account of your company's operation.

Sterlite case – The Plant was operating without permission and engaging into severe water and air pollution. In the present case, the Company has all permissions in place and whatever shortcomings were notified, the Company has complied with them and submitted the compliances in time.

Goel Ganga Case - The issue involved in this case was violation of EC conditions. The permission was for 12 buildings and 18 were constructed. The Company has never violated any of the consent or EC conditions and whatever violation was ever reported, were immediately complied with within the given time frame. Hence this case is not applicable.

MEGHMANI NOVOTECH PRIVATE LTD.

804, B- Wing, Siddhivinayak Tower, Nr. Kataria Arcade, Off S. G. Highway, Makarba, Ahmedabad – 380051,
Plant - Plot No. CH-22,, GIDC, Phase-2, Dahej, Tal. : Vagra, Bharuch– 392130, Gujarat, India

Akhil Bhartiya Mengela Samaj Parishad – This deals with extreme pollution in respect of Industrial area of Tarapur, which is the No.1 in the CEPI Index in India. Dahej does not even find a mention in 100 most polluted areas. Secondly, the judgment of the NGT is challenged before the Supreme Court and the decision on the same is awaited. The Compensation amounts have been stayed and hence it is *sub-judice*.

(g) The working of EC2 is also based on erroneous assumption. Rule 8(v) of Hazardous Waste Management Rules, 2016 permits storage of hazardous and other waste for 90 days however, considering the extended monsoon during the year 2021, the same was extended to 180 days by your good office itself. A Copy of the office order dated 19.04.2021 issued by GPCB is annexed herewith **Annexure B**. The quantity of Hazardous waste found from our premises is well within the stipulated limit. The Joint monitoring team inspections in October, November 2021 and subsequently in April 2022 and May 2022 have not considered the said circular to hold waste in designated premises. Even the properly stored hazardous waste is also being considered to levy EDC under EC2 portion, which is contrary to law.

We further submit that as soon as the TSDF started, the properly stored Hazardous waste was disposed off in compliance with the Environment law. The quantitative details of yearly hazardous waste so disposed of (including to the end users) is as per details given here under:-

Meghmani Novotech Private Limited Ahmedabad

MEGHMANI NOVOTECH PRIVATE LTD.

804, B- Wing, Siddhivinayak Tower, Nr. Kataria Arcade, Off S. G. Highway, Makarba, Ahmedabad – 380051,
Plant - Plot No. CH-22,, GIDC, Phase-2, Dahej, Tal. : Vagra, Bharuch– 392130, Gujarat, India

Disposal of Hazardous waste		
Year	Disposal to TSDF	Disposal to end user
	MT	MT
2021-22	177	9920
Total	177	9920

The extension granted by the said GPCB circular with subsequent disposal of hazardous waste to TSDF site proves that industry had complied with the applicable law and therefore no penalty or EDC can be demanded on this account. Thus, no EDC on account of EC2 part can be considered and imposed.

In case of our unit, during their visit on 18.11.2021 officials of Joint team reported that there were about 560 MT of stock of Hazardous waste, which were stored in hazardous waste storage yard, however, the same is considered with ERF (Environment risk factor) =1.5, this ERF factor is applicable when the waste is disposed at un-authorized place or handed over or sold to unauthorized party. Out of 560 MT waste, 320 MT liquid recyclable waste (Dilute sulphuric acid & Zinc chloride solution) were stored in dedicated closed tanks having bund wall facility & timely dispatched to Actual end user through online manifest system. All the process residue (180 MT) were stored in closed drums. Whereas ETP sludge (60 MT) was stored under covered roof having RCC flooring having leachate collection facility. There might be spillages from random drum during shifting due to ongoing construction activity however spillage was for limited place only and cleared on immediate basis and submitted photographs to GPCB as well as CPCB office. No verification of compliance or re-evaluation of HW management system is being done by the authority thereafter in

Meghmani Novotech Private Limited Ahmedabad

MEGHMANI NOVOTECH PRIVATE LTD.

804, B- Wing, Siddhivinayak Tower, Nr. Kataria Arcade, Off S. G. Highway, Makarba, Ahmedabad – 380051,
Plant - Plot No. CH-22,, GIDC, Phase-2, Dahej, Tal. : Vagra, Bharuch– 392130, Gujarat, India

this reference. However, the same is considered with ERF (Environment risk factor) =1.5, this ERF factor is applicable when the waste is disposed at un-authorized place or handed over or sold to unauthorized party. The proper storage of waste , within permitted time limit and at proper place cannot be treat as violation of environmental law and the basis of levy of EDC under EC2 category. Therefore, we submit that the entire working of EC2 in our case is erroneous.

(h) The committee has not attempted at determining the actual quantum of damage to environment and cost of its remediation. The quantification of compensation can't be on the basis of assumption and presumption which are not permitted under law. In absence of actual facts and figures in this regard, no EDC can be imposed and collected from us.

2. The sample collection process followed by Joint Committee was also in violation of governing law and against the principle of natural justice.

(a) The samples collected by GPCB/Joint committee at effluent treatment plant /places and pumping station inlet and outlet are not the samples collected in conformity with process prescribed under Section 21 of the Water Act or in compliance with the provisions of section 11 of the Environment (Protection) Act 1986. There was no opportunity for us to take/receive a division of sample as prescribed in Section 21 of water act 1974 and Section 11 of Environment (Protection) Act 1986 in order to verify and

Meghmani Novotech Private Limited Ahmedabad

MEGHMANI NOVOTECH PRIVATE LTD.

804, B- Wing, Siddhivinayak Tower, Nr. Kataria Arcade, Off S. G. Highway, Makarba, Ahmedabad – 380051,
Plant - Plot No. CH-22,, GIDC, Phase-2, Dahej, Tal. : Vagra, Bharuch– 392130, Gujarat, India

cross check the analysis and results of the samples so taken, on our own. Due to non-compliance of proper procedure, we have serious objection to the authenticity of the test results and/or admissibility thereof as evidence in any decision making or adjudication proceedings.

(b) The test results of the samples collected by the joint committee on various dates from the same pumping station varies hugely which appears to unexplainable. The COD level of discharging industry connected to the same pumping station cannot vary beyond a limit as there is no change in the product and process involved. Therefore, it appears that either the test results of the samples are incorrect or the industrial effluent by other unscrupulous entities is being discharged illegally. The said variation of COD on various dates is submitted with as note to Annexure-C.

(c) Without prejudice to above, the analysis of such samples can take maximum 5-6 days depending on whether 3-day or 5-day BOD is measured. It was obligatory for GPCB/ Joint committee to communicate and share these results with the concerned industry immediately if GPCB had noticed any major deviation or non-compliance. As seen from the records such reports are either sent after a very long time (ranging from 15 days to 2-3 months) or in some cases are not even shared with industry/units, which were directly issued closure notices without any opportunity to raise objection/ show-cause for alleged violations with utter disregard to the process of the law. Such delay and lapses is not justified under law.

Meghmani Novotech Private Limited Ahmedabad

MEGHMANI NOVOTECH PRIVATE LTD.

804, B- Wing, Siddhivinayak Tower, Nr. Kataria Arcade, Off S. G. Highway, Makarba, Ahmedabad – 380051,
Plant - Plot No. CH-22,, GIDC, Phase-2, Dahej, Tal. : Vagra, Bharuch– 392130, Gujarat, India

3. Without prejudice to above, an industry can be held responsible for management of Environment within their premises and in the vicinity thereof and not for the area spread across the estate and/or as vide as PCPIR, Dahej. It is the responsibility of GIDC to provide required infrastructure for disposal of industrial effluent and make provision for CETP for which they have collected money and promised to set up CETP to attract the industry from across the country. The industry is entitled to the benefit of 'Principle of Promissory Estoppel", as GIDC is still under process to honor its promise to provide CETP and other related infrastructure in time.

4. Even otherwise also, we as industry are required to impart primary treatment to our liquid effluent discharge and release them in Common Effluent Treatment Plant set up by GIDC, as per order dated 22.02.2017 passed by Hon Supreme Court in Writ petition No 375/2012 and if the GIDC is not able to fulfil its commitment, then GIDC should contribute the higher EDC. Despite of this fact, where the revised EDC charges increased heavily on the industry, GIDC have been levied with only for a miniscule amount of EDC, which is against the principle of equitable justice.

5. We further submit that we have not discharged any effluent directly to any river, pond, sea etc. but only in the designated sump of GIDC through pipeline nor resorted to any ghost connection to discharge any effluent, which lead to contamination of soil or river, pond, well etc. and therefore, we cannot be penalized for any violation which we have not committed for.

Meghmani Novotech Private Limited * Ahmedabad

MEGHMANI NOVOTECH PRIVATE LTD.

804, B- Wing, Siddhivinayak Tower, Nr. Kataria Arcade, Off S. G. Highway, Makarba, Ahmedabad – 380051,
Plant - Plot No. CH-22,, GIDC, Phase-2, Dahej, Tal. : Vagra, Bharuch– 392130, Gujarat, India

In view of the above stated facts and error and omission in working of EDC proposed on the industry by the Joint Committee, we disapprove and seriously object to the EDC levied on our industry and submit that we are not liable for any EDC as proposed by the Joint Committee report of May, 2022.

6. Without prejudice to above and despite of our disagreement with joint committee report, the above stated genuine error and omission in EDC working need to be considered, if the EDC is being worked out for non-compliant period relating to our industry, the EDC payable by our industry is being worked out as per **Annexure- C** to this letter which may please be considered while imposing any EDC in the interest of natural and equitable justice.

7. We request you to grant us an opportunity of Personal Hearing before deciding the matter. We reserve our right to add, alter, amend and/or rescind any of the foregoing grounds, if necessary, in the interest of justice.

Thanking you in anticipation,

Encl. : As above

For Meghmani Novotech Private Limited

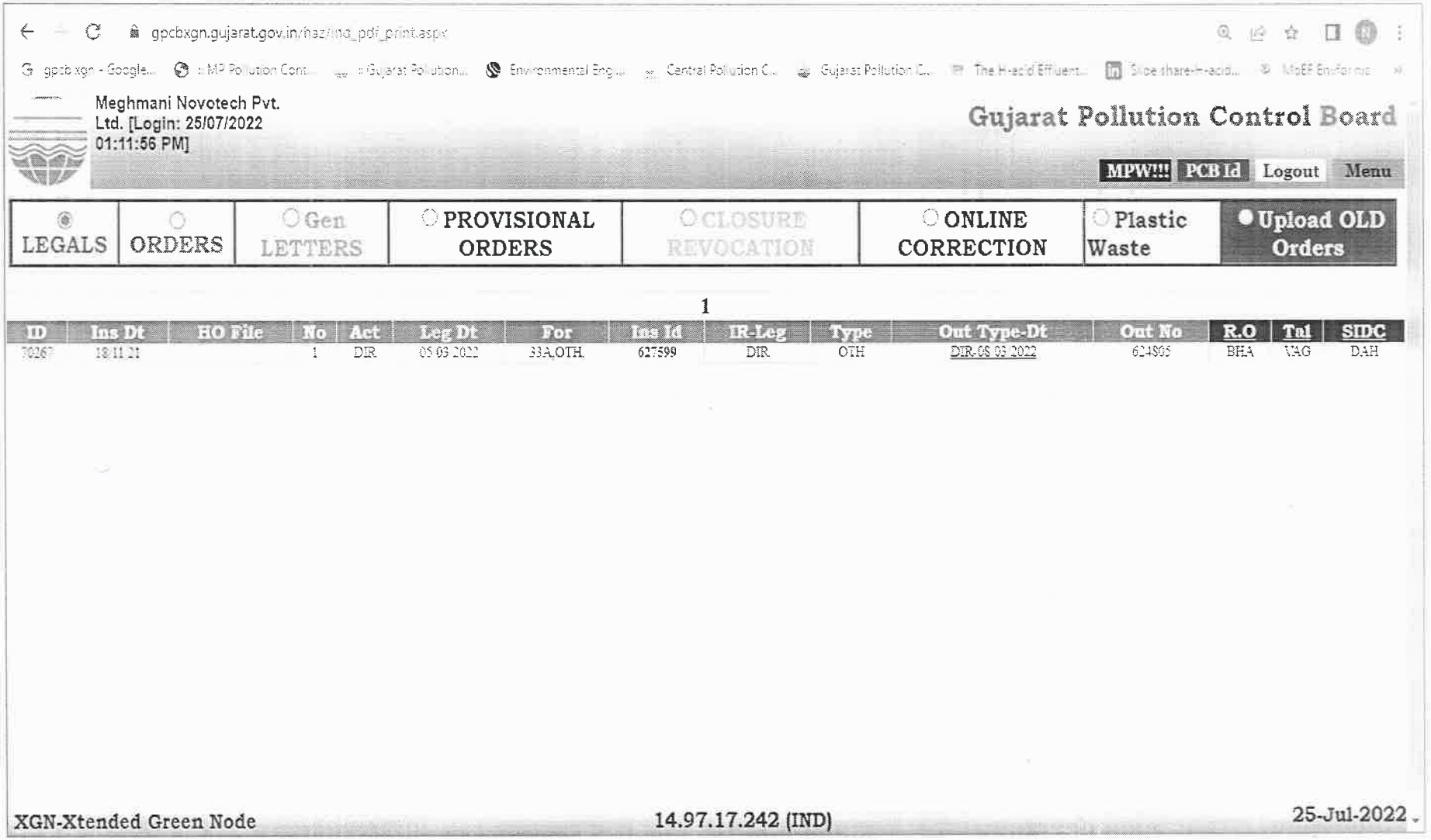
Meghmani Novotech Private Limited Ahmedabad

Authorized Signatory

Copy to: President/Hon. Secretary, Dahej Industries Association, Dahej.

Meghmani Novotech Pvt. Ltd.

Annexure-A



Note: Out unit has started production activity from January-2021 and No notice/direction was issued during year 2021

Meghmani Novotech Private Limited Ahmedabad

5661

Annexure- B

Gujarat Pollution Control Board
Head Office, "Paryavaran Bhavan"
Sector: 10-A, Gandhinagar

Office Order

Subject: Extension of Storage Periods of Hazardous Waste beyond 90 Days as per the provisions of Rule: 8 (v) of Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016.

As per provisions of Rule: 8 of Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016 (herein referred to as "The Rules"), occupier of the facility may store the hazardous and other waste for a period not extending ninety (90) days and that the State Pollution Control Board may extent the period of 90 days in certain cases on justifiable ground up to one hundred and eighty (180) days.

The Rule 3(21) defines the occupiers. "Occupiers in relation to any factory or premises, means a person who has control over the affairs of the factory of the premises and includes in relation to any hazardous and other waste, the person in possession of the hazardous and other waste".

Under the current situation of a COVID-19 pandemic and in public interest, the Gujarat Pollution Control Board hereby permits occupier to store hazardous and other wastes for period up to **one hundred eighty days (180) days.**

The order comes into effect from date of issue and will be **valid up to six months**.

During this Period, occupier shall ensure safe and environmental sound storage of hazardous and other wastes so that there is no adverse impact on environment and human health.

(A. V. SHAH)
MEMBER SECRETARY

No: GPCB/HAZ-GEN-723/ MS-14 Date: 19/04/2021

Copy to:

1. Additional Chief Secretary, Forest & Environment Department, Gandhinagar
2. Additional Chief Secretary, Urban Development Department, Gandhinagar
3. PS to Hon. Chairman, GPCB, Gandhinagar
4. All Common TSDFs
5. All Units Heads, GPCB, Gandhinagar
6. All Regional Officers, GPCB
7. Unit head- IT, GPCB

Meghmani Novotech Pvt. Ltd. -GIDC-Dahej

Annexure-C

EC1 (old)- Working	Particular	JC-1 (Nov-21)	MNPL	MNPL -Justification
EC1 (Old) = PI x N x R x S x LF				
Pollution Index of industrial sector	**PI**	**80**	**80**	
Number of days of violation	**N**	**12**	**2**	**Refer Note -A** for non compliant days
A factor in Rupees (Rs.) for EC per Day	**R**	**250**	**250**	
Factor for scale of operation	**S**	**1**	**1**	
Location factor for the area having population less than 1 million	**LF**	**1**	**1**	
EC1 (old)- Rs.		**240000**	**40000**	

EC1 (New)- Working	Particular	JC-2 (May-22)	MNPL	MNPL -Justification
EC1 (New) = EOL X 62.5				
Actual Volume Discharge by individual Industries from 1st March, 2021	Vj (KL)	24645	161.08	The date of dischareg of water wef 01.03.2021 i.e. 306 days of volume and working is based on that with 2 days as non complinace days - **Refer Note-A**
Total Actual Volume of Waste Water discharge in ith station	**Pumping Station - A-** Vi (KL)	6058834.4		The EC1(new) is derived from all these factors which is based on assumptions & presumpitons. (1) It does not consider the individual unit' sdefault period and assume the continues default. (2) As per Annexure-I of JC report-May 22, there is & huge variation observed in COD results **(Refer Note - B)** which also raise doubt about its results and % EC distribution.(3) The EC1 (New) working relied upon irrelevant decision of the courts (4) The deterent factor does not consider the quality aspect of the industrial effluent. All these point are described in detail in our letter.
Ratio of Wastewater discharge by individual industry D/E	Rvj : Vj/Vi	0.004067614		
Total Samples Collected		2		
Total Samples Failed		1		
Ratio of Failed Samples of individual industry H/G	Rfj	0.5		
Flow Failed (Non complianc e factor of Individual industry), NCj F*I	NCj	0.002033807		
∑NCj		0.202287769		
Deterrant Factor, Dfj=J/K		0.010054029		
Station Wise EC		1691722646		
Average COD of JC reports (Assuming it to be true) - 2017-2021	mg/L		1019	Assuming it to be true, reserve our right to contest
Allowed COD Norms	mg/L	250	250	
Treatment cost save (avoided cost)	Rs./Kg of Excess organic load	62.5	62.5	
Total Excess Organic Load of our Unit	Kg		123.9	
EC1 (New)	**Station wise EC x Dfj**	**17008628**	**7742**	
EC1 (Revised)- Max. of EC1 (old) and EC1 (New)		**17008628**	**40000**	

EC2- Working	Particular	JC	MNPL	MNPL -Justification
EC2= Q X ERF X R				
Qty. of HW stored outside the storage shed, stored outside in drums wherein leakages from the drums or drums in dilapidated conditions (MT)	Q	560	0	Out of 560 MT waste, 320 MT liquid recyclable waste (Dilute sulphuric acid & Zinc chloride solution) were stored in dedicated closed tanks having bund wall facility. All the process residue (180 MT) were stored in closed drums. ETP sludge (60 MT) was stored under covered roof having RCC flooring having leachate collection facility. No HW was stored/ disposed in Violation of HW Rules.
Environment Risk Factor	ERF	1.5	0.1	ERF: 0.1 (as per CPCB report May-2019 for Determination of EC under HW rules)
Environmental Compensation Fact	R	30000	30000	
Total EC2		**25200000**	**0**	
EDC =EC1 (Revised)+EC2		**42208628**	**40000**	

Meghmani Novotech Private Limited Ahmedabad

5663

Meghmani Novotech Pvt. Ltd.- GIDC Dahej

Note -A

Date of Visit	Date of Visit reply submission to GPCB	Compliance date	Nos. of Days of Non compliance	Remark
18-11-21	19-11-21	19-11-21	2	**Visit of Joint team of CPCB & GPCB. No non compliance remark mentioned in Notice of Entry. Data asked by Verbally was submitted on 19-11-2021**
Total days of Non compliance			**2**	
Note:				
1. Based on verification on visit dated: 25.01.2021, CCA is granted on 20.04.2021. Hence that visit is not considered				
2. Production activity started from January-2021. During year 2021, No notice issued by GPCB.				
3. The number of non-compliances days are being worked out on the basis of Report of committee - constituted in compliance of order of Honorable NGT Principal Bench, New Delhi- in the matter of Brackish Water Research Centre v/s Gujarat Pollution Control Board & Others in OA 70/2021				

Note - B

Data of Pumping station - COD (mg/L)				
Date	**PS-A**	**PS- C**	**FPS-Ambheta**	**Final disposal pt.**
25 to 28 Oct-21 & 16 to 18 Nov-21	9023	4115	--	1860
18-04-22	459.65	4536	1280	--
19-04-22	--	--	--	456
20-04-22	1632.93	583.36	1088.64	--
04-05-22	2237.76	497.76	810.56	1585.37
Source: JC report -May 2022. The reason for such huge variation remains unexplained even in JC Report.				

Meghmani Novotech Private Limited Ahmedabad

Date: 09/07/2025

Presentation for
Response submitted in reference to

HON'BLE NGT MATTER OA No. 60/2021 (WZ)

(Aryavart Foundation v/s Hemani Organics Ltd & Ors)

5665

By

M/s. Meghmani Novotech Pvt Ltd.

Plot no. CH-22, GIDC Estate-Dahej, Taluka: Vagra, Dist-Bharuch, Gujarat.

Reference: GPCB E-mail, dated 08/07/2025 reg. Hearing wrt NGT OA. 60/2021

We, M/s. Meghmani Novotech Pvt Ltd, are engaged in manufacturing of Reactive dyes, Optical Brightening Agents and Dyes Intermediates Products at Plot no. CH-22, GIDC Estate-Dahej, Taluka: Vagra, Dist-Bharuch, Gujarat.

The Unit is in receipt of Notice of direction from Gujarat Pollution Control Board vide outward no. 624805, Dated 05.03.2022 as our unit was inspected by Joint team of CPCB & GPCB on 18.11.2021 in compliance of Hon. NGT order dated: 04.10.2021

According to Joint report of GPCB & CPCB published in November-2021 and further on May-2022, our unit has been directed to pay particular EDC amount.

In view of the proposed EDC amount mentioned in Joint committee report of May-2022, we have submitted objection letter along with valid reasons to Gujarat Pollution Control Board on 04.08.2022

The compliance status of Notice direction dated: 05.03.2022 was submitted to GPCB on 13.04.2022 and herewith Submit Latest compliance status of the same.

5666

Point wise Compliance status of Notice of direction dated 05.03.2022 in reference to Joint committee inspection dated 18.11.2021

<table>
<tr><th colspan="2">Specific points mentioned in Notice of direction dated 5.03.2025 based on Non compliance observed during JC inspection dated 18.11.2021</th><th>Current Compliance status</th></tr>
<tr><td>1</td><td>Analysis results reveals that the sample collected from the final treated wastewater discharge tank exceeds discharge norms prescribed by the GPCB</td><td>In sample taken during JC inspection, only TSS and COD is found higher and rest of the other parameters are found well within the norms. As per M/s. Parul University quarterly analysis during year 2024-25, Treated effluent quality found as under which is well within the limit :
<table>
<tr><th>Date of sampling</th><th>COD (mg/L)</th><th>BOD (mg/L)</th><th>Ammonical Niitrongen (mg/L)</th><th>TSS (mg/L)</th></tr>
<tr><td>05-08-2024</td><td>204.96</td><td>76.7</td><td>7.1</td><td>64.6</td></tr>
<tr><td>21-11-2024</td><td>192.8</td><td>70</td><td>6.6</td><td>75.6</td></tr>
<tr><td>28-01-2025</td><td>191.2</td><td>73.3</td><td>0.9</td><td>63.60</td></tr>
</table></td></tr>
<tr><td>2</td><td>The effluent collection pit provided in the process plant was found completely full with acidic wastewater however ETP was not in operation.</td><td>We have provided a pit of 15 KL (MOC: MSRLBL) for the storage of effluent in production plant. Once it is filled with effluent, after the adjustment of pH, it is transferred to Equalization tank (Cap.1200 KL) for further treatment. We are operating our ETP efficiently.</td></tr>
</table>

56967

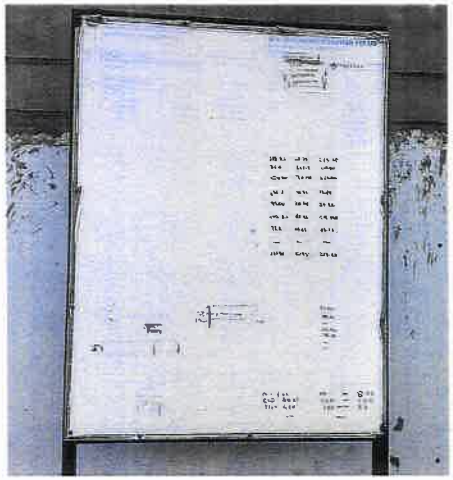
3	Huge quantity of Process residue waste/Off specification chemical materials keeping in drums without any labelling stored in haphazard manner at various locations was observed. Proper hazardous waste storage area is not provided for the same Residue stored in drums during JC inspection	In the beginning stage the Cement industry were agreed to lift the residue in Drums only for the co-processing and therefore we stored the residue in drums & most of the drums were stored on wooden pallets beneath the shed and or covered with tarpaulin. However we have discontinued storage of Process residue in drums & Dedicated closed storage tank of 40 MT capacity is provided for the said purpose . **Current Status** Current status of Area with RCC flooring Residue storage tank (Cap. 40 MT)

5668

4	Process waste and ETP Sludge was found in mix up condition in various locations on open land within premises.	Separate Closed storage area is provided for the Process waste as well as ETP sludge Residue storage tank (Cap. 40 MT) ETP sludge/ solid waste storage area
5	Huge quantity of process residue/cleaning materials and off specification process distillation residue waste were stored at the various locations in plant premises in haphazard manner without any safety and security consideration.	Dedicated storage facility provided for solid waste as well as liquid recyclable waste (with provision of bund wall & acid brick lining) & timely disposed through online manifest system
6	About 180 MT process distillation residue, 30 MT dilute sulphuric acid, 290 MT spent ZnCl2 solution and 60 MT ETP sludge were stored in the ETP and plant premises	

5669

7	Hazardous waste was stored since January 2021 means more than 10 months while as per hazardous waste management rules 2016 hazardous waste cannot be stored more than 90 days.	We had started our production since Jan-21 and disposal of Dilute sulphuric acid & ZnCL2 Solution was started from next month it self viz. Feb-21. So far as concerned with Disposal of Process residue is concern, after quality confirmation from cement industries, we had started to send it for co-processing. Regular dispatch of the waste is being done to ensure minimum stock at the plant
8	The drums filled with hazardous waste were not labelled with the category and name of waste and the condition of the drums was very poor and most of the drums were observed leakages and spillages of hazardous waste and contaminating the nearby unpaved/ raw land surfaces.	The spillages were rectified & as mentioned above, we have discontinued storage of residue in Drums after Joint committee inspection. Use of Dedicated Closed storage tank has eliminated chances of leakages & spillages. All the hazardous waste storage area/ tanks are facilitated with RCC flooring. Nomenclature provided for each type of hazardous waste storage.
9	Leakages from the drums, spread out of leachate from the sludge as well as from the drums on the un-impervious ground and acidic, suffocating fumes were observed during the visit.	
10	Construction work was going on and digging of the land at many places were observed in the industrial premises. In such a situation, soil and ground water contamination cannot be rules out by the leakages and spreading of hazardous waste on the ground.	As mentioned above, dedicated waste storage area with leachate collection facility & bund wall is provided whereas Liquid waste storage is done in closed tanks. As we have taken all preventive measure there is no possibility of contamination

11	Connectivity of TOC analyzer is not provided with the server of GPCB and CPCB.	The OCEMS is provided at ETP outlet as well as stack. We have consulted respective supplier for its connectivity to GPCB/CPCB server
12	The industry has not provided display board at the gate of the premises.	Display board is provided at the entry of main gate 

5971

Direction points given vide Notice of direction dated 5.03.2025		Current Compliance status
1	Unit shall carry out proper effluent stream segregation and treat each stream based on it quality/ characteristics	Separate & dedicated Collection tanks are provided for High COD and Low COD effluent. High COD effluent is treated in MEE followed by ATFD whereas Low COD effluent is treated in ETP consisting of primary, secondary and Tertiary treatment units followed by chlorination .
2	Unit shall upgrade ETP and operate it effectively & efficiently in such a way that treated effluent always confirms discharge norms prescribed in the CCA.	We have installed ETP consisting full fledge primary, secondary & tertiary treatment units along with Chlorination system and we are operating the same efficiently and treated water quality confirm GPCB norms
3	Unit shall provide separate flow meters and energy meters for ETP and color coding of all pipeline networks of wastewater within the premises of Industries with flow directions and nomenclatures.	Complied

Direction points given vide Notice of direction dated 5.03.2025		Current Compliance status
3		

4	Unit shall practice only single treated industrial effluent discharge point.	We have only one treated water discharge point.
5	Unit shall handle, store and dispose various types of hazardous waste as per the Hazardous & Other Waste (Management and Handling) Rules, 2016.	We are strictly following guideline under Hazardous & Other Waste (Management and Handling) Rules, 2016.
6	Unit shall provide adequate in-house HW storage facility with roof, covered from all sides, impervious flooring and leachate management system.	Complied. Adequate in-house HW storage area is provided as mentioned above. Leachate collection facility is provide in ETP area as well as in solid waste storage area.
7	Unit shall immediately dispose of solid and liquid hazardous waste stored inside the premises as per CCA condition.	We are regularly disposing the hazardous waste through online manifest system to ensure minimum accumulation of the same at our plant
8	Unit shall take adequate measures to prevent leakage, spillage while handling toxic, volatile and hazardous chemicals/wastes	We are taking utmost care to prevent leakage, spillage while handling toxic, volatile and hazardous chemicals/wastes and infrastructure for the same is already in the place

5674

9	Unit shall operate OCEMS regularly as per CPCB's directions/ guidelines.	Complying the same
10	Unit shall immediately take corrective measures for above non-compliance and submit compliance report/time bound action plan for it.	Compliance report was submitted on 13.04.2025 We are in compliance with the all the remarks
11	Unit shall comply all conditions mentioned in CCA judiciously	We are complying the conditions as mentioned in our CCA
12	Unit shall pay Environment Damage Compensation (EDC) as and when communicated by the Board.	Noted It is to be kindly noted that No closure direction order issued to our unit since commencement of production (i.e. since January-2021).

Other Compliance/regulatory points we would like to highlight for your kind consideration

The company has obtained environmental certifications, including **ISO 14001:2015 (Environmental Management System), ISO 45001:2018 (Occupational Health and Safety**

We have complied the remarks of joint team visit dated: 18.11.2021. During the said visit also, most of the waste were properly stored including liquid waste in dedicated storage tanks. There might be some spillages during transfer of drums due to ongoing construction work, but that spread was within limited space on RCC flooring & within the premises. In any way, No damage to Environment or to the outside of premises was caused.

Waste is being disposed time to time in accordance with the rules

Analysis result of treated water sample taken by Joint team officials indicates that 11 out of 13 parameters found within limit and only two parameters found nominal higher than discharge norms

5676

Revised EDC calculation submission to GPCB:

In continuation to GPCB and CPCB team site visit, final report circulated by Board in May, 2022 considering revised EDC to be levied from the industries

Regarding the same, we have submitted our response to the Board mentioning objection against the EDC calculation and amount has been highlighted to be paid by us.

We have already submitted the revised calculation sheet according to our understanding and we are providing herewith same EDC calculation for your kind perusal

EC1 (old)- Working	Particular	JC-1 (Nov-21)	MNPL
EC1 (Old) = PI x N x R x S x LF			
Pollution Index of industrial sector	PI	80	80
Number of days of violation	N	12	2
A factor in Rupees (Rs.) for EC per Day	R	250	250
Factor for scale of operation	S	1	1
Location factor for the area having population less than 1 million	LF	1	1
EC1 (old)- Rs.		**240000**	**40000**

EC1 (New)- Working	Particular	JC-2 (May-22)	MNPL
EC1 (New) = EOL X 62.5			
Actual Volume Discharge by individual Industries from 1st March, 2021	Vj (KL)	24645	161.08
Total Actual Volume of Waste Water discharge in ith station	Pumping Station - A-Vi (KL)	6058834.4	
Ratio of Wastewater discharge by individual industry D/E	Rvj : Vj/Vi	0.004067614	
Total Samples Collected		2	
Total Samples Failed		1	
Ratio of Failed Samples of individual industry H/G	Rfj	0.5	
Flow Failed (Non complianc e factor of Individual industry), NCj F*I	NCj	0.002033807	
∑NCj		0.202287769	
Deterrant Factor, Dfj=J/K		0.010054029	
Station Wise EC		1691722646	
Average COD of JC reports (Assuming it to be true) - 2017-2021	mg/L		1019
Allowed COD Norms	mg/L	250	250
Treatment cost save (avoided cost)	Rs./Kg of Excess organic load	62.5	62.5
Total Excess Organic Load of our Unit	Kg		123.9
EC1 (New)	**Station wise EC x Dfj**	**17008628**	**7742**
EC1 (Revised)- Max. of EC1 (old) and EC1 (New)		**17008628**	**40000**

EC2- Working	Particular	JC	MNPL
EC2= Q X ERF X R			
Qty. of HW stored outside the storage shed, stored outside in drums wherein leakages from the drums or drums in dilapidated conditions (MT)	Q	560	0
Environment Risk Factor	ERF	1.5	0.1
Environmental Compensation Factor	R	30000	30000
Total EC2		**25200000**	**0**
EDC =EC1 (Revised)+EC2		**42208628**	**40000**

5680

Thank You

Date: 09/07/2025

Presentation for
Response submitted in reference to

HON'BLE NGT MATTER OA No. 60/2021 (WZ)

(Aryavart Foundation v/s Hemani Organics Ltd & Ors)

5682

By

M/s. Meghmani Novotech Pvt Ltd.

Plot no. CH-22, GIDC Estate-Dahej, Taluka: Vagra, Dist-Bharuch, Gujarat.

Reference: GPCB E-mail, dated 08/07/2025 reg. Hearing wrt NGT OA. 60/2021

We, M/s. Meghmani Novotech Pvt Ltd, are engaged in manufacturing of Reactive dyes, Optical Brightening Agents and Dyes Intermediates Products at Plot no. CH-22, GIDC Estate-Dahej, Taluka: Vagra, Dist-Bharuch, Gujarat.

The Unit is in receipt of Notice of direction from Gujarat Pollution Control Board vide outward no. 624805, Dated 05.03.2022 as our unit was inspected by Joint team of CPCB & GPCB on 18.11.2021 in compliance of Hon. NGT order dated: 04.10.2021

According to Joint report of GPCB & CPCB published in November-2021 and further on May-2022, our unit has been directed to pay particular EDC amount.

In view of the proposed EDC amount mentioned in Joint committee report of May-2022, we have submitted objection letter along with valid reasons to Gujarat Pollution Control Board on 04.08.2022

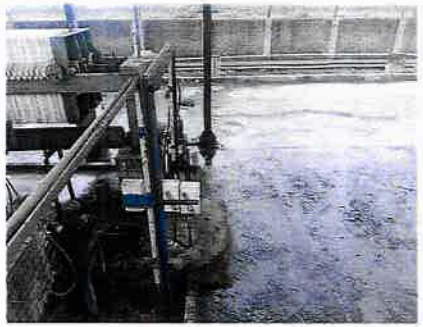
The compliance status of Notice direction dated: 05.03.2022 was submitted to GPCB on 13.04.2022 and herewith Submit Latest compliance status of the same.

5683

Point wise Compliance status of Notice of direction dated 05.03.2022 in reference to Joint committee inspection dated 18.11.2021

<table>
<tr><th colspan="2">Specific points mentioned in Notice of direction dated 5.03.2025 based on Non compliance observed during JC inspection dated 18.11.2021</th><th>Current Compliance status</th></tr>
<tr><td>1</td><td>Analysis results reveals that the sample collected from the final treated wastewater discharge tank exceeds discharge norms prescribed by the GPCB</td><td>In sample taken during JC inspection, only TSS and COD is found higher and rest of the other parameters are found well within the norms. As per M/s. Parul University quarterly analysis during year 2024-25, Treated effluent quality found as under which is well within the limit :
<table>
<tr><th>Date of sampling</th><th>COD (mg/L)</th><th>BOD (mg/L)</th><th>Ammonical Niitrongen (mg/L)</th><th>TSS (mg/L)</th></tr>
<tr><td>05-08-2024</td><td>204.96</td><td>76.7</td><td>7.1</td><td>64.6</td></tr>
<tr><td>21-11-2024</td><td>192.8</td><td>70</td><td>6.6</td><td>75.6</td></tr>
<tr><td>28-01-2025</td><td>191.2</td><td>73.3</td><td>0.9</td><td>63.60</td></tr>
</table></td></tr>
<tr><td>2</td><td>The effluent collection pit provided in the process plant was found completely full with acidic wastewater however ETP was not in operation.</td><td>We have provided a pit of 15 KL (MOC: MSRLBL) for the storage of effluent in production plant. Once it is filled with effluent, after the adjustment of pH, it is transferred to Equalization tank (Cap.1200 KL) for further treatment. We are operating our ETP efficiently.</td></tr>
</table>

5684

3	Huge quantity of Process residue waste/Off specification chemical materials keeping in drums without any labelling stored in haphazard manner at various locations was observed. Proper hazardous waste storage area is not provided for the same Residue stored in drums during JC inspection	In the beginning stage the Cement industry were agreed to lift the residue in Drums only for the co-processing and therefore we stored the residue in drums & most of the drums were stored on wooden pallets beneath the shed and or covered with tarpaulin. However we have discontinued storage of Process residue in drums & Dedicated closed storage tank of 40 MT capacity is provided for the said purpose . **Current Status**  Current status of Area with RCC flooring Residue storage tank (Cap. 40 MT)

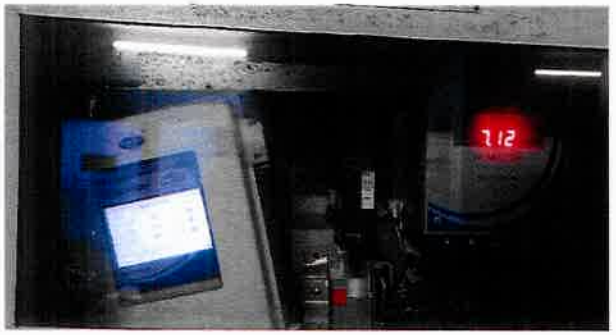
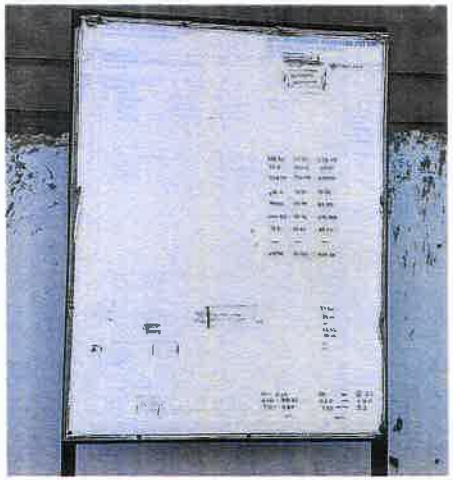
5685

4	Process waste and ETP Sludge was found in mix up condition in various locations on open land within premises.	Separate Closed storage area is provided for the Process waste as well as ETP sludge Residue storage tank (Cap. 40 MT) ETP sludge/ solid waste storage area
5	Huge quantity of process residue/cleaning materials and off specification process distillation residue waste were stored at the various locations in plant premises in haphazard manner without any safety and security consideration.	Dedicated storage facility provided for solid waste as well as liquid recyclable waste (with provision of bund wall & acid brick lining) & timely disposed through online manifest system
6	About 180 MT process distillation residue, 30 MT dilute sulphuric acid, 290 MT spent ZnCl2 solution and 60 MT ETP sludge were stored in the ETP and plant premises	

5686

7	Hazardous waste was stored since January 2021 means more than 10 months while as per hazardous waste management rules 2016 hazardous waste cannot be stored more than 90 days.	We had started our production since Jan-21 and disposal of Dilute sulphuric acid & ZnCL2 Solution was started from next month it self viz. Feb-21. So far as concerned with Disposal of Process residue is concern, after quality confirmation from cement industries, we had started to send it for co-processing. Regular dispatch of the waste is being done to ensure minimum stock at the plant
8	The drums filled with hazardous waste were not labelled with the category and name of waste and the condition of the drums was very poor and most of the drums were observed leakages and spillages of hazardous waste and contaminating the nearby unpaved/ raw land surfaces.	The spillages were rectified & as mentioned above, we have discontinued storage of residue in Drums after Joint committee inspection. Use of Dedicated Closed storage tank has eliminated chances of leakages & spillages. All the hazardous waste storage area/ tanks are facilitated with RCC flooring. Nomenclature provided for each type of hazardous waste storage.
9	Leakages from the drums, spread out of leachate from the sludge as well as from the drums on the un-impervious ground and acidic, suffocating fumes were observed during the visit.	
10	Construction work was going on and digging of the land at many places were observed in the industrial premises. In such a situation, soil and ground water contamination cannot be rules out by the leakages and spreading of hazardous waste on the ground.	As mentioned above, dedicated waste storage area with leachate collection facility & bund wall is provided whereas Liquid waste storage is done in closed tanks. As we have taken all preventive measure there is no possibility of contamination

5687

11	Connectivity of TOC analyzer is not provided with the server of GPCB and CPCB.	The OCEMS is provided at ETP outlet as well as stack.  We have consulted respective supplier for its connectivity to GPCB/CPCB server
12	The industry has not provided display board at the gate of the premises.	Display board is provided at the entry of main gate 

5688

Direction points given vide Notice of direction dated 5.03.2025		Current Compliance status
1	Unit shall carry out proper effluent stream segregation and treat each stream based on it quality/ characteristics	Separate & dedicated Collection tanks are provided for High COD and Low COD effluent. High COD effluent is treated in MEE followed by ATFD whereas Low COD effluent is treated in ETP consisting of primary, secondary and Tertiary treatment units followed by chlorination .
2	Unit shall upgrade ETP and operate it effectively & efficiently in such a way that treated effluent always confirms discharge norms prescribed in the CCA.	We have installed ETP consisting full fledge primary, secondary & tertiary treatment units along with Chlorination system and we are operating the same efficiently and treated water quality confirm GPCB norms
3	Unit shall provide separate flow meters and energy meters for ETP and color coding of all pipeline networks of wastewater within the premises of Industries with flow directions and nomenclatures.	Complied

5689

Direction points given vide Notice of direction dated 5.03.2025		Current Compliance status
3		

4	Unit shall practice only single treated industrial effluent discharge point.	We have only one treated water discharge point.
5	Unit shall handle, store and dispose various types of hazardous waste as per the Hazardous & Other Waste (Management and Handling) Rules, 2016.	We are strictly following guideline under Hazardous & Other Waste (Management and Handling) Rules, 2016.
6	Unit shall provide adequate in-house HW storage facility with roof, covered from all sides, impervious flooring and leachate management system.	Complied. Adequate in-house HW storage area is provided as mentioned above. Leachate collection facility is provide in ETP area as well as in solid waste storage area.
7	Unit shall immediately dispose of solid and liquid hazardous waste stored inside the premises as per CCA condition.	We are regularly disposing the hazardous waste through online manifest system to ensure minimum accumulation of the same at our plant
8	Unit shall take adequate measures to prevent leakage, spillage while handling toxic, volatile and hazardous chemicals/wastes	We are taking utmost care to prevent leakage, spillage while handling toxic, volatile and hazardous chemicals/wastes and infrastructure for the same is already in the place

5691

9	Unit shall operate OCEMS regularly as per CPCB's directions/ guidelines.	Complying the same
10	Unit shall immediately take corrective measures for above non-compliance and submit compliance report/time bound action plan for it.	Compliance report was submitted on 13.04.2025 We are in compliance with the all the remarks
11	Unit shall comply all conditions mentioned in CCA judiciously	We are complying the conditions as mentioned in our CCA
12	Unit shall pay Environment Damage Compensation (EDC) as and when communicated by the Board.	Noted It is to be kindly noted that No closure direction order issued to our unit since commencement of production (i.e. since January-2021).

Other Compliance/regulatory points we would like to highlight for your kind consideration

The company has obtained environmental certifications, including **ISO 14001:2015 (Environmental Management System), ISO 45001:2018 (Occupational Health and Safety**

We have complied the remarks of joint team visit dated: 18.11.2021. During the said visit also, most of the waste were properly stored including liquid waste in dedicated storage tanks. There might be some spillages during transfer of drums due to ongoing construction work, but that spread was within limited space on RCC flooring & within the premises. In any way, No damage to Environment or to the outside of premises was caused.

Waste is being disposed time to time in accordance with the rules

Analysis result of treated water sample taken by Joint team officials indicates that 11 out of 13 parameters found within limit and only two parameters found nominal higher than discharge norms

5693

Revised EDC calculation submission to GPCB:

In continuation to GPCB and CPCB team site visit, final report circulated by Board in May, 2022 considering revised EDC to be levied from the industries

Regarding the same, we have submitted our response to the Board mentioning objection against the EDC calculation and amount has been highlighted to be paid by us.

We have already submitted the revised calculation sheet according to our understanding and we are providing herewith same EDC calculation for your kind perusal

EC1 (old)- Working	Particular	JC-1 (Nov-21)	MNPL
EC1 (Old) = PI x N x R x S x LF			
Pollution Index of industrial sector	PI	80	80
Number of days of violation	N	12	2
A factor in Rupees (Rs.) for EC per Day	R	250	250
Factor for scale of operation	S	1	1
Location factor for the area having population less than 1 million	LF	1	1
EC1 (old)- Rs.		**240000**	**40000**

EC1 (New)- Working	Particular	JC-2 (May-22)	MNPL
EC1 (New) = EOL X 62.5			
Actual Volume Discharge by individual Industries from 1st March, 2021	Vj (KL)	24645	161.08
Total Actual Volume of Waste Water discharge in ith station	Pumping Station - A- Vi (KL)	6058834.4	
Ratio of Wastewater discharge by individual industry D/E	Rvj : Vj/Vi	0.004067614	
Total Samples Collected		2	
Total Samples Failed		1	
Ratio of Failed Samples of individual industry H/G	Rfj	0.5	
Flow Failed (Non complianc e factor of Individual industry), NCj F*I	NCj	0.002033807	
∑NCj		0.202287769	
Deterrant Factor, Dfj=J/K		0.010054029	
Station Wise EC		1691722646	
Average COD of JC reports (Assuming it to be true) - 2017-2021	mg/L		1019
Allowed COD Norms	mg/L	250	250
Treatment cost save (avoided cost)	Rs./Kg of Excess organic load	62.5	62.5
Total Excess Organic Load of our Unit	Kg		123.9
EC1 (New)	**Station wise EC x Dfj**	**17008628**	**7742**
EC1 (Revised)- Max. of EC1 (old) and EC1 (New)		**17008628**	**40000**

EC2- Working	Particular	JC	MNPL
EC2= Q X ERF X R			
Qty. of HW stored outside the storage shed, stored outside in drums wherein leakages from the drums or drums in dilapidated conditions (MT)	Q	560	0
Environment Risk Factor	ERF	1.5	0.1
Environmental Compensation Factor	R	30000	30000
Total EC2		**25200000**	**0**
EDC =EC1 (Revised)+EC2		**42208628**	**40000**

Thank You

GUJARAT FLUOROCHEMICALS
VALUE THROUGH GREEN CHEMISTRY
CIN : L24304GJ2018PLC105479

Gujarat Fluorochemicals Limited
earlier known as Inox Fluorochemicals Limited

12/A, GIDC Dahej Industrial Estate, Taluka Vagra, Distt. Bharuch-392130, Gujarat, India | Tel: +91-2641-618031 (Admin) / 618041-50 (Purchase) / 618086-87 (Security) | www.gfl.co.in

Ref. GFL/GPCB-ID 15136/2022-23/21 July 29,2022

To
The Member Secretary
Gujarat Pollution Control Board
Gandhinagar – 382010
chairman-gpcb@gujarat.gov.in
ms-gpcb@gujarat.gov.in

Gujarat Pollution Control Board
02 AUG 2022
23787

Dear Sir,

Subject: Objections on behalf of Gujarat Fluorochemicals Ltd. against proposed Environment Damage Compensation in Joint Committee Report of November 2021 and May 2022 submitted to National Green Tribunal (Western Zone Bench) in OA No. 60/2021 [Aryavart Foundation v. Hemani Industries Ltd.] as directed by NGT.

References:

a) Mail received on Implementation of Directions of Hon'ble NGT in the matter of O.A. No. 60/2021 from GPCB Head Office (Mr. Irfan Kagzi) dated on July 13th ,2022
b) Order dated 02.02.2022 of National Green Tribunal, Western Zone Bench, Pune passed in OA No. 60/2021
c) Report of Joint Committee of May 2022 submitted to NGT in OA No. 60/2021
d) Objections filed on behalf of Gujarat Fluorochemicals Ltd. on 05.07.2022 before the NGT in OA No. 60/2022
e) Order dated 06.07.2022 of National Green Tribunal, Western Zone Bench, Pune passed in OA No. 60/2021

1. That Gujarat Fluorochemicals Ltd. (**"GFL"**) is a public limited Company. It was incorporated in 1987 and commenced commercial operations at Dahej Industrial Area in 2007. It has over 30 years of expertise in fluorine chemistry and is one of the major producers of Fluoropolymers, Fluorospecialities, Refrigerants, and Chemicals. Currently, GFL manufactures various chemicals at its Plant in Dahej.

2. That OA No. 60/2021 relates to wastewater management by the industries and Gujarat Infrastructure Development Corporation (**"GIDC"**) in Dahej Industrial area.

The Joint Report submitted by the members of Gujarat Pollution Control Board (**"GPCB"**) and Central Pollution Control Board (**"CPCB"**) in compliance of the order dated 04.10.2021 passed by the Hon'ble NGT alleged non-compliance of wastewater norms by GFL and calculated an environmental compensation of Rs. 5.19 crores to be imposed upon GFL. The environmental compensation remains unchanged in the subsequent Report filed by the Joint Committee in June 2022 in compliance of the order dated 02.02.2022 passed by the Hon'ble NGT.

3. It may be noted at the outset that GFL placed its objections to the Joint Committee Reports on record before the Hon'ble NGT on 05.07.2022. The said copy of objections was also served upon the Chairman, GPCB.

4. That vide order dated 06.07.2022 in the subject OA, the Hon'ble NGT has directed industries to place their grievances before the State PCB regarding the quantum of Environment Damage Compensation (**"EDC"**) determined within a period of one month. Pursuant thereto, we have received email dated 13.07.2022 from your office requesting us to place our objections before the GPCB. Along with the email, you have also shared a detailed computation sheet as Annexure-A. In compliance with the said order and your email, GFL seeks to submit its objections to the computation of EDC in the Joint Committee Reports of November 2021 and May 2022.

5. At the outset, it is submitted that no EDC whatsoever ought to be imposed against GFL for the following reasons:

I. Collection of samples without following due process of law

a) That the Joint Committee has not complied with the mandatory requirement of complying with the provisions of Section 21 of the Water (Prevention and Control of Pollution) Act, 1974 (**"Water Act"**) at the time of collecting the effluent samples from the GFL plant. The water samples were not divided in the presence of GFL's officers/representatives/agents.

It is trite law that if effluent samples are not collected in the manner provided under the Water Act, the said samples are not admissible under law and no action should be taken against the unit basis the test report of such samples. Therefore, it is submitted that no EDC ought to be levied upon GFL and re-sampling may be undertaken.

II. The Joint Committee has made erroneous and baseless observations against GFL

a) The Joint Committee has made various baseless and unsubstantiated findings against GFL in its report, as below:

i. ***"Industry discharging wastewater to Final Pumping Station of GIDC without complying with the CCA discharge norms. Industry needs to improve treatment efficiency of its ETP through regular maintenance and operations."***

b) That it has been alleged that the final treated wastewater discharged into the GIDC drain exceeded GPCB CCA standards as below:

Parameters (mg/l)	*Final Outlet to GIDC drain*	*GPCB Discharge Standards as per the CCA*
BOD (3 days at 27 degree Celsius)	*122*	*100*
COD	*620*	*250*

c) It is submitted that the sample results (as mentioned at Pg. 1906 in the Joint Committee Report) are erroneous. The results are in variation and contrary to the results of the samples analyzed by the NABL accredited third party laboratory and GFL's inhouse laboratory results on the same date which are as below:

Parameters (mg/l)	*Final Outlet to GIDC drain (third party laboratory)*	*Final Outlet to GIDC drain (GFL's inhouse laboratory)*	*GPCB Discharge Standards as per the CCA*
BOD (3 days at 27 degree Celsius)	*46*	*48.6*	*100*
COD	*161.7*	*198*	*250*

Copies of the analysis reports by third party NABL accredited laboratory and GFL's inhouse laboratory are annexed hereto and marked as **Annexure-1** and **Annexure-2**. The said analysis/test reports clearly show that the wastewater discharged from GFL's plant is meeting the standards prescribed in the CCA and that GFL is not discharging effluents in violation of the discharge conditions prescribed in the CC&A.

d) Moreover, it may be noted that for the same period, the online CPCB server recorded COD of 188.54. Copy of the screenshot of the CPCB server is annexed hereto and marked as **Annexure-3**.

e) It is submitted that the analysis results by the GPCB are erroneous. This has probably occurred due to the high chloride content in the sample which affects Chemical Oxygen Demand (**"COD"**) values. It is pertinent to mention that GFL produces chloro chemicals and uses inorganic chemicals as major raw materials. The main raw materials are sea salt, and chlorides. On many occasions, GFL has jointly tested COD with GPCB laboratory to understand the interference of chloride during estimation of COD. By using the APHA Method: 5220 on various samples, it has been confirmed that chlorides are interfering into COD digestion leading to erratic values of COD.

f) This has been acknowledged by the GPCB previously when GPCB did not analyse COD because of higher chloride content in sample Ref Sample ID 251215 dated 15.01.2019, 251216 dated 15.01.2019, 248500 dated 09.12.2018 and 248501 dated 09.12.2018. The remark is high chloride in the said samples. Copy of the result showing in A.R comparative sheet downloaded from GPCB XGN portal in which for four occasions COD was not analysed due to higher chloride is annexed hereto and marked as **Annexure-4**. Copy of a sample test result is also annexed hereto and marked as **Annexure-5**.

g) It may be noted that scientific research has well-documented the effects of chloride to the COD analysis. High content of chloride leads to higher COD results erroneously.

It may be noted that separate tests are required to be performed for determination of COD depending on the chloride content. In case the chloride content is high, a procedure to remove the chloride with mercuric sulphate is recommended. Removal of Chloride and dosing of Hg (mercury) is a critical stage of analysis where skill and accuracy plays a vital role.

GPCB has previously collected many samples for routine testing and our COD was found within limits when chloride removal has been done as per APHA guidelines. It appears, thus, that the said method was not used by the GPCB properly and the third-party laboratory in its examination possibly. This has led to higher COD in the GPCB results relied upon in the Joint Committee Report. Therefore, it is submitted that the GPCB has adopted flawed methodology in measurement of COD and BOD in the sample testing. Copy of the Standard Operating Procedure for determination of COD prepared by the GFL is annexed hereto and marked as **Annexure-6**.

h) *Vide* letter dated 25.11.2021, GFL highlighted the aforesaid issue of high chloride content and requested GPCB to undertake a re-sampling/joint analysis to eliminate the errors caused by the high chloride content. However, your office had failed to give any response or address the issue. The Joint Committee

Report also fails to mention the possibility of such an error. Copy of the letter dated 25.11.2021 is annexed hereto and marked as **Annexure-7**. This was again brought to your notice *vide* GFL's reply dated 28.03.2022 to the Direction dated 05.03.2022 issued by the GPCB under Section 33-A of the Water Act. The reply requested for a re-sampling to be undertaken by the GPCB due to the flawed methodologies adopted, as explained above. Copy of the reply dated 28.03.2022 is annexed hereto and marked as **Annexure-8**. However, GPCB has not taken into account the said issue and continued to recommend compensation of Rs. 5.19 crores upon GFL in the Joint Committee Report filed in June 2022.

i) In the meantime, GPCB has also undertaken sampling as a part of CCA amendment application on 22.02.2022 and inward date 23.02.2022 from final outlet of our ETP. The results for the sample tested was uploaded on 05.03.2022 (Test Report No. 46945) showing COD value 190 ppm as against the limit of 250 ppm. At the same time, GFL also tested the same sample in its laboratory and the result was 233 ppm while the results of the NABL approved laboratory was 238.1 ppm. This confirms that our discharge is well below the limit prescribed by Board. Copy of the GPCB and NABL approved laboratory test results are annexed hereto and marked as **Annexure-9**.

j) It is submitted that GFL has segregated all wastewater sources based on type and quality parameters and accordingly designed the ETP for treating six streams with specific treatment for each of them. The segregation has been noted at pg. 1902 of the Joint Committee Report filed in December 2021. GFL operates its ETPs based on the stream as per the SOP defined for the stated stream. Copy of the ETP Flow Diagram is annexed hereto and marked as **Annexure-10**.

k) Furthermore, it is noteworthy that GFL's plant is being continuously monitored by a third-party monitoring agency, namely M/s. **Unistar Environment and Research Labs Pvt. Ltd** accredited by National Accreditation Board for Testing and Calibration Laboratories (NABL). The test reports annexed above corroborate the fact that GFL has been discharging wastewater within the stipulated limits prescribed by GPCB. GIDC has also been undertaking regular testing of the sample by using the same Laboratory.

l) It can be inferred from the above that the Joint Committee Report suffers from various infirmities, especially in respect of waste water testing from the Plant. The contrary and erroneous effluent test results *qua* GFL in the Joint Committee Report signify the errors in sample collection and testing by the Joint Committee. Thus, no compensation ought to be imposed upon GFL.

m) Lastly, it has been wrongly observed by the Joint Committee that GFL needs to improve treatment efficiency of its ETP through regular maintenance and operations. GFL's ETP system is adequate and certified by M/s. Dharmsinh Desai University, Department of Chemical Engineering, a GPCB-appointed recognized auditor (Schedule-I). It was certified on 03.06.2022 by the Adequacy Certificate of Environment Management System that the environmental management system provided by GFL is adequate and efficacious to achieve the quality of effluents (Air, Waste water and Hazardous waste) as specified/required for consents/notifications issued by GPCB. A copy of the said certificate is annexed herein as **Annexure-11.** Further, GFL is operating the ETP diligently and effectively on a regular basis and have upgraded the ETP operation process.

ii. ***"The industry also needs to provide flow meter at wastewater inlet of ETP for each stream."***

a) The Joint Committee has wrongly and without any basis or proof observed that there are no flowmeters at inlet streams.

It is respectfully submitted that as per the GPCB guidelines, flow meters at inlet of effluent streams are not mandatory in law however, GFL has already placed flow meters for inlet streams for internal monitoring. Further, GFL also has a flow meter for outlet discharge point connected to GPCB server. All flow meters had been installed prior to the notice and are already in working condition. It is submitted that GFL has installed flow meters at all wastewater inlet streams and the same has been recorded in the ETP logbook.

In view thereof, it is submitted that GFL is not in non-compliance of the said condition. Photos of such flow meters installed at the six streams are annexed hereto and marked as **Annexure-12**.

iii. ***"The industry had stored calcium chloride along with other waste haphazardly inside the premises. The industry need to explore to utilize or sell calcium chloride produced instead of disposing it in CHWTSDF."***

a) GFL has provided sufficient covered storage area to store calcium chloride and fly ash under non-hazardous storage area. Copy of the photographs showing such storage area is annexed hereto and marked as **Annexure-13**.

b) Further, GFL has been exploring the possibility of selling the produced calcium chloride to users, but suitability of this material is not yet accepted by any buyer. The other industries find it difficult to treat the calcium chloride due to various impurities therefore, there are hardly any buyers for the same. Hence, GFL is

disposing this material to the Common Hazardous Waste Treatment, Storage and Disposal Facility (CHWTSDF) system/site. It may be noted that during the monsoon season, the landfill site had been closed as per GPCB guideline and hence the calcium chloride was stored in non-hazardous area on site.

c) It is submitted that GFL is handling, storing and disposing hazardous wastes as per the Hazardous & Other Waste (Management & Handling) Rules, 2016. GFL has also provided adequate in-house hazardous storage facility covered on all sides, impervious flooring and leachate management system. Copies of manifest of waste disposal at GPCB approved landfill site/recycler/coprocessor are annexed hereto and marked as **Annexure-14**.

iv. ***"The industry need to improve handling of coal dust, fly ash and other wastes inside the premises and implement good housekeeping practices."***

a) It is submitted that GFL is using the following systems to improve handling of coal dust, fly ash and other wastes inside the premises and implement good housekeeping practices.

i. ESP (Electro-static Precipitator) to control SPM in the stack
ii. Online Monitoring system for stack dust monitoring
iii. Water Spray Nozzles are available at coal unloading/grizzly Hopper area (Dust Suppression)
iv. Water Spray Nozzles at Belt Conveyors
v. Ash Conditioner with water spray arrangement surrounding ash unloading area

Copies of photographs evidencing the aforesaid measures are annexed hereto and marked as **Annexure-15**.

b) Moreover, GFL is following good housekeeping practices. Copies of photographs showing housekeeping practices of GFL are annexed hereto and marked as **Annexure-16**.

6. In addition, we state that we have not discharged any effluent directly in any river, pond, sea etc. and have discharged the same only in the designated sump of GIDC through pipeline. Moreover, we have not resorted to any ghost connections to discharge any effluent.

7. Without prejudice to the above foundational objections to the findings against GFL in the Joint Committee Report, GFL also seeks to raise strong objections to the computation of EDC in the Joint Committee Report, as below:

I. The methodology adopted by the Joint Committee to assess EDC is without any legal backing

That the methodologies adopted in the Joint Committee Reports is arbitrary, perverse, and without any legal backing whatsoever.

Firstly, it is submitted that CPCB/GPCB has no jurisdiction to determine the methodology for levying environmental compensation. The Environment (Protection) Act, 1986 nowhere empowers the CPCB to determine the formula for calculation of environmental compensation. The said powers are in the nature of legislative powers and ought not to have been exercised by the CPCB. A challenge to the power of the CPCB to levy compensation is pending before the Hon'ble Supreme Court.

Secondly, the formula/methodology for levying compensation does not have any legal backing. The formula is neither enshrined in any statute nor in a delegated legislation. It has also not been notified in the official Gazette by the Government. In absence of the same, it is unclear how compensation has been calculated and levied by the Joint Committee.

II. No determination of actual damage to environment undertaken

No proof at all has been produced to show the extent of actual damage caused to the environment by GFL. It is submitted that the quantification of compensation cannot be presumed without any data and the same should be based upon a clear and workable restitution plan which should be contingent upon the type/nature of water body sought to be restituted. It is submitted that without any proof of environmental damage, the imposition of such a hefty environmental compensation is disproportionate and against the principles of levy of compensation. Quantification of
compensation can neither be presumptive nor assumptive. It must be based on actual facts and figures.

III. Relevant factors have not been taken into account

a) The EC formula does not take into account the Environment Management systems adopted by the industry for control of water, air and land pollution. Even if adequate EMS is provided, the industry has to pay same amount of compensation for minor violations of pollution control and Environmental laws at par with the industries which have not provided adequate effluent treatment plants, installed proper air pollution control equipment or adopted appropriate measures for Hazardous waste disposal.

b) Quality of effluent is not part of the formula relied upon by the committee. There cannot be a same criterion for all units where the quality of effluent differs and therefore, contributes differently to the alleged polluted streams.

IV. EC 1 (old) determined by the Joint Committee in its' Report of November 2021 is without any application of mind

a. Formula is without any legal backing

a) It is stated that the Environmental Compensation determined by the Joint Committee in its November 2021 Report is erroneous, arbitrary, unreasonable and devoid of any merit in law and fact. It may be noted that EC 1 (New) considers EC1 (Old). The relevant excerpt of the Joint Committee Report determining the Environmental Compensation to be paid by GFL is reproduced below for ease of reference:

S. No.	Name of Industry	Scale of Operation (as per GPCB records)	No. of days of violation	EC_1 (Rs. in crores)	Quantum of HW observed (MT)	EC_2 (Rs. In crores)	Total EC (Rs. In crores)
15	M/s Gujarat Fluorochemicals Ltd., Plot no. 12-A, GIDC Dahej, Tal. Vagra, Bharuch	1.5	1730	5.19	0	0	5.19

b) The formula adopted in the Joint Committee Report for determining the above-stated Environmental Compensation is reproduced below for ease of reference:

"

$$EC1 = PI \times N \times R \times S \times LF$$

Where:
PI= Pollution Index of industrial sector, as the concerned industries falls in the Red Category, its Pollution Index is 80

N= Number of days for which the violation took place is considered from the first date of NOD/direction with respect to wastewater management issued by GPCB to the industry since 01.04.2016 till 29.11.2021 (Date of Hearing of the matter before Hon'ble NGT). In case GPCB not issued any directions during last five years, the N is considered from the date of visit. The joint team has considered continual violation of the industry with respect to wastewater management because of the fact that the final disposal quality of the wastewater found non-complying the discharge conditions based on the last five years data.

R= A factor in Rupees (Rs.) for EC is Rs. 250/day

S= Factor for scale of operation is 1.5 for large scale, 1.0 for medium scale and 0.5 for small or micro scale.

LF= Location Factor is 1 as the population of the area is less than 1 million.

These values have been applied to the formula for EC1 determination for the industries and GIDC where non-compliance observed."

c) It appears that the formula has been adopted from the "*Report of the CPCB In-house Committee on Methodology for Assessing Environmental Compensation and Action Plan to Utilize the Fund*" filed by the CPCB and accepted by NGT, Principal Bench in Paryavaran Suraksha Samiti v. Union of India & Ors, O.A. No. 593/2017 ("**CPCB Report**"). However, it is submitted that the methodology has not been notified in the Official Gazette by way of a statute. In absence of the same, it is respectfully submitted that the formula ought not to be applied. Moreover, the Joint Committee has neither provided any rationale for the adoption of the above-stated formula nor provided any reason while determining values to the factors mentioned in the formula namely, 'N', 'PI' and 'R'. It is submitted that determination of compensation cannot be arbitrary and the same must be founded upon intelligible considerations and criteria.

d) In addition, it may be noted that the categorization of industries as Red, Orange, Green and White was undertaken by CPCB for the purpose of consent management and monitoring by SPCBs. It was not for the purpose of finance or bank loans or levying Environment compensation on the industries. Therefore, the formula is *prima-facie* improper.

b. Erroneous assumptions while calculating period of violation for levy of Environmental Compensation

a) Without prejudice to the submissions above, it is submitted that the Joint Committee has made various erroneous assumptions while determining the Environmental Compensation to be paid by GFL and has applied the said formula in a desultory and frivolous manner to levy compensation on GFL and other industries in the Joint Committee Report. The Joint Committee has not provided any data in the Joint Committee Report to show that GFL had breached conditions relating to waste-water discharge and management for a continuous period of 1730 days basis which Environmental Compensation has been levied. This assumption of a continuous violation for a period of 1730 days is *ex-facie* erroneous and based on surmises and conjectures.

b) While the formula applied in the Joint Committee Report remains the same as the one formulated in the CPCB Report, the value/meaning ascribed to 'N' i.e. 'Number of Days for which violation took place' is different in both the reports. The CPCB Report dealing with "*Methodology for Assessing Environmental Compensation*" considered 'N' as:

"N, number of days for which violation took place is the period between the day of violation observed/due date of direction's compliance and the day of compliance verified by CPCB/SPCB/PCC."

c) In this regard, GFL understands from Pg. 1907 of the Joint Committee Report that notices dated 06.03.2017, 20.02.2019 and 30.01.2019 issued by GPCB to GFL, were taken into consideration by the Joint Committee while calculating the period of violation for determining Environmental Compensation to be paid by GFL.

i. Assumption regarding continuous violation

a) It is submitted that the Joint Committee has without any rationale or basis in law or fact considered the period of days of violation to be starting from the date of NOC/direction with respect to waste-water management issued by GPCB to GFL in the past 5 years (01.04.2016 till 29.11.2021) i.e., from 06.03.2017. GFL states that the Joint Committee has wrongly assumed the period of violation for each industry to be continuous from the first date of issuance of a notice/direction relating to waste-water management in the last 5 years erroneously on the basis of Section 15(3) of the National Green Tribunal Act, 2010 which only provides for the period of limitation for institution of proceedings. The assumption that the violation continued from the date of issuance of first notice/direction by GPCB to GFL is fallacious and causes grave prejudice and damage to GFL. The Joint Committee has committed serious errors by failing to take note of and in effect challenging the various compliances done by GFL and noted by GPCB along with conditional re-start orders issued to GFL by the GPCB.

b) Moreover, it is pertinent to highlight that between the period of May 2017 and March 2022, GPCB has continuously undertaken sample analysis tests of GFL's wastewater. In all the analysis reports, the COD and BOD of the wastewater has been within the prescribed norms as per the CC&A. This fact has been completely overlooked by the Joint Committee while determining the compensation amount. The test reports are dated 21.05.2017, 30.06.2017, 16.10.2017, 20.01.2018, 05.03.2018, 08.05.2018, 11.12.2018, 31.03.2019, 28.06.2019, 20.07.2019, 25.11.2019, 17.12.2019, 23.01.2020, 07.10.2020, 01.07.2021, 06.10.2021, 28.12.2021, and 05.03.2022. Copies of the test reports are annexed hereto and marked as **Annexure – 17**.

ii. Considers notices which do not relate to violation of waste-water discharge conditions

a) It is stated that the Joint Committee Report fails to take into consideration that the notices issued to GFL for the period between 01.04.2016 till 29.11.2021 do not relate to the same violations of effluent discharge conditions into the Common Effluent Treatment Plant of GIDC as alleged in the Joint Committee Report. In fact, some notices do not pertain to wastewater at all.

b) For instance, the Direction dated 30.01.2019 varies in substance from the issues raised by the Joint Committee in its Report. Pursuant to the said Direction, GFL submitted its reply along with an action plan.

c) The Direction dated 20.02.2019 does not mention any of the alleged violations mentioned in the Joint Committee Report and nowhere alleges that GFL has discharged beyond the prescribed parameters. Pursuant to the said direction, GFL undertook remedial measures and submitted an application for revocation of the closure direction. After being satisfied of the measures taken by GFL, the GPCB issued the Revocation Order dated 27.02.2019 for resumption of plant operations. Copy of the Direction dated 20.02.2019 are annexed hereto and marked as **Annexure – 18.** Copy of the revocation Order dated 27.02.2019 is annexed hereto and marked as **Annexure-19**.

It is evident from the above that the Joint Committee has calculated the environment compensation arbitrarily and without any application of mind. It has not even taken into account its own revocation order which categorically demonstrates that GFL was not in continuous violation of the discharge conditions.

V. Calculation of EC1 (New) is arbitrary, erroneous and illogical

a) *Firstly*, Pg. 2062 of the Joint Committee Report of May 2022 erroneously notes that "*It is observed from the recent monitoring results from December 2021 to April 2022 that the condition in terms of flow and non-compliance is still continuous as the samples collected from the final pumping station still have a varied degree of non-compliance as detailed in above sections of the report.*" It is submitted that GFL is not in non-compliance of the conditions. This is evident from the monitoring and analysis results dated 28.12.2021 and 05.03.2022 which show that GFL has been within the norms laid down for wastewater discharge.

In fact, it is pertinent to highlight that in April 2022, GFL operationalized a pipeline (onshore and offshore) for disposal of treated wastewater for 5 MLD capacity originating from GFL's Effluent Treatment Plant (**"ETP"**) and starting from the Guard Pond in GFL's premises into the deep sea. The total length of the pipeline is 12 kms. Therefore, GFL is no longer discharging wastewater to the Final Pumping Station therefore, there is no question of it contributing to the non-compliant results collected from the Final Pumping Station. GFL is in receipt of the CRZ clearance, Gujarat Maritime Board (NOC), GIDC ROU Final Order, SEZ Clearance, Consolidated Consent and Authorization of Deep-Sea pipeline. Copy of the map and google imagery of the pipeline and the flow of wastewater is annexed hereto and marked as **Annexure-20**.

b) *Secondly*, Pg. 2063 of the Joint Committee Report provides for the methodology for calculating EC1 (New). Step 1 includes calculation of total treatment cost saved (avoided cost) by the industries due to excess organic load. In steps 2 and 3, EC 1 (new) calculated in step 1 is distributed pumping station wise based on the degree of violation. Step 4 involves further distributing the EC 1 (new) for each station among the respective non-complying industries in the area. This is done by calculation of deterrent factor for each industry and multiplying the same with station-wise EC.

It is submitted that the formula to first calculate total EC 1 (New) as avoided cost of treatment and then distributing it among different industries is flawed and erroneous. This formula does not consider the industries as separate entities with varied degrees of non-compliance. It puts all industries at the same level and merely calculates the ratio of failed samples. It fails to take into account the degree of failure of the samples by different industries along with the quality of wastewater discharge in the ratio of wastewater discharge into the pumping station. This is the fundamental flaw in the formula which fails to consider the differences between the wastewater discharge and alleged non-

compliances between different industries and therefore, the formula ought to be revised.

c) The errors in every step of the calculation of EC 1 (New) in the Joint Committee Report of May 2022 is detailed below:

i. **Step 1** estimates EOL (Excess Organic Load) as difference between CA (Average organic concentration in terms of COD) of final pumping station minus 250. This calculation presumes that organic concentration in terms of COD at pumping station is contributed by all. It is submitted that this is patently false. The quality of discharge depending upon type of process of the unit is a very important factor which the Committee fails to take into account. Moreover, deduction of 250 is based on presumption that 250 is allowable COD as per discharge standard. This is a faulty presumption as discharge standard for industrial undertaking for primary discharge is 2000 to 3000. Thus, value of EC1 (New) changes substantially. In fact, it becomes zero for our unit.

ii. **Steps 2 and 3** also has faulty presumptions in as much as maximum concentration in last five years is taken. It should be average for equitable distribution of total load on individual pumping station. Moreover, distributing EC 1 (New) pumping station wise is arbitrary and unfair inasmuch as some industries in grossly polluting pumping stations may not be discharging grossly polluted wastewater. Rather than distributing the EC pumping station wise, the individual non-compliance of industries must be considered.

iii. **Step 4** involves calculation of deterrent factor by calculating ratio of wastewater discharge and ratio of failed samples. Calculation of ratio of failed samples does not take into account the degree of violation of the norms. For instance, industries which are discharging wastewater with grossly high parameters of TSS, COD, BOD etc are at par with industries which discharge wastewater with minor variations in TSS, COD and BOD. The calculation of 'ratio of failed samples' puts both these industries in the same category which is arbitrary, perverse and ex-facie erroneous. Similarly, the ratio of wastewater discharge does not consider the quality of wastewater discharge by individual industries.

d) *Thirdly*, in GFL's case, the EC with the given formula has also been calculated wrongly:

i. Annexure -A records that the volume of wastewater discharged from the GFL Plant for the period of January 2017 to November 2021 is 5484518.389. However, the quantity of wastewater discharged from the

GFL plant for the period of January 2017 to November 2021 is 5054863, as per the monthly patrak uploaded on the GPCB server.

ii. Annexure-A records that 4 out of 26 samples collected during the 5-year period of January 2017 to November 2021 were failed samples. However, as per the GPCB record uploaded on the server, 4 samples of effluent discharge out of 32 samples were found with variation in results, on account of TSS/COD.

In view thereof, it is submitted that the calculation of EC is riddled with errors and inconsistencies and ought to be recalculated.

A copy of monthly patrak uploaded on the GPCB server is annexed herewith as Annexure-21.
A copy of the GPCB record exhibiting the number of samples collected and the variations therein is annexed herewith as **Annexure-22**.

8. That in view of the aforesaid, it is submitted that no EDC ought to be applicable upon GFL. GFL is fully compliant with the norms as prescribed in the CCA as explained above. In any event, the formula for calculation of EDC is arbitrary, perverse, irrational and without any legal foundation. It is submitted that the formula ought to be revised and EDC be recalculated for the industries.

9. Kindly consider the above objections and provide us with an opportunity of hearing as well.

Looking forward to a positive response.

Thanking you,

For, **Gujarat Fluorochemicals Limited.**

Gujarat Fluorochemicals Ltd. DAHEJ

29/7/2022

Authorized Signatory
Dr. Sharad S. Potghan

CC: 1. Regional Officer, Gujarat pollution Control Board, GIDC Phase-II, Narmada Nagar, Bharuch-392015
2. Central Pollution Control Board, Parivesh Bhawan, Aatmajyoti Ashram Rd, Opp. VMC Ward Office No.10, Subhan Pura, Vadodara, Gujarat -390023

The following documents are attached as under:

Annexure 1	:	Report of Third party NABL accredited laboratory
Annexure 2	:	Report of GFL's laboratory
Annexure 3	:	A Copy of the screenshot of the CPCB server

Annexure 4	:	A Copy of the result showing in A.R comparative sheet downloaded from GPCB XGN portal
Annexure 5	:	A Copy of a sample test result of high chloride.
Annexure 6	:	A Copy of the Standard Operating Procedure for determination of COD prepared by GFL
Annexure 7	:	A Copy of the Joint analysis letter dated 25.11.2021
Annexure 8	:	A Copy of the reply dated 28.03.2022
Annexure 9	:	A Copy of the GPCB & NABL approved laboratory test results
Annexure 10	:	A Copy of the ETP Flow Diagram
Annexure 11	:	A copy of the Adequacy certificate
Annexure 12	:	A Photo of flow meter installed
Annexure 13	:	A Copy of storage area photograph
Annexure 14	:	Copies of manifest of waste disposal at GPCB approved landfill site/recycler/coprocessor
Annexure 15	:	Copies of photographs of ESP, Water spray nozzles, Online monitoring of stack dust
Annexure 16	:	Copies of photographs of housekeeping practices of GFL
Annexure 17	:	Copies of Test reports of GPCB
Annexure 18	:	A copy of the Direction dated 20.02.2019
Annexure 19	:	A Copy of the revocation Order dated 27.02.2019
Annexure 20	:	A Copy of the map and google imagery of the pipeline and the flow of wastewater
Annexure 21	:	A copy of monthly patrak uploaded on the GPCB server
Annexure 22	:	A copy of the GPCB record exhibiting the number of samples collected and the variations therein

5715

Annexure :- 1

UniStar
Environment and Research Labs Pvt. Ltd.

White House,
Near G.I.D.C. Office, Char Rasta,
Vapi-396 195, Gujarat, India.
Phone : +91 260 2433966 / 2425610
Email : response@uerl.in Website : www.uerl.in

MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA-1986 (12.01.2020 to 17.03.2023) | QCI-NABET Accredited EIA Consultant Organization | GPCB Recognized Environmental Auditor (Schedule-II) | ISO 9001:2015 Certified Company | ISO 45001:2018 Certified Company

TEST REPORT

Report No.	URC /21/10/L-0364		
Name & Address of Customer	M/s. Gujarat Fluorochemicals Limited Plot No.12/A, GIDC Dahej, Bharuch.	Date Of Report	02/11/2021
		Customer's Ref.	--
Sample Details	Waste Water Sample (GPCB Counter)	Location	---
Sample Qty.	5 Lit.	Appearance	Colourless
Sampling Date	27/10/2021	Sample Received Date	28/10/2021
Test Started Date	28/10/2021	Test Completion Date	01/11/2021
Sampled By	Party.	Sampling Method	--
UERL Lab ID. No.	21/10/L-0364		

TEST RESULTS:

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment			
Sr.	Parameters	Test Method Permissible	Permissible	Unit of	Results
		PHYSIO-CHEMICAL PARAMETERS			
1.	pH @ 25 ° C	(APHA 23rd Ed.,2017,4500-H^+B)	6.0 – 9.0	--	6.73
2.	Total Suspended Solids	IS 3025(Part 17)1984,Amd.1	100	mg/L	142
3.	Total Dissolved Solids	IS 3025(PART 16) 1984	--	mg/L	32160
		GENERAL CHEMICAL PARAMETERS			
1.	Oil & Grease	IS 3025(Part39)1991, Amd. 2	10	mg/L	BDL(MDL:2.0)
2.	Fluoride	(APHA 23rd Ed.,2017,4500 F,D)	15	mg/L	9.4
3.	Chloride as Cl^-	IS 3025(PART 32) 1988	--	mg/L	20543.6
4.	Sulphate as SO_4^{-2}	IS 3025(Part 24)1986	--	mg/L	676
5.	Sulphide	(APHA 23rd Ed.,2017,4500 S^{-2} F)	5	mg/L	1.5
6.	TKN	(APHA 23rd Ed.,2017,4500 NORG, B,)	50	mg/L	11.2
7.	Ammonical Nitrogen	IS 3025(Part 34)1988,	50	mg/L	8.3
8.	Free Ammonia	IS 3025(Part 34)1988,	5	mg/L	BDL(MDL:0.2)
9.	Copper	IS 3025(Part 42)1992amd.01,	3	mg/L	0.074
10.	Zinc	IS 3025(Part 49)1994	15	mg/L	0.103
11.	BOD (3 days at 27 °C)	IS 3025(Part 44)1993Amd.01	100	mg/L	46
12.	COD	IS 3025(Part 58)2006	250	mg/L	161.7
13.	Arsenic	APHA 23rd Ed.,2017,3114-C	0.2	mg/L	BDL(MDL:0.01)
14.	Mercury	(APHA 23rd Ed.,2017,3112-B)	0.01	mg/L	BDL(MDL:0.001)
15.	Lead	IS 3025(Part 47)1994Amd.02	1	mg/L	BDL(MDL:0.01)
16.	Cadmium	IS 3025(Part 41)1992,	2	mg/L	0.067
17.	Hexavalent Chromium	APHA 23rd Ed.,2017,3500CrB	0.1	mg/L	BDL(MDL:0.05)
18.	Total Chromium	IS 3025(Part 52)2003,	2	mg/L	BDL(MDL:0.05)
19.	Nickel	IS 3025(Part 54)2003,	5	mg/L	0.071
20.	Cyanide	IS 3025(Part27)1986	0.2	mg/L	BDL(MDL:0.05)
21.	Phenolic Compound	IS 3025(Part 43)1992, Amd.2	5	mg/L	BDL(MDL:0.1)
22.	Manganese	APHA 23rd Ed.,2017,3500 Mn B	2	mg/L	BDL(MDL:0.1)
23.	Iron	IS 3025(Part 53)2003,	3	mg/L	0.266
Remarks: BDL= Below Detection Limit, MDL = Minimum Detection Limit,					
Opinion & Interpretation (If required):					

********* End of Report *********

Checked By
N. C. P.
(Nilesh C. Patelp
(Sr. Chemist)

Authorized By
(N. B. T.)
(Nitin B. Tandel)
(Technical Manager)

UERL/CHM/F-2/05

Note: This report is subject to terms and conditions mentioned overleaf.

Annexure -2

GUJARAT FLUOROCHEMICALS LIMITED, DAHEJ

Annexure -F
Result dated 26.10.2021, analysed at ETP LAB as under,

Sr. No.	Parameters	Unit
1	pH	6.70
2	COD	198 ppm
3	TSS	96 ppm

Annexure :- 3

File Edit View History Bookmarks Tools Help

chloride content effect on COD × :: Pollution Control Board :: × GLens ×

https://glens.glensserver.com/#/landing/industryReports/HourlyAverageReport

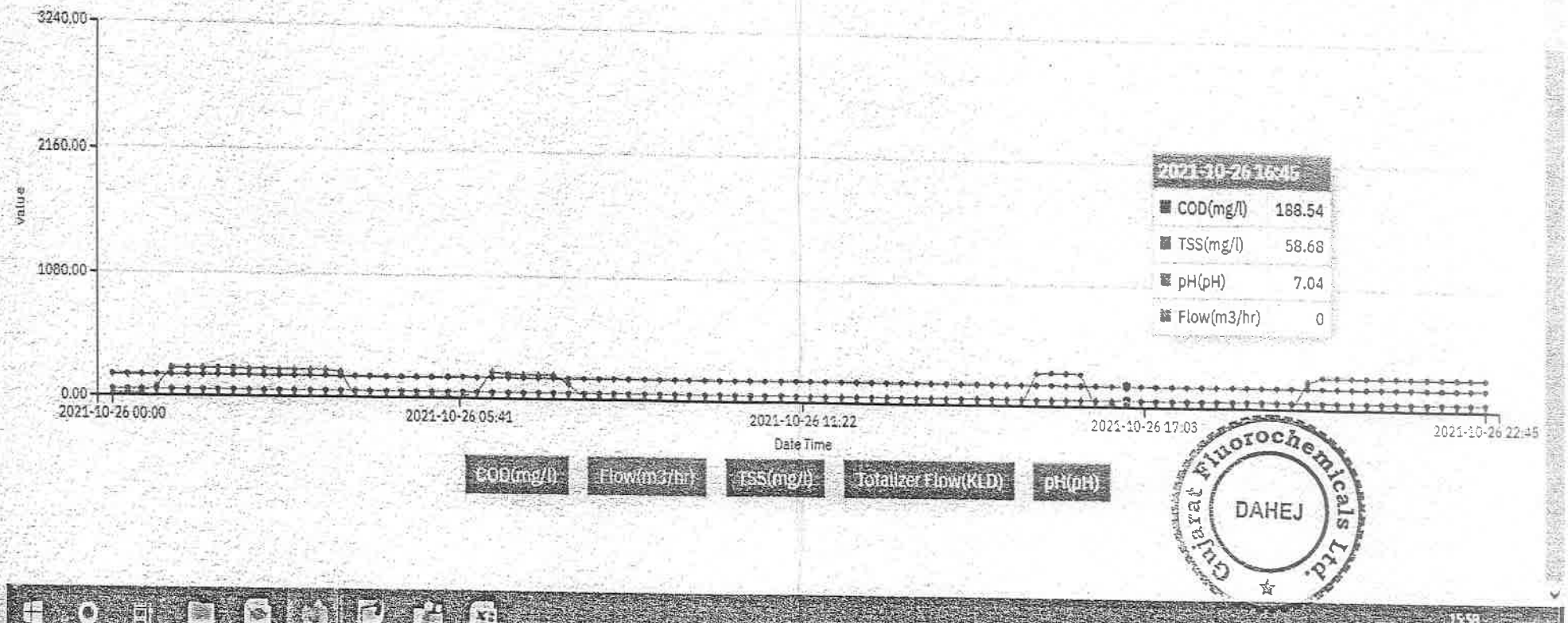
GFL GLens EIS - Login :: Pollution Control Bo... PayGURU HRMS | Log in

Dashboard Live Status Regulator Reports Industry Reports Calibration Work Flow GFCHT

Average Report

Print Excel Reports

ETP_2_Outlet - 15 Min - Average Data



Gujarat Fluorochemicals Ltd. DAHEJ

15:58 12-11-2021

5717

Annexure - III

Annexure : 4

:: Pollution Control Board :: — Mozilla Firefox

https://gpcbxgn.gujarat.gov.in/ACT/Reports/view_cross_tab.aspx?ACT=/mvQz1fWAD4=&gpcb_id=ocsP0Pi3dGU=&MTH=aUtGjcydRv8=

90%

15136 - Gujarat Fluorochemicals Limited / L From Date: 01/12/2017 - To Date: 12/11/2021

Point : ALL

Para: ALL >0 All Cases GO Print Excel

☐ ALL ☐ ACE ☐ ALK ☐ BOD ☐ CAL ☐ CHL ☐ COD ☐ COL ☐ FLU ☐ NH3 ☐ NTR ☐ O&G ☐ pH ☐ PHE ☐ SS ☐ SUL ☐ SUP ☐ TDS ☐ TKN ☐ TMP

Samp ID & Dt	Samp pt	Type	BOD	CAL	CHL	COD	COL	FLU	NH3	NTR	O&G	pH	PHE	SS	SUL	SUP	TDS	TKN	TMP
Permissible Values			100			250		15	50		20	9	5	100	5				45
315987-26/10/2021	From Final Outlet of Unit into GIDC drain. ~	OTH	122		22350	620	30	13.1	8.96	4.96		6.68	0.29	78	2.24	802		11.2	
315991-26/10/2021	From Equalisation Tank of stream-1 ~	OTH	461		121	1998	70	10.8	2.24	1.61		6.21	0.28	62	1.44	32		7.84	
315995-26/10/2021	From Equalisation Tank of stream-3 ~	OTH	944		15810	3735	20	>40	5.6	52.55		<1	0.63	38	<1.00	293		11.2	
316014-26/10/2021	From Collection tank of Stream-6 ~	OTH	22		232	91	40	4	3.92	11.66		7.01	0.26	126	<1.00	84		8.96	
312867-17/09/2021	## Final Outlet of the ETP ~ From Final outlet of ETP	AIA	47	2525.04	19400	214	30	3.2	BDL			7.01	BDL	88		1208	36226		
305192-01/06/2021	## Final Outlet of the ETP ~	VIG	39	28	18180	196	15	1.41	0.84			6.94	0.36	60		958	33430		
288860-16/09/2020	## Final Outlet of the ETP ~ From Final outlet of ETP	OTH	60	5098	18185	239	2.5	7.8	7.84			7.50	0.13	86		1636	30620		
285283-28/07/2020	## Final Outlet of the ETP ~	ROU	129	9619.2	22215	413	05	11.5	5.38			7.19	0.04	74		1587	41046		
285284-28/07/2020	From Borewell of Shri Ranjit Gohil, Deputy Sarpanch, Ambheta Village ~	ROU	17		3960	54	7.5	1.10	BDL	4.88	BDL	7.81		16		1506	7740		28
273574-04/01/2020	## Final Outlet of the ETP ~ ---	APP	54	7896.0	15997	241	2.5	11.30	5.21			7.69	BDL	66		789	29616		
271060-29/11/2019	## Final Outlet of the ETP ~ From treated waste water collection tank	APP	51	1463	11159	241	70	7.25	1.57			6.99	0.42	152		784	21322		
270218-14/11/2019	## Final Outlet of the ETP ~ From treated waste water collection tank	REV	50	8350.70	17083	230	2.5	10.25	7.39			6.89	BDL	62		549	31444		
262285-05/07/2019	## Final Outlet of the ETP ~ From treated waste water holding guard pond	ROU	45		17164	233	10	6.95	8.01			7.16		186		763	31018		28
260797-15/06/2019	From storm water drain nr MMT area. (within premises) ~	APP	9		1960	56	5.0		3.19			8.45		16		462	3852		28
260798-15/06/2019	## Final Outlet of the ETP ~ --	APP	40		26856	210	5.0		8.96			8.24		40		793	55570		28
255928-30/03/2019	## Final Outlet of the ETP ~ ----------	HOR			35499	234			30.74			8.56		64			62264		
255854-29/03/2019	From final discharge point of unit at FPS (GL) ~	REV			25206	157			23.97			7.09		54			48640		
251215-15/01/2019	ww sample is collected from storm water drain opposite side of deepak phenolics (outside the GFL)	COM	140		89036	Not analysed (high chloride in	200	1675	72.80			<1.0		606		310	173784		
251216-15/01/2019	ww sample is collected from drain out material from reactor 3R-140E of CaCl2 plant ~	COM	345		86100	Not analysed (high chloride in	140	2975	5.60			<1.0		604		318	115520		
248500-09/12/2018	From final discharge point at collection sump of final pumping station, Ambheta, Dahej. ~ (P2)	OTH				NOT ANALYSED (Chloride interfe			5.6			6.69		162			69328		
248501-09/12/2018	From final outlet of ETP within premises (P7) ~	OTH				NOT ANALYSED (Chloride interfe			5.6			6.63		146			69146		
238972-23/07/2018	From Final outlet of the ETP ~ ----	APP	151		37958	570	60	16.0	5.04		0.8	6.78	BDL	68		862	60914		28
231582-10/04/2018	## Final Outlet of the ETP ~ --	APP	59		18889	233	10	6.45	5.6		0.4	7.30		86		607	36612		28
227593-09/02/2018	From treated waste water Guard pond ~ ---	ROU	47		28872	167	15	12.4	15.68		0.4	7.47		508		702	36450		28
224558-02/01/2018	## Final Outlet of the ETP ~	APP	70		37974	242	10	9.0	5.6		0.8	7.12		74		1187	53946		29

Gujarat Fluorochemicals Limited

15:52 12-11-2021

5718

Annexure - IV

5719

Annexure :- 5

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:248501 - Analysis Completion:11/12/2018

Organic Chemicals manufacturing / LAB Inward : 36516

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 36516 Date: 11/12/2018

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : OTH-Others/Higher Authority)
4. Sample Collected By : R.R.Vyas, R.O Head
5. Quantity of Sample Received : 2 lit
6. Code No. of the Sample : 248501
7. Date & Time of Collection & Inwarding : 09/12/2018 , (1930 to 1930) & 10/12/2018
8. Date of Start & Completion of Analysis : 10/12/2018 & 11/12/2018
9. Sampling Point : From final outlet of ETP within premises (P7) ~
10. Flow Details (Remarks) : ----
- Mode of Disposal : individual drainage pipeline to Final Pumping station at
- Ultimate Receiving Body : Sea
13. Temperature on Collection : 28 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for : Barcode & Color & Appearance :Slight turbid
: Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD) : 5 ,Cap No & Weight : ----

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	6.63
2	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	69146
3	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	146
4	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	5.6
5	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	LYSED (Chlor

Laboratory Remarks : freezed, COD Not analyzed due to high chloride interference
By:210-vig_210 Dt.: 11/12/2018

K. I. Karelia,SSO

Note :
1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

5720

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:248500 - Analysis Completion:11/12/2018

Organic Chemicals manufacturing / LAB Inward : 36511

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 36511 **Date: 11/12/2018**

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : OTH-Others/Higher Authority)
4. Sample Collected By : R.R.Vyas, R.O Head
5. Quantity of Sample Received : 2 lit
6. Code No. of the Sample : 248500
7. Date & Time of Collection & Inwarding : 09/12/2018 , (1645 to 1645) & 10/12/2018
8. Date of Start & Completion of Analysis : 10/12/2018 & 11/12/2018
9. Sampling Point : From final discharge point at collection sump of final pumping station, Ambheta, Dahej. ~ (P2)
10. Flow Details (Remarks) : ----
11. Mode of Disposal : individual drainage pipeline to Final Pumping station at
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 29 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for : Barcode & Color & Appearance :Slight turbid
15. Water Consumption & W.W.G (KLPD) : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	6.69
2	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	69328
3	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	162
4	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	5.6
5	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	LYSED (Chlor

Laboratory Remarks : freezed. Not Analyzed due to high chloride interference By:210-vig_210
Dt.: 11/12/2018

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

5721

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:251215 - Analysis Completion:24/01/2019

Organic Chemicals manufacturing / LAB Inward : 37040

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 37040 **Date: 25/01/2019**

1. **Name of the Customer** : Gujarat Fluorochemicals Limited - 15136
2. **Address** : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej–392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. **Nature of Sample** : REP-Representative/Grab, (Insp Type : COM-On Complaint)
4. **Sample Collected By** : Bhumika A. Bhuva, AEE
5. **Quantity of Sample Received** : 5 lit
6. **Code No. of the Sample** : 251215
7. **Date & Time of Collection & Inwarding** : 15/01/2019 , (1400 to 1400) & 16/01/2019
8. **Date of Start & Completion of Analysis** : 16/01/2019 & 24/01/2019
9. **Sampling Point** : ww sample is collected from storm water drain opposite side of deepak phenolics (outside the GFL)
10. **Flow Details (Remarks)** : ---
11. **Mode of Disposal** : Storm water drainage line
12. **Ultimate Receiving Body** : Sea
13. **Temperature on Collection** : 29 & pH Range on pH Strip :2 pH on pH strip
14. **Carboys Nos for** : barcode & Color & Appearance :Yellowish
15. **Water Consumption & W.W.G (KLPD)** : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	<1.0
2	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	200
3	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	173784
4	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	606
5	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	72.80
6	Acidity as Caco3	mg/l	Titration Method. (2310 B APHA Standard Methods 2	1 – 1000 mg/l	26800.0
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	89036
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	310
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	lysed (high ch
10	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	1675
11	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	140

Laboratory Remarks : Freezed By:210-vig_210 Dt.: 25/01/2019

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

5722

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:251216 - Analysis Completion:24/01/2019

Organic Chemicals manufacturing / LAB Inward : 37039

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 37039 **Date: 25/01/2019**

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : COM-On Complaint)
4. Sample Collected By : Bhumika A. Bhuva, AEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 251216
7. Date & Time of Collection & Inwarding : 15/01/2019 , (1415 to 1415) & 16/01/2019
8. Date of Start & Completion of Analysis : 16/01/2019 & 24/01/2019
9. Sampling Point : ww sample is collected from drain out material from reactor 3R-140E of CaCl2 plant ~
10. Flow Details (Remarks) : ---
11. Mode of Disposal : Collected in pit from which partially going to storm water drainage line
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 30 & pH Range on pH Strip :2 pH on pH strip
14. Carboys Nos for : barcode & Color & Appearance :greyish yellow
15. Water Consumption & W.W.G (KLPD) : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	<1.0
2	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	140
3	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	115520
4	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	604
5	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	5.60
6	Acidity as Caco3	mg/l	Titration Method. (2310 B APHA Standard Methods 2	1 – 1000 mg/l	88200.0
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	86100
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	318
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	lysed (high ch
10	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	2975
11	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	345

Laboratory Remarks : Freezed By:210-vig_210 Dt.: 25/01/2019

K. I. Karelia,SSO

Note :
1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

Annexure :- 6

GFL	STANDARD OPERATING PROCEDURE		
Doc. No.: ETP/SOP/10	Revision No.: 02	Effective Date: 05.05.2017	Page 1 of 5
TITLE: Test Methods for measurement of Chemical Oxygen Demand (COD)			

SCOPE & APPLICATION:

This SOP describes methods for

A) Determination the chemical oxygen demand (COD) in Wastewaters, and Industrial Water by open reflux method.
B) Determination of Chlorides
C) Removal of chlorides prior to COD determination if higher than 2000ppm

A) DETERMINATION OF CHEMICAL OXYGEN DEMAND(COD)

Below test method is recommended for the water samples having chloride content <2000 ppm. In case Chloride content is higher, remove the chloride with mercuric sulphate as per the procedure C until it is <2000 ppm .

1.0 TEST METHOD STANDARD:

IS 3025(Part 58) 2006
APHA 22nd Ed.2012, 5220-B, 5-17
US EPA Method 410.3:1978
ASTM D 1252 – 06

2.0 RESPONSIBILITY:

Chemist

3.0 PRINCIPLE:

Most types of organic matter are oxidized by boiling mixture of potassium dichromate and sulphuric acid to form carbon dioxide and water. A sample is refluxed in strongly acid solution with a known excess of Potassium Dichromate ($K_2Cr_2O_7$). After digestion, the remaining unreduced Potassium Dichromate is titrated with ferrous ammonium Sulphate to determine the amount of Potassium Dichromate consumed and the oxidizable matter is calculate in term of oxygen equivalent.

4.0 APPARATUS, EQUIPMENT AND CHEMICALS & REAGENTS:

4.1 APPARATUS.

4.1.1 Reflux Apparatus
4.1.2 Blender
4.1.3 Pipette, Class- A and wide bore
4.1.4 Burette
4.1.5 Volumetric Flask
4.1.6 Weighing Balance
4.1.7 Reflux Condenser
4.1.8 Reflux Flask

Prepared by	Approved by	Issued by

4.2 REAGENT.

4.2.1 Standard Potassium Dichromate Solution (0.25 N):

Dissolve 12.259 g Potassium dichromate primary standard grade, previously dried at 103 °C for 2 hr. in distilled water and dilute 1000 ml.

4.2.2 **Sulfuric acid reagent:**
Dissolve 5.5 gm Silver sulphate in 1 Kg Sulfuric acid. Keep overnight for dissolution. Shake well after dissolution.

4.2.3 Ferroin Indicator solution:
Dissolve 1.485gm, 1, 10-phenanthroline monohydrate and 695 mg $FeSO_4 7H_2O$ in distilled Water and dilute to 100 ml.

4.2.4 **Standard Ferrous Ammonium Sulfate (FAS) (0. 1N):**
Dissolve 39.214 g Fe $(NH4)_2(SO4)_2.6H_2O$ in distilled water. Add 20 ml Conc H_2SO_4 Cool and dilute to 1000 ml.

Standardization of FAS Solution:
Weigh approximately 0.1 gm prehcated Potassium Dichromate at 105 ° C for 24 hours. Dissolve in small amount of water, chill it and add 30 ml of conc. H_2SO_4.Titrate it against 0.1N FAS using Ferroin as an indicator. Colour change sharply green blue to wine red.

$$\text{Normality of FAS} = \frac{\text{Weight of } K_2Cr_2O_7 \times 1000}{TR \times 49.03}$$

TR is titration reading in ml.

4.2.5 **Mercuric sulfate** $HgSO_4$

4.2.6 **Standard Potassium hydrogen phthalate (KHP):**
Dissolve 425 mg KHP dissolve in 1 Lit. This solution has theoretical COD of 500 ppm.

5.0 ENVIRONEMENTAL CONDITIONS:
Ambient Temperature

6.0 SAMPLE PREPARATION:
Homogenize all samples containing suspended solids before analysis. Make preliminary dilution for waste containing a high COD to reduce the error inherent in measuring small sample volumes.

7.0 PROCEDURE:

7.1 Take a COD reflux flask. Add 20 ml or an Aliquot sample diluted to 20 ml with distilled water.

7.2 Add 0.4g mercuric sulphate to remove chloride interference.

7.3 Now add 30 ml of Sulphuric acid reagent.

7.4 Mix well and then add 10 ml of 0.25 N Potassium dichromate solutions. Mix well if the color turns green; take fresh sample with smaller aliquot.

7.5 Add 3-4 glass beads in each reaction vessel.

7.6 Insert the Reaction vessels in the holes of the Block, which has attained 150°C. Put air condensers on reaction vessels. Reflux the content for 2 hours. Cool the contents and transfer them in 200 ml conical flasks.

7.7 Take all the contents by washing the tubes with 80 ml distilled water. Cool and titrate the excess potassium dichromate with standard Ferrous Ammonium sulphate using 4 to 5 drops of Ferroin Indicator. Near the end of the titration color changes sharply from blue green to reddish brown (wine red) that persists for one minute or longer.

7.8 Reflux a reagent blank simultaneously with the sample under identical conditions.

7.9 CALCULATION:

$$\text{COD (mg/L)} = \frac{(B - A) \times \text{Normality of FAS} \times 8000}{\text{ml of sample taken}}$$

B= Blank T.R
A= Sample T.R

8.0 SAFETY MEASURES:

Safety:
Use fuming hood chamber
Use safety appliances
For handling chemical & reagent always refer MSDS.
Take special care for handling Sulphuric acid.

Quality:
The most common interference is Chloride ion, which reacts with Silver to precipitate Silver chloride, to overcome the presence of chloride ion add Mercuric Sulphate to form complex before refluxing.
Potassium dichromate must be dried at 105± 2 ° c for 24 hrs before use.

B) PROCEDURE FOR CHLORIDE MEASUREMENT:

REAGENTS:

1. **Standard Silver Nitrate AgNO3 (0.1 N solution)**
   - Take about 100 ml of distilled water in a cleaned and dried 1000 ml volumetric flask.
   - Add about 17 gm of Silver Nitrate with continues stirring.
   - Add more about 700 ml of distilled water, mix.
   - Make up the volume 1000 ml with water. Mix solution thoroughly.
   - Keep the solution for at least one hour and then carry out the standardization

2. **Standardization**
   - Weigh 50 mg NaCl, previously dried at 110 °C for 2 hours, to a 150 mL conical flask
   - Dissolve in 5 mL of DI water
   - Add 2.5 mL of Acetic Acid, 25 mL methanol, and about 0.25 mL of Eosin indicator.
   - Titrate with the AgNO3 solution and calculate Normality of solution

   N = Weight of NaCl (mg) / AgNO3 (mL) * 58.44

3. **Preparation of 1% Potassium Chromate Indicator Solution:**
   - Dissolve 5 g K2CrO4 in about 5 mL distilled water.
   - Add a few drops of silver nitrate until a definite red precipitate forms.
   - Let stand 12 hours,
   - Filter and dilute to 100 mL with DI water

PROCEDURE:

1. Take 100 mL sample in a beaker and adjust to pH 7.0 to 10.0 with 0.1 N NaOH or 0.1 N H2SO4.
2. Take 2 gm sample from above into the conical flask and add 50 mL DI water
3. Add few drops of 1% Potassium Chromate Solution

4. Titrate with 0.1 N Silver Nitrate solution till end point (Yellow to Brick Red)
5. Note down Titration reading as TR and calculate the results

CALCULATION:

$$\text{Chloride ppm} = \frac{\text{TR X N of } AgNO_3 \text{ X } 35.5 \text{ X } 1000}{\text{Wt. of Sample}}$$

C)PROCEDURE FOR CHLORIDE REMOVAL: (This process is not required if Cl content is less than 2000 ppm)

1. Take 50 mL samples in a 100 mL glass beaker
2. Check the chloride content of the sample
3. Calculate the amount of Mercuric sulphate as per formula (HgSO4 in gram = Chloride in ppm/2000).
4. Add above quantity of HgSO4 in beaker
5. Add 5ml Conc H2SO4 and mix the content gently with a glass rod until the product becomes homogeneous.
6. Filter the material by using Whatman filter paper
7. Check chloride of supernatant. If Chloride is >2000ppm, repeat the above process.
8. If Chloride < 2000 ppm, proceed for COD analysis.

PRECAUTIONS:

- Standardize all the reagents on daily basis especially Ferrous Ammonium Sulphate (FAS)
- Add (Sulfuric Acid + Silver Sulphate) solution very slowly for chloride correction to prevent heating and loss of organic compounds.
- Weigh the Mercuric sulphate accurately.
- Sample should be analyzed within 7 hours of sampling otherwise preserve the sample by adding 0.1 N sulphuric acid to a pH of ≤2.
- Run a standard sample of Potassium hydrogen phthalate (KHP) having COD of 500 ppm on daily basis to validate the procedure. (Dissolve 0.425 gm of KHP, previously dried at 120 °C for 2 hrs, in 1 Liter DI water. This solution has theoretical COD of 500 ppm.)

5729

Annexure :-7

GUJARAT FLUOROCHEMICALS
PATH THROUGH GREEN CHEMISTRY
CIN : L24304GJ2018PLC105479

Gujarat Fluorochemicals Limited
earlier known as Inox Fluorochemicals Limited

12/A, GIDC Dahej Industrial Estate, Taluka Vagra, Distt. Bharuch-392130, Gujarat, India

Tel: +91-2641-618031 (Admin) / 618041-50 (Purchase) / 618086-87 (Security) | www.gfl.co.in

Ref. GFL/GPCB-ID 15136/2020-21/41

November 15, 2021

To,
Regional Officer
Gujarat pollution Control Board
GIDC Phase-II, Narmada Nagar,
Bharuch-392015

Reference: 1. Your Visit and Sample collected on 26.10.2021
2. Sample analysis Report of GPCB dated 10.11.2021

15-11-2021
Post Received
Gujarat Pollution Control Board
BHARUCH

Kind Attn: Shri FM Modi, Regional Officer, Bharuch

Subject: Request for re-sampling/Joint Analysis of treated effluent.

Dear Sir,

This has reference to the above subject matter regarding the analysis results.

The COD and BOD value are quite higher as compared to our own laboratory, online CPCB server as well as NABL accredited laboratory due to perhaps higher chloride @ 22350mg/l. In past also GPCB has not analyzed COD because of higher chloride in sample Ref. Sample ID.& dated 251215-15.01.2019, 251216-15.01.2019, 248500-09.12.2018 & 248501-09.12.2018.

Please find enclose herewith result showing in A.R comparative sheet downloaded from GPCB XGN portal in which for 04 occasions COD was not analyzed due to higher chloride which is self explanatory.

Comparison of sample analysis results, ETP Outlet is as under:

Sample Date	GFL Lab		NABL accredited Lab		Online CPCB Server	GPCB Lab	
26.10.2021	COD	BOD	COD	BOD	COD	COD	BOD
	198	48.6	161.7	46	188.54	620	122

In view of the above result is not convincing to us, we humbly request for re-sampling/joint of treated effluent of our unit.

Thanking you,
For, **Gujarat Fluorochemicals Limited**

(Authorized Signature)

Gujarat Fluorochemicals Ltd. DAHEJ

CC: The Member Secretary, Gujarat Pollution Control Board, Gandhinagar-382010

Encl.: 1. A.R Comparative sheet downloaded from GPCB XGN Portal **as Annexure-I**
2. NABL accredited lab analysis report as **Annexure-II**
3. Online CPCB server screen snap as **Annexure-III**
4. GPCB sample analysis report as **Annexure-IV**

16/11/21

Gujarat Pollution Control Board
Head Office
Sector No.-10-A,
Gandhinagar-382010

5731

O/C

GUJARAT FLUOROCHEMICALS
VALUE THROUGH GREEN CHEMISTRY
CIN : L24304GJ2018PLC105479

Gujarat Fluorochemicals Limited
earlier known as Inox Fluorochemicals Limited

12/A, GIDC Dahej Industrial Estate, Taluka Vagra, Distt. Bharuch-392130, Gujarat, India

Tel: +91-2641-618031 (Admin) / 618041-50 (Purchase) / 618086-87 (Security) | www.gfl.co.in

Ref. GFL/GPCB-ID 15136/2020-21/43

November 25, 2021

To,
The Regional Directorate (West),
Parivesh Bhawan,
Nr. Ward Office No.10,
Subhanpura,
Vadodara-390023(Gujarat)

Regional Directorate (West) • CPCB, M.O.E.F.&CC, Govt. of India • Vadodara

24/11/21

Reference: 1. Your Visit and Sample collected on 26.10.2021
2. Sample analysis Report of GPCB dated 10.11.2021

Kind Attn: Shri Prasoon Gargava, The Regional Director.

Subject: Request for re-sampling/Joint Analysis of treated effluent.

Dear Sir,

This has reference to the above subject matter regarding the analysis results.

The COD and BOD value are quite higher as compared to our own laboratory, online CPCB server as well as NABL accredited laboratory due to perhaps higher chloride @ 22350mg/l. In past also GPCB has not analyzed COD because of higher chloride in sample Ref. Sample ID.& dated 251215-15.01.2019, 251216-15.01.2019, 248500-09.12.2018 & 248501-09.12.2018.

Please find enclose herewith result showing in A.R comparative sheet downloaded from GPCB XGN portal in which for 04 occasions COD was not analyzed due to higher chloride which is self-explanatory.

Comparison of sample analysis results, ETP Outlet is as under:

Sample Date	GFL Lab		NABL accredited Lab		Online CPCB Server	GPCB Lab	
	COD	BOD	COD	BOD	COD	COD	BOD
26.10.2021	198	48.6	161.7	46	188.54	620	122

In view of the above result is not convincing to us, we humbly request for re-sampling/joint of treated effluent of our unit.

Thanking you,
For, **Gujarat Fluorochemicals Limited**

Gujarat Fluorochemicals Ltd. DAHEJ

(Authorized Signature)

CC: 1. The Member Secretary, Gujarat Pollution Control Board, Gandhinagar-382010.
2. The Regional Officer, Gujarat pollution Control Board, Bharuch-392015

Encl.: 1. A.R Comparative sheet downloaded from GPCB XGN Portal **as Annexure-I**
2. NABL accredited lab analysis report as **Annexure-II**
3. Online CPCB server screen snap as **Annexure-III**
4. GPCB sample analysis report as **Annexure-IV**

:: Pollution Control Board :: — Mozilla Firefox

https://gpcbxgn.gujarat.gov.in/ACT/Reports/view_cross_tab.aspx?ACT=/mvQz1fWAD4=&gpcb_id=ocsP0PI3dGU=&MTH=aUtGjcydRv&=

90%

15136 - Gujarat Fluorochemicals Limited / L From Date: 01/12/2017 - To Date: 12/11/2021

Point : ALL Para: ALL >0 All Cases GO Print Excel

☐ ALL ☐ ACI ☐ ALK ☐ BOD ☐ CAL ☐ CHL ☐ COD ☐ COL ☐ FLU ☐ NH3 ☐ NTR ☐ O&G ☐ pH ☐ PHE ☐ SS
☐ SUL ☐ SUP ☐ TDS ☐ TKN ☐ TMP

Samp ID & Dt	samp_pf	Type	BOD	CAL	CHL	COD	COL	FLU	NH3	NTR	O&G	pH	PHE	SS	SUL	SUP	TDS	TKN	TMP
Permissible Values			100			250		15	50		20	9	5	100	5				45
315987-26/10/2021	From Final Outlet of Unit into GIDC drain. ~	OTH	122		22350	620	30	13.1	8.96	4.96		6.68	0.29	78	2.24	802		11.2	
315991-26/10/2021	From Equalisation Tank of stream-1 ~	OTH	461		121	1998	70	10.8	2.24	1.61		6.21	0.28	62	1.44	32		7.84	
315995-26/10/2021	From Equalisation Tank of stream-3 ~	OTH	944		15810	3735	20	>40	5.6	52.65		<1	0.63	38	<1.00	293		11.2	
316014-26/10/2021	From Collection tank of Stream-6 ~	OTH	22		232	91	40	4	3.92	11.66		7.01	0.26	126	<1.00	84		8.96	
312867-17/09/2021	## Final Outlet of the ETP ~ From Final outlet of ETP	AIA	47	2525.04	19400	214	30	3.2	BDL			7.01	BDL	88		1208	36226		
305192-01/06/2021	## Final Outlet of the ETP ~	VIG	39	28	18180	196	15	1.41	0.84			6.94	0.36	60		958	33430		
288860-16/09/2020	## Final Outlet of the ETP ~ From Final outlet of ETP	OTH	60	5098	18185	239	2.5	7.8	7.84			7.50	0.13	86		1636	30620		
285283-28/07/2020	## Final Outlet of the ETP ~ ------	ROU	129	9619.2	22215	413	05	11.5	5.38			7.19	0.04	74		1587	41046		
285284-28/07/2020	From Borewell of Shri Ranjit Gohil, Deputy Sarpanch, Ambheta Village ~	ROU	17		3960	54	7.5	1.10	BDL	4.88	BDL	7.81		16		1506	7740		28
273574-04/01/2020	## Final Outlet of the ETP ~ ---	APP	54	7896.0	15997	241	2.5	11.30	5.21			7.69	BDL	66		789	29616		
271060-29/11/2019	## Final Outlet of the ETP ~ From treated waste water collection tank	APP	51	1463	11159	241	70	7.25	1.57			6.99	0.42	152		784	21322		
270218-14/11/2019	## Final Outlet of the ETP ~ From treated waste water collection tank	REV	50	6350.70	17083	230	2.5	10.25	7.39			6.89	BDL	62		549	31444		
262285-05/07/2019	## Final Outlet of the ETP ~ From treated waste water holding guard pond	ROU	45		17164	233	10	6.95	8.01			7.16		186		763	31018		28
260797-15/06/2019	From storm water drain nr MMT area. (within premises) ~	APP	9		1960	56	5.0		3.19			8.45		16		462	3852		28
260798-15/06/2019	## Final Outlet of the ETP ~ --	APP	40		26856	210	5.0		8.96			8.24		40		798	55570		28
255928-30/03/2019	## Final Outlet of the ETP ~ ----------	HOR			35499	234			30.74			8.56		64			62264		
255854-29/03/2019	From final discharge point of unit at FPS (GL) ~	REV			25206	157			23.97			7.09		54			48640		
251215-15/01/2019	ww sample is collected from storm water drain opposite side of deepak phenolics (outside the GFL)	COM	140		89036	Not analysed (high chloride in	200	1675	72.80			<1.0		606		310	173784		
251216-15/01/2019	ww sample is collected from drain out material from reactor 3R-140E of CaCl2 plant ~	COM	345		86100	Not analysed (high chloride in	140	2975	5.60			<1.0		604		318	115520		
248500-09/12/2018	From final discharge point at collection sump of final pumping station, Ambheta, Dahej. ~ (P2)	OTH				NOT ANALYSED (Chloride interfe			5.6			6.69		162			69328		
248501-09/12/2018	From final outlet of ETP within premises (P7) ~	OTH				NOT ANALYSED (Chloride interfe			5.6			6.63		146			69146		
238972-23/07/2018	From Final outlet of the ETP ~ ----	APP	151		37958	570	60	16.0	5.04		0.8	6.78	BDL	68		862	60914		28
231582-10/04/2018	## Final Outlet of the ETP ~ --	APP	59		18889	233	10	6.45	5.6		0.4	7.30		86		607	36612		28
227593-09/02/2018	From treated waste water Guard pond ~ ---	ROU	47		28872	167	15	12.4	15.68		0.4	7.47		508		702	36450		28
224558-02/01/2018	## Final Outlet of the ETP ~	APP	70		37974	242	10	9.0	5.6		0.8	7.12		74		1187	53946		29

Fluorochemicals Limited DAHEJ

15:52 12-11-2021

5732

Annexure-I

5733

Annexure-II

UniStar
Environment and Research Labs Pvt. Ltd.

White House,
Near G.I.D.C. Office, Char Rasta,
Vapi-396 195, Gujarat, India.
Phone : +91 260 2433966 / 2425610
Email : response@uerl.in Website : www.uerl.in

MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA-1986 (12.01.2020 to 12.03.2023) | QCI-NABET Accredited EIA Consultant Organization | GPCB Recognized Environmental Auditor (Scheaule-II) | ISO 9001:2015 Certified Company | ISO 45001:2018 Certified Company

TEST REPORT

Report No.	URC /21/10/L-0364		
Name & Address of Customer	M/s. Gujarat Fluorochemicals Limited Plot No.12/A, GIDC Dahej, Bharuch.	Date Of Report	02/11/2021
		Customer's Ref.	–
Sample Details	Waste Water Sample (GPCB Counter)	Location	—
Sample Qty.	5 Lit.	Appearance	Colourless
Sampling Date	27/10/2021	Sample Received Date	28/10/2021
Test Started Date	28/10/2021	Test Completion Date	01/11/2021
Sampled By	Party.	Sampling Method	–
UERL Lab ID. No.	21/10/L-0364		

TEST RESULTS:

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment			
Sr.	Parameters	Test Method Permissible	Permissible	Unit of	Results
		PHYSIO-CHEMICAL PARAMETERS			
1.	pH @ 25 ° C	(APHA 23rd Ed.,2017,4500-H^+B)	6.0 – 9.0	–	6.73
2.	Total Suspended Solids	IS 3025(Part 17)1984,Amd.1	100	mg/L	142
3.	Total Dissolved Solids	IS 3025(PART 16) 1984	–	mg/L	32160
		GENERAL CHEMICAL PARAMETERS			
1.	Oil & Grease	IS 3025(Part39)1991, Amd. 2	10	mg/L	BDL(MDL:2.0)
2.	Fluoride	(APHA 23rd Ed.,2017,4500 F,D)	15	mg/L	9.4
3.	Chloride as Cl^-	IS 3025(PART 32) 1988	–	mg/L	20543.6
4.	Sulphate as SO_4^{-2}	IS 3025(Part 24)1986	–	mg/L	676
5.	Sulphide	(APHA 23rd Ed.,2017,4500 S^{-2} F)	5	mg/L	1.5
6.	TKN	(APHA 23rd Ed.,2017,4500 NORG, B,)	50	mg/L	11.2
7.	Ammonical Nitrogen	IS 3025(Part 34)1988,	50	mg/L	8.3
8.	Free Ammonia	IS 3025(Part 34)1988,	5	mg/L	BDL(MDL:0.2)
9.	Copper	IS 3025(Part 42)1992amd.01,	3	mg/L	0.074
10.	Zinc	IS 3025(Part 49)1994	15	mg/L	0.103
11.	BOD (3 days at 27 °C)	IS 3025(Part 44)1993Amd.01	100	mg/L	46
12.	COD	IS 3025(Part 58)2006	250	mg/L	161.7
13.	Arsenic	APHA 23rd Ed.,2017,3114-C	0.2	mg/L	BDL(MDL:0.01)
14.	Mercury	(APHA 23rd Ed.,2017,3112-B)	0.01	mg/L	BDL(MDL:0.001)
15.	Lead	IS 3025(Part 47)1994Amd.02	1	mg/L	BDL(MDL:0.01)
16.	Cadmium	IS 3025(Part 41)1992,	2	mg/L	0.067
17.	Hexavalent Chromium	APHA 23rd Ed.,2017,3500CrB	0.1	mg/L	BDL(MDL:0.05)
18.	Total Chromium	IS 3025(Part 52)2003,	2	mg/L	BDL(MDL:0.05)
19.	Nickel	IS 3025(Part 54)2003,	5	mg/L	0.071
20.	Cyanide	IS 3025(Part27)1986	0.2	mg/L	BDL(MDL:0.05)
21.	Phenolic Compound	IS 3025(Part 43)1992, Amd.2	5	mg/L	BDL(MDL:0.1)
22.	Manganese	APHA 23rd Ed.,2017,3500 Mn B	2	mg/L	BDL(MDL:0.1)
23.	Iron	IS 3025(Part 53)2003,	3	mg/L	0.266
Remarks: BDL= Below Detection Limit, MDL = Minimum Detection Limit,					
Opinion & Interpretation (If required):					

****** End of Report ******

Checked By
N. C. P.
(Nilesh C. Patelp
(Sr. Chemist)

Gujarat Fluorochemicals Ltd. DAHEJ

Authorized By
(N.B.T.)
(Nitin B. Tandel)
(Technical Manager)

UniStar
Environment and Research Labs Pvt. Ltd.

White House,
Near G.I.D.C. Office, Char Rasta,
Vapi-396 195, Gujarat, India.
Phone : +91 260 2433966 / 2425610
Email : response@uerl.in Website : www.uerl.in

MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA-1986 (12.01.2020 to 17.03.2023) | QCI-NABET Accredited EIA Consultant Organization | GPCB Recognized Environmental Auditor (Scheoule-II) | ISO 9001:2015 Certified Company | ISO 45001:2018 Certified Company

TEST REPORT

Report No.	URC /21/10/L-0364		
Name & Address of Customer	M/s. Gujarat Fluorochemicals Limited Plot No.12/A, GIDC Dahej, Bharuch	Date Of Report	02/11/2021
		Customer's Ref.	--
Sample Details	Waste Water Sample (GPCB Counter)	Location	---
Sample Qty.	5 Lit.	Appearance	Colourless
Sampling Date	27/10/2021	Sample Received Date	28/10/2021
Test Started Date	28/10/2021	Test Completion Date	01/11/2021
Sampled By	Party.	Sampling Method	--
UERL Lab ID. No.	21/10/L-0364		

TEST RESULTS:

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment			
Sr. No.	Parameters	Test Method Permissible	Permissible Limits (GPCB)	Unit of Measurement	Results
PHYSIO-CHEMICAL PARAMETERS					
1.	Temperature	IS 3025(Part 9)1984	Shall Not Exceed More Than 5 0C above Ambient Water Temperature	^{o}C	27
2.	Colour	IS 3025(Part 4)	--	Pt. Co. Scale	40
GENERAL CHEMICAL PARAMETERS					
3.	Nitrate	(APHA 23rd Ed.,2017,4500 NO3-B)	50	mg/L	5.8
4.	Total Residual Chlorine	IS 3025(Part 26)1986,	1	mg/L	BDL(MDL:0.1)
5.	Selenium	IS 3025(Part 56)2003	0.05	mg/L	BDL(MDL:0.1)
6.	Vanadium	APHA 23rd Ed.,2017,3500 - V	0.2	mg/L	BDL(MDL:0.1)
7.	Bio Assay test (%)	IS:6582-1971	90 % survival of fish after 96 hrs. in 100% Effluent	%	90 % survival of fish after 96 hrs.
Remarks: BDL= Below Detection Limit, MDL = Minimum Detection Limit,					

******* End of Report *******

Checked By
N. C. P.
Nilesh C. Patel
(Sr. Chemist)

Gujarat Fluorochemicals Ltd. DAHEJ

Authorized By
(N. B. T.)
(Nitin B. Tandel)
(Technical Manager)

File Edit View History Bookmarks Tools Help

chloride content effect on COD × :: Pollution Control Board :: × GLens ×

https://glens.glensserver.com/#/landing/industryReports/HourlyAverageReport

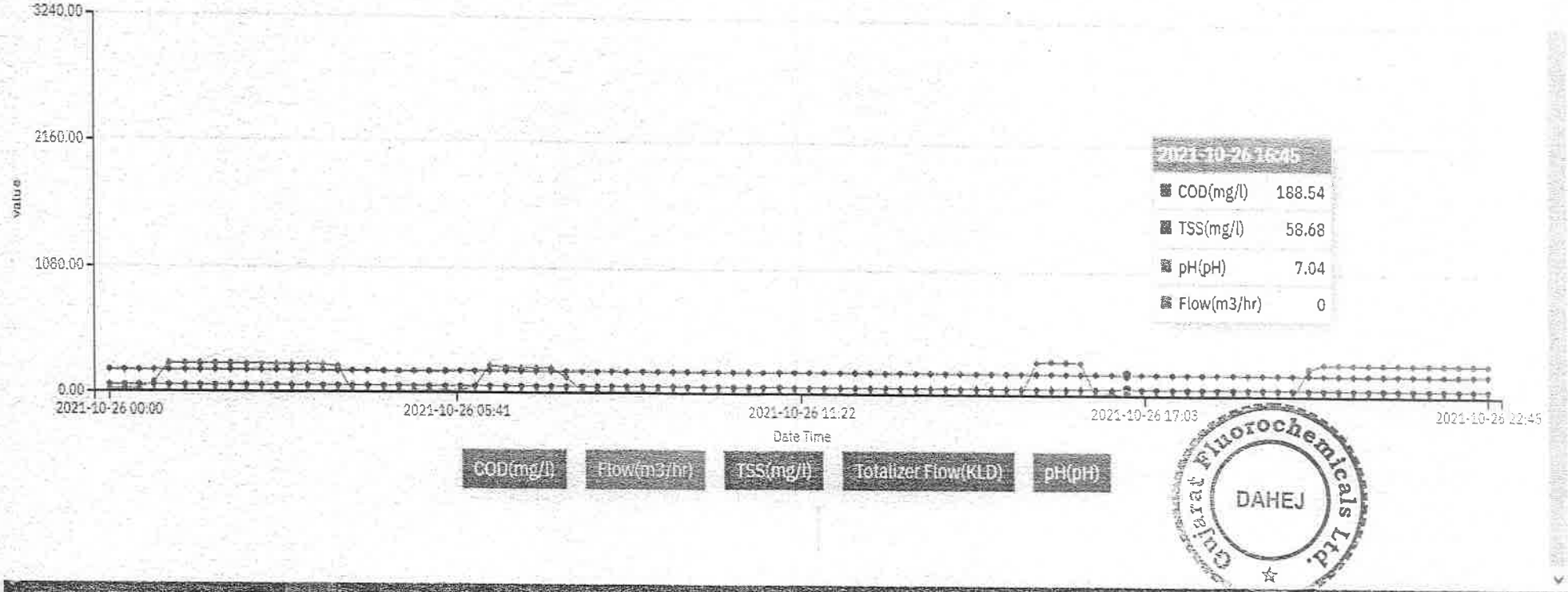
GFL GLens EIS - Login :: Pollution Control Bo... PayGURU HRMS | Log in

Dashboard Live Status Regulator Reports Industry Reports Calibration Work Flow GFCHT

Average Report

Print Excel Reports

ETP_2_Outlet - 15 Min - Average Data



Gujarat Fluorochemicals Ltd. DAHEJ

15:58 12-11-2021

5735

Annexure - III

5736

Annexure-IV

WATER / WASTE WATER SAMPLE

Sample ID:315987 - Analysis Completion:10/11/2021

Organic Chemicals manufacturing / LAB Inward : 45796

Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

est Report No. : 45796 Date: 10/11/2021

. Name of the Customer	: Gujarat Fluorochemicals Limited - 15136
. Address	: 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
. Nature of Sample	: REP-Representative/Grab, (Insp Type : OTH-Others/Higher Authority)
. Sample Collected By	: MR. RAJENDRASINH RAJABHAU GAEK
. Quantity of Sample Received	: 2.5
. Code No. of the Sample	: 315987
Date & Time of Collection & Inwarding	: 26/10/2021 , (1640 to 1640) & 29/10/2021
Date of Start & Completion of Analysis	: 29/10/2021 & 10/11/2021
Sampling Point	: From Final Outlet of Unit into GIDC drain. ~
. Flow Details (Remarks)	: —
. M[illegible] of Disposal	: Through GIDC drainage network
. Ultimate Receiving Body	: Sea
. Temperature on Collection	: 30 & pH Range on pH Strip :@ 7-8 on pH Strip
. Carboys Nos for	: barcode & Color & Appearance :colorless
	: Ind :13306.720 , Dom :52.500 & Ind :4406.000 , Dom :45.000
. Water Consumption & W.W.G (KLPD)	: 13 ,Cap No & Weight :

Parameter	Unit	Test Method	Range of Testing	Result
pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	6.68
Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	30
Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Metho	2 – 10000 mg/L	78
Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	8.96
Total Kjeldahl Nitrogen	mg/l	Titrimetric method followed by preliminary distillation	1 – 5000 mg/l.	11.2
Nitrate	mg/l	Cadmium reduction method As per Spectrophotomet	0.005 – 100 mg/l	4.96
Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l.	22350
Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	802
Che[illegible]al Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	620
Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	0.29
Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l.	13.1
Sulphide	mg/l	APHA (23rd Edi.)4500-s2-F –iodometric Method	1-500.0 mg/l	2.24
B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	122

oratory Remarks : Approved By:399-lab_399 Dt.: 10/11/2021

Gujarat Fluorochemicals Ltd. DAHEJ

R.C.VASAVA,S.O

1. The results refer only to the tested samples and applicable parameters. Endorsement of products is neither inferred nor implied.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. This report is not to be reproduced wholly or in part or used in any advertising media without the permission of the Board in writing.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

5737

Annexure - 8

CIN : L24304GJ2018PLC105479

Tel: +91-2641-618031 | www.gfl.co.in

Gujarat Fluorochemicals Limited
earlier known as Inox Fluorochemicals Limited

Plot No D-2/CH/173 & 222, Village - Jolva, GIDC Industrial Estate, Dahej II, Dahej, Distt. Bharuch 392130, Gujarat, India.

Ref. GFL/GPCB-ID 15136/2021-22/59

March 28, 2022

Member Secretary,
Gujarat Pollution Control Board,
Paryavaran Bhavan,
Sector-10/A
Gandhinagar-382010

30/03/2022
Gujarat Pollution Control Board
Head Office
Sector No.-10-A,
Gandhinagar-382010

Kind Attention : **Mr. Irfan Kagzi (Unit Head- Bharuch)**

Dear Sir :

Reference : **DIRECTION UNDER SECTION 33-A OF THE WATER (PREVENTION AND CONTROL OF POLLUTION) ACT-1974 issued vide letter no.: GPCB/BRCH-B/CCA-1080(21) ID: 15136/624731, Date: 05/03/2022**

This has reference to the notice of direction issued to our unit by the Board. We are submitting herewith compliance details of the same as under:

I. Compliance of non-conformance observed during visit dated:26/10/2021.

Sr. No.	Observations	Compliances Status
1	The final treated wastewater discharged into the GIDC drain exceeded GPCB CCA standards as below:	We have segregated all waste water sources based on type and quality parameters, accordingly designed the ETP for treating six streams with specific treatment for each of them.

Parameters (mg/l)	Final Outlet to GIDC drain	GPCB Discharge Standards as per CCA
BOD (3 days at 27°C)	122	100
COD	620	250

Your visit dated on 26th Oct,2021 and sample was collected at final outlet to GIDC drain. The sample was analyzed in NABL accredited third party laboratory & GFL 's inhouse laboratory and results of COD & BOD are respectively 161.7 ppm,46 ppm & 198 ppm ,48.6 pp. Also, Online CPCB server had 188.54 ppm COD. The result submitted by GPCB is 620 ppm COD & 122 ppm BOD. This probably occurred due to the high chloride content in the sample and this high chloride content affect the COD values in sample and this is also acknowledged by GPCB in last few years. Please

29/3/22
Post Received
Gujarat Pollution Control Board
BHARUCH

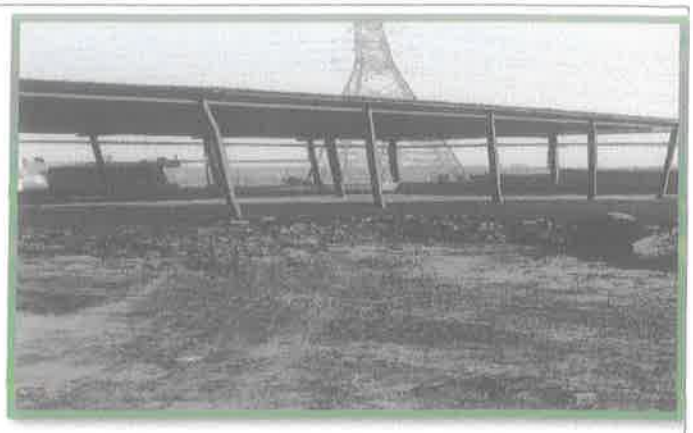
GAHEJ

Regd. Office: Survey No. 16/3, 26, 27, Village Ranjitnagar, Taluka Ghoghamba, Distt. Panchmahal - 389380, Gujarat, India.
Tel: +91-2678-248152/153/107 | Fax: +91-2678-248153
Vadodara Office: ABS Towers, 2nd floor, Old Padra road, Vadodara-390007, Gujarat, India |Tel: +91-265-6198111/2330057 | Fax:+91-265-2310312
Corporate Office: INOX Towers, Plot No. 17, Sector-16A, Noida-201301, Uttar Pradesh, India | Tel: +91-120-6149600 | Fax: +91-120-6149610

		find enclosed herewith result showing in A.R comparative sheet downloaded from GPCB XGN portal in which for 04 occasions COD was not analyzed due to higher chloride which is self-explanatory. Sample ID & dated 251215-15.01.2019,251216-15.01.2019,248500-09.12.2018 & 248501-09.12.2018 due to high chloride and it may also be noted during samples collected at various time March,2019 to December, 2021. Based on that We have submitted request letter for re-sampling/Joint Analysis of treated effluent letter along with A.R Comparative sheet downloaded from GPCB XGN Portal, NABL accredited lab analysis report, Online CPCB server screen snap as **Annexure -I,** We are well within the permissible limits as per CCA. It would not be out of place to mention that the BOD and COD are within the permissible limits as per the result issued by GPCB dated: 22nd feb,2022. We are following this standard method for COD measurement. Please refer to **Annexure-II** – "APHA Method for COD" for 5220 B. Open Reflux Method which is common procedure for COD measurement and removal of chloride interference in sample please refer APHA method for COD -5220 A introduction. We have detailed Process flow diagram as per SOP. Please refer to **Annexure -III.**
2	Unit has not provided flowmeters at wastewater inlet streams at ETPs.	We have installed Flow meters at all wastewater inlet streams at ETPs and same to be recorded in ETP log book.

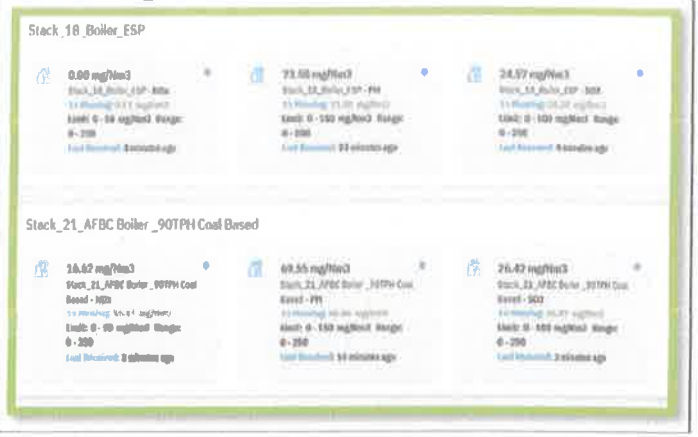
3	The fly ash from captive power plant and Calcium Chloride were found stored haphazardly in the industry near CPP.	We have provided sufficient covered storage area to store Calcium Chloride and fly ash under Non-Hazardous storage area. Photograph attached:

Gujarat Flue-Gas ... Ltd. DAHEJ

		 We are exploring buyers for calcium chloride till that we are being disposed calcium chloride at regular interval at GPCB approved landfill site. During monsoon season landfill site had been closed so that time we stored calcium chloride under non-hazardous storage area.
4	Poor handling of coal dust, fly ash and Calcium Chloride was observed in the premises.	We are using following systems / installations to improve handling of coal dust, fly ash and other wastes inside the premises and implement good housekeeping practices. ESP (Electro-static Precipitator) to control SPM in Stack.

Gujarat Fluorochemicals Ltd. DAHEJ

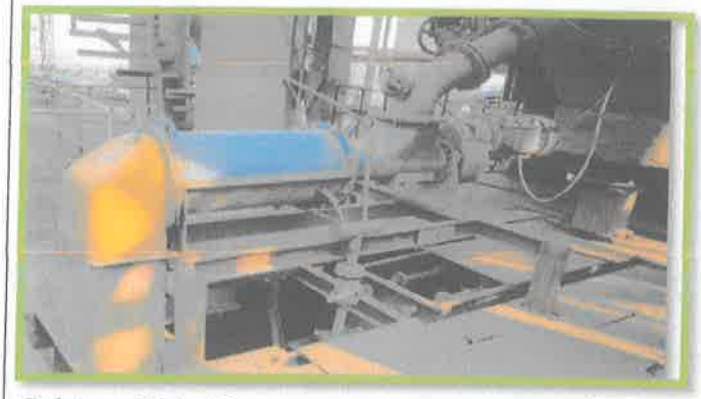
Online monitoring system for Stack dust monitoring.



Water Spray Nozzles are available at Coal unloading / Grizzly Hopper area (Dust Suppression)

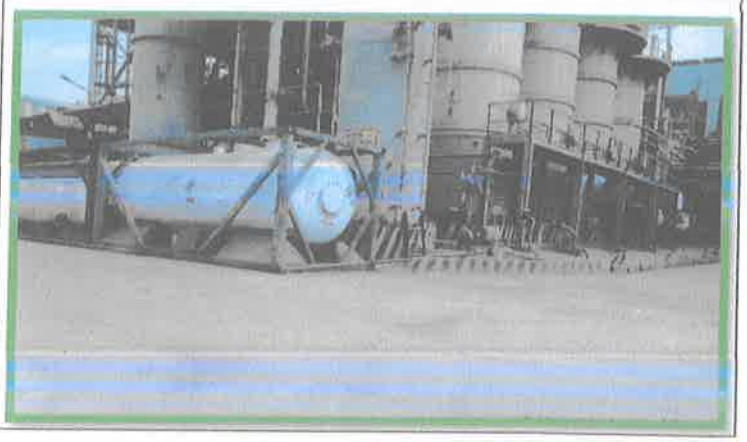
Water Spray Nozzles at Belt conveyors to control coal Dust

Gujarat Fluorochemicals Ltd. DAHEJ

		Ash conditioner with water spray arrangement in surrounding at Ash unloading area.  Calcium Chloride is being stored in a covered non-hazardous waste storage area and is being disposed off on a regular basis.
5	Housekeeping is observed Poor.	It is ongoing practices. Please see attached photographs.

Gujarat Fluorochemicals Ltd. DAHEJ

Gujarat Fluoro Chemicals Ltd. DAHEJ



Gujarat Fluorochemicals Ltd. DAHEJ

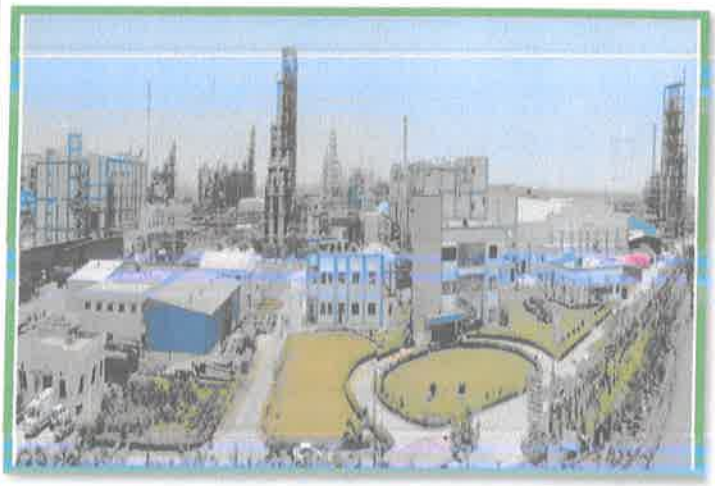
II. Compliance of the points as mentioned in Notice of Direction.

Sr. No.	Observations	Compliances Status
1	Unit shall carry out proper effluent stream segregation and treat each stream based on its quality/characteristics.	We have segregated all waste water sources based on type, quality and parameters. Accordingly, six various streams have been established for specific treatment of the stream. We operate our ETPs based on the stream as per the SOP defined for the stated stream. ETP flow diagram enclosed as **Annexure III**
2	Unit shall upgrade ETP and operate it effectively & efficiently in such a way that treated effluent always confirms discharge norms prescribed in the CCA.	We are operating the ETP diligently and effectively on a regular basis and have in fact upgraded our ETP operation process so as to meet the requirement. The discharge norms of our effluent are in compliance with the norms as mentioned in the CCA, please refer to **Annexure III.**
3	Unit shall provide separate flow meters and energy meters for ETP, RO and color coding of all pipeline networks of wastewater within the premises of Industries with flow directions and nomenclatures.	Unit has separate flow meters and energy meters for ETP & RO. Photographs of Flow meters & Energy meters are attached same records of last 15 days enclosed as **Annexure -IV.** Photographs of energy meter for ETP.

Gujarat Fluorochemicals Ltd. DAHEJ

		   Photos of color coding of all pipeline networks of wastewater within the premises of Industries with flow directions and nomenclatures **attached** as:
4	Unit shall practice only single treated industrial effluent discharge point.	We are practicing a single point of discharge only and discharging our effluent to deep sea through GIDC pipeline.

Gujarat Fluorochemicals Ltd. DAHEJ

5	Unit shall handle, store and dispose various types of hazardous waste as per the Hazardous & Other Waste (Management and Handling) Rules, 2016.	We are handling, storing and disposing various hazardous wastes as per Hazardous & Other Waste (Management and Handling) Rules, 2016. Please refer to **Annexure-V** for the manifests of waste disposal at GPCB approved landfill site/recycler/Coprocessor.
6	Unit shall provide adequate in-house HW storage facility with roof, covered from all sides, impervious flooring and leachate management system.	We have already provided adequate in-house hazardous waste storage facility covered on all sides, impervious flooring and leachate management system. The leachate whatsoever is generated is being sent to our ETP for treatment. Photograph of hazardous waste storage area attached:
7	Unit shall adopt good housekeeping practices.	Unit is being maintained good housekeeping within our premises and will continue to do the same. Please see the attached photographs. 

Gujarat Fluorochemicals Ltd. DAHEJ

Gujarat Electronics Ltd. DAHEJ

8	Unit shall take adequate measures to prevent leakage, spillage while handling toxic, volatile and hazardous chemicals/wastes.	The company have taken following steps for prevent leakage, spillage management: 1) All the Process is Controlled by latest DCS with redundant Power supply back up to prevent loss of Containment due to High Pressure, Temperature, flow etc. with Alarms system. 2) All Equipment designed by ASME / API relevant / latest standard. 3)Early Detection system like Chlorine Detectors, LEL Detector installed where the HTM leakage would have tremendous impact. 4)All pumps & pipelines are maintained as per preventive schedule and inspected periodically and whenever required. 5)Flanges has been provided with Flange Guard of Compatible Material. 6)Breather valves, Flame arrestors & vent 7)Condensers have been provided for solvent storage tanks. 8)Fugitive emissions in the work area are being monitored. 9) Distillation reactors columns are connected with condenser the vent condensers are supplied with as per suitable utilities to minimize vapour loss. 10)All solvent handling pumps have been provided double mechanical seal. 11)All condensers with sufficient Heat Transfer Assessment. 12)All majority of chemicals are transferred through closed loop systems. Controlling measures such as vent condensers, scrubbing mechanism are installed in manufacturing processes.
9	Unit shall explore possibilities to utilize or sell Calcium Chloride produced to actual end users by making MOU and through GPS mounted vehicles instead of disposing it in CHWTSDF.	We are exploring the possibility of selling the produced Calcium Chloride to an actual user so as to avoid its being disposed off to the CHWTSDF system / site.

Gujarat Fluorochemicals Ltd. DAHEJ

10	Unit shall immediately take corrective measures for above non-compliances and submit compliance report/ time bound action plan for it.	This response itself may please be taken to be a part of this particular requirements since we have taken suitable corrective measures.
11	Unit shall comply) all conditions mentioned in CCA judiciously.	We comply with all the conditions as mentioned in our CCA. Please refer to **Annexure-VI**.
12	Unit shall pay Environment Damage Compensation (EDC) as and when communicated by the Board.	In view of explanation provided by us at sr.no 1 to 11, and compliance of all EC and CTO conditions, the EDC imposed on us may kindly be reviewed.

As a responsible Corporate Body, we assure full compliance on the stated observations and norms enumerated by Gujarat Pollution Control Board.

For Gujarat **Fluorochemicals Limited**

AUTHORIZED SIGNATORY

Gujarat Fluorochemicals Ltd. DAHEJ

CC:

1] The Regional Officer, Gujarat pollution Control Board, GIDC Phase-II, Narmada Nagar, Bharuch-392015.

2] Central Pollution Control Board, Parivesh Bhawan, Aatmajyoti Ashram Rd, Opp. VMC Ward Office No.10, Subhan Pura, Vadodara, Gujarat -390023

Encl.:

i) Request letter for re-sampling/Joint Analysis of treated Effluent along with A.R Comparative sheet downloaded from GPCB XGN Portal as Annexure -I
ii) APHA test method for COD measurement attached as Annexure-II
iii) ETP flow diagram attached as Annexure-III.
iv) Energy meter & Flow meter records attached as Annexure -IV
v) Hazardous waste disposal manifest attached as per Annexure-V
vi) CCA compliance report attached as Annexure -VI

5750

Annexure :- 1 O/C

GUJARAT FLUOROCHEMICALS
VALUE THROUGH GREEN CHEMISTRY
CIN : L24304GJ2018PLC105479

Gujarat Fluorochemicals Limited
earlier known as Inox Fluorochemicals Limited

12/A, GIDC Dahej Industrial Estate, Taluka Vagra, Distt. Bharuch-392130, Gujarat, India | Tel: +91-2641-618031 (Admin) / 618041-50 (Purchase) / 618086-87 (Security) | www.gfl.co.in

Ref. GFL/GPCB-ID 15136/2020-21/43

November 25, 2021

To,
The Regional Directorate (West),
Parivesh Bhawan,
Nr. Ward Office No.10,
Subhanpura,
Vadodara-390023(Gujarat)

Regional Directorate (West) • CPCB, M.O. E.F.&CC, Govt. of India • Vadodara

26/11/21

Reference: 1. Your Visit and Sample collected on 26.10.2021
2. Sample analysis Report of GPCB dated 10.11.2021

Kind Attn: Shri Prasoon Gargava, The Regional Director.

Subject: Request for re-sampling/Joint Analysis of treated effluent.

Dear Sir,

This has reference to the above subject matter regarding the analysis results.

The COD and BOD value are quite higher as compared to our own laboratory, online CPCB server as well as NABL accredited laboratory due to perhaps higher chloride @ 22350mg/l. In past also GPCB has not analyzed COD because of higher chloride in sample Ref. Sample ID.& dated 251215-15.01.2019, 251216-15.01.2019, 248500-09.12.2018 & 248501-09.12.2018.

Please find enclose herewith result showing in A.R comparative sheet downloaded from GPCB XGN portal in which for 04 occasions COD was not analyzed due to higher chloride which is self-explanatory.

Comparison of sample analysis results, ETP Outlet is as under:

Sample Date	GFL Lab		NABL accredited Lab		Online CPCB Server	GPCB Lab	
	COD	BOD	COD	BOD	COD	COD	BOD
26.10.2021	198	48.6	161.7	46	188.54	620	122

In view of the above result is not convincing to us, we humbly request for re-sampling/joint of treated effluent of our unit.

Thanking you,
For, **Gujarat Fluorochemicals Limited**

Gujarat Fluorochemicals Ltd. DAHEJ

(Authorized Signature)

CC: 1. The Member Secretary, Gujarat Pollution Control Board, Gandhinagar-382010.
2. The Regional Officer, Gujarat pollution Control Board, Bharuch-392015

Encl.: 1. A.R Comparative sheet downloaded from GPCB XGN Portal as **Annexure-I**
2. NABL accredited lab analysis report as **Annexure-II**
3. Online CPCB server screen snap as **Annexure-III**
4. GPCB sample analysis reports as **Annexure-IV**

:: Pollution Control Board :: — Mozilla Firefox

https://gpcbxgn.gujarat.gov.in/ACT/Reports/new_cross_tab.aspx?ACT=/mvQz1fWAD4=&gpcb_id=ocsP0Pi3dGU=&MTH=aUtGjcydRv8=

90%

15136 - Gujarat Fluorochemicals Limited / L From Date: 01/12/2017 - To Date: 12/11/2021

Point : ALL

Para: ALL >0 All Cases GO Print Excel

☐ ALL ☐ ACI ☐ ALK ☐ BOD ☐ CAL ☐ CHL ☐ COD ☐ COL ☐ FLU ☐ NH3 ☐ NTR ☐ O&G ☐ pH ☐ PHE ☐ SS

☐ SUL ☐ SUP ☐ TDS ☐ TKN ☐ TNP

Samp ID & Dt	samp_pt	Type	BOD	CAL	CHL	COD	COL	FLU	NH3	NTR	O&G	pH	PHE	SS	SUL	SUP	TDS	TKN	TMP
Permissible Values			100			250		15	50		20	9	5	100	5				45
316987-26/10/2021	From Final Outlet of Unit into GIDC drain. ~	OTH	122		22350	620	30	13.1	8.96	4.96		6.68	0.29	78	2.24	802		11.2	
315991-26/10/2021	From Equalisation Tank of stream-1 ~	OTH	461		121	1998	70	10.8	2.24	1.61		6.21	0.28	62	1.44	32		7.84	
315995-26/10/2021	From Equalisation Tank of stream-3 ~	OTH	944		15810	3735	20	>40	5.6	52.55		<1	0.63	38	<1.00	293		11.2	
316014-26/10/2021	From Collection tank of Stream-6 ~	OTH	22		232	91	40	4	3.92	11.66		7.01	0.26	126	<1.00	84		8.96	
312867-17/09/2021	## Final Outlet of the ETP ~ From Final outlet of ETP	AIA	47	2525.04	19400	214	30	3.2	BDL			7.01	BDL	88		1208	36226		
305192-01/06/2021	## Final Outlet of the ETP ~	VIG	39	28	18180	196	15	1.41	0.84			6.94	0.36	60		958	33430		
288860-16/09/2020	## Final Outlet of the ETP ~ From Final outlet of ETP	OTH	60	5098	18185	239	2.5	7.8	7.84			7.50	0.13	86		1636	30620		
285283-28/07/2020	## Final Outlet of the ETP ~ ----	ROU	129	9619.2	22215	413	05	11.5	5.38			7.19	0.04	74		1587	41046		
285284-28/07/2020	From Borewell of Shri Ranjit Gohil, Deputy Sarpanch, Ambheta Village ~	ROU	17		3960	54	7.5	1.10	BDL	4.88	BDL	7.81		16		1506	7740		28
273574-04/01/2020	## Final Outlet of the ETP ~ ...	APP	54	7896.0	15997	241	2.5	11.30	5.21			7.69	BDL	66		789	29616		
271060-29/11/2019	## Final Outlet of the ETP ~ From treated waste water collection tank	APP	51	1463	11159	241	70	7.25	1.57			6.99	0.42	152		784	21322		
270218-14/11/2019	## Final Outlet of the ETP ~ From treated waste water collection tank	REV	50	5350.70	17083	230	2.5	10.25	7.39			6.89	BDL	62		549	31444		
262285-05/07/2019	## Final Outlet of the ETP ~ From treated waste water holding guard pond	ROU	45		17164	233	10	6.95	8.01			7.16		186		763	31018		28
260797-15/06/2019	From storm water drain nr MMT area. (within premises) ~	APP	9		1960	56	5.0		3.19			8.45		16		462	3852		28
260798-15/06/2019	## Final Outlet of the ETP ~ ~	APP	40		26856	210	5.0		8.96			8.24		40		793	55570		28
255928-30/03/2019	## Final Outlet of the ETP ~ ------	HOR			35499	234			30.74			8.56		64			62264		
255854-29/03/2019	From final discharge point of unit at FPS (GL) ~	REV			25206	157			23.97			7.09		54			48640		
251215-15/01/2019	ww sample is collected from storm water drain opposite side of deepak phenolics (outside the GFL)	COM	140		89036	Not analysed (high chloride in	200	1675	72.80			<1.0		606		310	173784		
251216-15/01/2019	ww sample is collected from drain out material from reactor 3R-140E of CaCl2 plant ~	COM	345		86100	Not analysed (high chloride in	140	2975	5.60			<1.0		604		318	115520		
248500-09/12/2018	From final discharge point at collection sump of final pumping station, Ambheta, Dahej. ~ [P2]	OTH				NOT ANALYSED (Chloride interfe			5.6			6.69		162			69328		
248501-09/12/2018	From final outlet of ETP within premises [P7] ~	OTH				NOT ANALYSED (Chloride interfe			5.6			6.63		146			69146		
238972-23/07/2018	From Final outlet of the ETP ~ ----	APP	151		37958	570	60	16.0	5.04		0.8	6.78	BDL	68		862	60914		28
231582-10/04/2018	## Final Outlet of the ETP ~ ...	APP	59		18889	233	10	6.45	5.6		0.4	7.30		86		607	36612		28
227593-09/02/2018	From treated waste water Guard pond ~ ...	ROU	47		28872	167	15	12.4	15.68		0.4	7.47		508		702	36450		28
224558-02/01/2018	## Final Outlet of the ETP ~	APP	70		37974	242	10	9.0	5.6		0.8	7.12		74		1187	53946		29

Fluorochemicals Ltd. DAHEJ

12-11-2021

5751

Annexure-II

UniStar
Environment and Research Labs Pvt. Ltd.

White House,
Near G.I.D.C. Office, Char Rasta,
Vapi-396 195, Gujarat, India.
Phone : +91 260 2433966 / 2425610
Email : response@uerl.in Website : www.uerl.in

MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA-1986 (12.01.2020 to17.03.2023) | QCI-NABET Accredited EIA Consultant Organization | GPCB Recognized Environmental Auditor (Schedule-II) | ISO 9001:2015 Certified Company | ISO 45001:2018 Certified Company

TEST REPORT

Report No.	URC /21/10/L-0364		
Name & Address of Customer	M/s. Gujarat Fluorochemicals Limited Plot No.12/A, GIDC Dahej, Bharuch.	Date Of Report	02/11/2021
		Customer's Ref.	–
Sample Details	Waste Water Sample (GPCB Counter)	Location	—
Sample Qty.	5 Lit.	Appearance	Colourless
Sampling Date	27/10/2021	Sample Received Date	28/10/2021
Test Started Date	28/10/2021	Test Completion Date	01/11/2021
Sampled By	Party.	Sampling Method	–
UERL Lab ID. No.	21/10/L-0364		

TEST RESULTS:

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment			
Sr.	Parameters	Test Method Permissible	Permissible	Unit of	Results
		PHYSIO-CHEMICAL PARAMETERS			
1.	pH @ 25 ° C	(APHA 23rd Ed.,2017,4500-H+B)	6.0 – 9.0	–	6.73
2.	Total Suspended Solids	IS 3025(Part 17)1984,Amd.1	100	mg/L	142
3.	Total Dissolved Solids	IS 3025(PART 16) 1984	–	mg/L	32160
		GENERAL CHEMICAL PARAMETERS			
1.	Oil & Grease	IS 3025(Part39)1991, Amd. 2	10	mg/L	BDL(MDL:2.0)
2.	Fluoride	(APHA 23rd Ed.,2017,4500 F,D)	15	mg/L	9.4
3.	Chloride as Cl-	IS 3025(PART 32) 1988	–	mg/L	20543.6
4.	Sulphate as SO_4^{-2}	IS 3025(Part 24)1986	–	mg/L	676
5.	Sulphide	(APHA 23rd Ed.,2017,4500 S^{-2} F)	5	mg/L	1.5
6.	TKN	(APHA 23rd Ed.,2017,4500 NORG, B,)	50	mg/L	11.2
7.	Ammonical Nitrogen	IS 3025(Part 34)1988,	50	mg/L	8.3
8.	Free Ammonia	IS 3025(Part 34)1988,	5	mg/L	BDL(MDL:0.2)
9.	Copper	IS 3025(Part 42)1992amd.01,	3	mg/L	0.074
10.	Zinc	IS 3025(Part 49)1994	15	mg/L	0.103
11.	BOD (3 days at 27 °C)	IS 3025(Part 44)1993Amd.01	100	mg/L	46
12.	COD	IS 3025(Part 58)2006	250	mg/L	161.7
13.	Arsenic	APHA 23rd Ed.,2017,3114-C	0.2	mg/L	BDL(MDL:0.01)
14.	Mercury	(APHA 23rd Ed.,2017,3112-B)	0.01	mg/L	BDL(MDL:0.001)
15.	Lead	IS 3025(Part 47)1994Amd.02	1	mg/L	BDL(MDL:0.01)
16.	Cadmium	IS 3025(Part 41)1992,	2	mg/L	0.067
17.	Hexavalent Chromium	APHA 23rd Ed.,2017,3500CrB	0.1	mg/L	BDL(MDL:0.05)
18.	Total Chromium	IS 3025(Part 52)2003,	2	mg/L	BDL(MDL:0.05)
19.	Nickel	IS 3025(Part 54)2003,	5	mg/L	0.071
20.	Cyanide	IS 3025(Part27)1986	0.2	mg/L	BDL(MDL:0.05)
21.	Phenolic Compound	IS 3025(Part 43)1992, Amd.2	5	mg/L	BDL(MDL:0.1)
22.	Manganese	APHA 23rd Ed.,2017,3500 Mn B	2	mg/L	BDL(MDL:0.1)
23.	Iron	IS 3025(Part 53)2003,	3	mg/L	0.266

Remarks: BDL= Below Detection Limit, MDL = Minimum Detection Limit,

Opinion & Interpretation (If required):

******* End of Report *******

Checked By
(Nilesh C. Patel)

Gujarat Fluorochemicals DAHEJ

Authorized By
(N.B.T.)
(Nitin B. Tandel)

Annexure - III

5754

Annexure-IV

WATER / WASTE WATER SAMPLE

Sample ID:315987 Analysis Completion:10/11/2021

Organic Chemicals manufacturing / LAB Inward : 45796

Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 45796 Date: 10/11/2021

. Name of the Customer	: Gujarat Fluorochemicals Limited - 15136
. Address	: 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
. Nature of Sample	: REP-Representative/Grab, (Insp Type : OTH-Others/Higher Authority)
Sample Collected By	: MR. RAJENDRASINH RAJABHAU GAEK
Quantity of Sample Received	: 2.5
Code No. of the Sample	: 315987
Date & Time of Collection & Inwarding	: 26/10/2021 , (1640 to 1640) & 29/10/2021
Date of Start & Completion of Analysis	: 29/10/2021 & 10/11/2021
Sa ling Point	: From Final Outlet of Unit into GIDC drain. ~
Fl Details (Remarks)	: —
Mode of Disposal	: Through GIDC drainage network
Ultimate Receiving Body	: Sea
Temperature on Collection	: 30 & pH Range on pH Strip :@ 7-8 on pH Strip
Carboys Nos for	: barcode & Color & Appearance :colorless
	: Ind :13306.720 , Dom :52.500 & Ind :4406.000 , Dom :45.000
Water Consumption & W.W.G (KLPD)	: 13 ,Cap No & Weight :

Parameter	Unit	Test Method	Range of Testing	Result
pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14, pH value As or	6.68
Colour	Pt.Co.Sc	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	30
uspended Solids	mg/l	Gravimetric method: (2540 D APHA Standard Metho	2 – 10000 mg/L	78
mmonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l	8.96
otal Kjeldahl Nitrogen	mg/l	Titrimetric method followed by preliminary distillation	1 – 5000 mg/l	11.2
itrate	mg/l	Cadmium reduction method As per Spectrophotomet	0.005 – 100 mg/l	4.96
[illegible]	mg/l	Argentometric method: (4500 Cl? B APHA Standard M	1 - 50000 mg/l	22350
lph	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	802
emical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2	5.0- 50000 mg/l	620
enolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	0.29
oride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	13.1
lphide	mg/l	APHA (23rd Edi.)4500-s2-F –iodometric Method	1-500.0 mg/l	2.24
.D (3 Days 27oC)	mg/l	3 – Day BOD test (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	122

tory Remarks : Approved By:399-lab_399 DL: 10/11/2021

Gujarat Fluorochemicals Ltd. DAHEJ

R.C.VASAVA,S.O.

The results refer only to the tested samples and applicable parameters. Endorsement of products is neither inferred nor implied.
Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
This report is not to be reproduced wholly or in part or used in any advertising media without the permission of the Board in writing.
The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
otal liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to
ujarat Jurisdiction only.
ermissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
hysicochemical and microbiological parameters, Std.Methods for Water and Waste Water, 22nd Edition by APHA

Annexure-7

Gujarat Fluorochemicals Limited [Login: 15/03/2022 03:25:03 PM]

Gujarat Pollution Control Board

MPW!!! PCB Id Logout Menu

Sample	Bill No	Bill Dt	Pay ID	Tot Amt	R.O	Lab	Insp ID	Insp Dt	Coll Dt	Catg	Type	#Para	#Result	View	To	RES
324588	16668	23/02/22	111294	9160	BHA	BHA	640047	22/02/2022	22/02/22	PRE	REP	A-2	2	View		N.A
324585	16668	23/02/22	111294	9160	BHA	BHA	640047	22/02/2022	22/02/22	PRE	REP	A-1	1	View		N.A
324582	16668	23/02/22	111294	9160	BHA	BHA	640047	22/02/2022	22/02/22		REP	W-13	13	View	OTH	N.A
319283	16579	10/12/21	109379	3360	BHA	BHA	630527	09/12/2021	09/12/21		REP	W-13	13	View	OTH	N.A
316014	16533	29/10/21	108554	12540	BHA	BHA	625457	26/10/2021	26/10/21		REP	W-13	13	View	OTH	N.A
315995	16533	29/10/21	108554	12540	BHA	BHA	625457	26/10/2021	26/10/21		REP	W-13	13	View	OTH	N.A
315991	16533	29/10/21	108554	12540	BHA	BHA	625457	26/10/2021	26/10/21		REP	W-13	13	View	OTH	N.A
315987	16533	29/10/21	108554	12540	BHA	BHA	625457	26/10/2021	26/10/21		REP	W-13	13	View	OTH	N.A
312867	16463	18/09/21	107604	2810	BHA	BHA	620458	17/09/2021	17/09/21		REP	W-12	12	View	OTH	N.A
305192	16341	04/06/21	104971	2810	BHA	GAN	607192	01/06/2021	01/06/21		REP	W-12	12	View	SEW	N.A
303140	16301	16/04/21	104602	4000	BHA	BHA	603696	14/04/2021	14/04/21	L+O	REP	H-11	11	View		N.A
288860	16090	18/09/20	99845	2810	BHA	BHA	577992	16/09/2020	16/09/20		REP	W-12	12	View	OTH	N.A

i)To see UNDECLARED samples Click on [PENDING RESULT],
ii) If VIEW is disabled->Clear the LAB Bill First.

Pending Result | Print

ParaCd	Para Nm	Unit	Test Method	Test Range	Result	Limit
2	pH (std)	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As on digital pH meter.	6.97	
3	Colour (std)	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-500 hazen	05	
11	Suspended Solids (std)	mg/l	Gravimetric method. (2540 D APHA Standard Methods 22nd edi.)2012	2 – 10000 mg/L	62	
13	Ammonical Nitrogen (std)	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standard Methods 22nd edi.)-2012	1 - 2000 mg/l.	12.32	
14	Total Kjeldahl Nitrogen	mg/l	Titrimetric method followed by preliminary distillation step. (4500-Norg – B APHA Standard Methods 22nd edi.)-2012	1 – 5000 mg/l	15.68	
16	Nitrate	mg/l	Cadmium reduction method As per Spectrophotometric method. (4500-NO2 E APHA Standard Methods 22nd edi.)-2012	0.005 – 100 mg/l	3.20	
25	Chloride (std)	mg/l	Argentometric method. (4500 Cl? B APHA Standard Methods 22nd edi.)-2012	1 - 50000 mg/l	37575	
26	Sulphate (std)	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	877	
35	Chemical Oxygen Demand (std)	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2012	5.0- 50000 mg/l	190	
37	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extraction (Direct Photometric method) (5530 D APHA Standard Methods 22nd edi.) -2012	0.1 – 50 mg/l	BDL	
39	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods 22nd Edi.)-2012	0.10-40 mg/l	1.16	
40	Sulphide	mg/l	APHA (23rd Edi.)4500-s2-F –iodometric Method	1-500.0 mg/l	p.nil	
55	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirmed 1999)-2009	05–50000 mg/l	44	

5755

5220 CHEMICAL OXYGEN DEMAND (COD)*

5220 A. Introduction

Chemical oxygen demand (COD) is defined as the amount of a specified oxidant that reacts with the sample under controlled conditions. The quantity of oxidant consumed is expressed in terms of its oxygen equivalence. Because of its unique chemical properties, the dichromate ion ($Cr_2O_7^{2-}$) is the specified oxidant in Methods 5220B, C, and D; it is reduced to the chromic ion (Cr^{3+}) in these tests. Both organic and inorganic components of a sample are subject to oxidation, but in most cases the organic component predominates and is of the greater interest. If it is desired to measure either organic or inorganic COD alone, additional steps not described here must be taken to distinguish one from the other. COD is a defined test; the extent of sample oxidation can be affected by digestion time, reagent strength, and sample COD concentration.

COD often is used as a measurement of pollutants in wastewater and natural waters. Other related analytical values are biochemical oxygen demand (BOD), total organic carbon (TOC), and total oxygen demand (TOD). In many cases it is possible to correlate two or more of these values for a given sample. BOD is a measure of oxygen consumed by microorganisms under specific conditions; TOC is a measure of organic carbon in a sample; TOD is a measure of the amount of oxygen consumed by all elements in a sample when complete (total) oxidation is achieved.

In a COD analysis, hazardous wastes of mercury, hexavalent chromium, sulfuric acid, silver, and acids are generated. Methods 5220C and D reduce these waste problems but may be less accurate and less representative. (See ¶ 2 below.)

1. Selection of Method

The open reflux method (B) is suitable for a wide range of wastes where a large sample size is preferred. The closed reflux methods (C and D) are more economical in the use of metallic salt reagents and generate smaller quantities of hazardous waste, but require homogenization of samples containing suspended solids to obtain reproducible results. Ampules and culture tubes with premeasured reagents are available commercially. Measurements of sample volumes as well as reagent volumes and concentrations are critical. Consequently, obtain specifications as to limits of error for premixed reagents from manufacturer before use.

Determine COD values of >50 mg O_2/L by using procedures 5220B.4*a*, C.4, or D.4. Use procedure 5220B.4*b* to determine, with lesser accuracy, COD values from 5 to 50 mg O_2/L.

2. Interferences and Limitations

Oxidation of most organic compounds is 95 to 100% of the theoretical value. Pyridine and related compounds resist oxidation and volatile organic compounds will react in proportion to their contact with the oxidant. Straight-chain aliphatic compounds are oxidized more effectively in the presence of a silver sulfate catalyst.

The most common interferent is the chloride ion. Chloride reacts with silver ion to precipitate silver chloride, and thus inhibits the catalytic activity of silver. Bromide, iodide, and any other reagent that inactivates the silver ion can interfere similarly. Such interferences are negative in that they tend to restrict the oxidizing action of the dichromate ion itself. However, under the rigorous digestion procedures for COD analyses, chloride, bromide, or iodide can react with dichromate to produce the elemental form of the halogen and the chromic ion. Results then are in error on the high side. The difficulties caused by the presence of the chloride can be overcome largely, though not completely, by complexing with mercuric sulfate ($HgSO_4$) before the refluxing procedure. Although 1 g $HgSO_4$ is specified for 50 mL sample, a lesser amount may be used where sample chloride concentration is known to be less than 2000 mg/L, as long as a 10:1 weight ratio of $HgSO_4$:Cl^- is maintained. Do not use the test for samples containing more than 2000 mg Cl^-/L. Techniques designed to measure COD in saline waters are available.[1,2]

Halide interferences may be removed by precipitation with silver ion and filtration before digestion. This approach may introduce substantial errors due to the occlusion and carrydown of COD matter from heterogenous samples.

Ammonia and its derivatives, in the waste or generated from nitrogen-containing organic matter, are not oxidized. However, elemental chlorine reacts with these compounds. Hence, corrections for chloride interferences are difficult.

Nitrite (NO_2^-) exerts a COD of 1.1 mg O_2/mg NO_2^--N. Because concentrations of NO_2^- in waters rarely exceed 1 or 2 mg NO_2^--N/L, the interference is considered insignificant and usually is ignored. To eliminate a significant interference due to NO_2^-, add 10 mg sulfamic acid for each mg NO_2^--N present in the sample volume used; add the same amount of sulfamic acid to the reflux vessel containing the distilled water blank.

Reduced inorganic species such as ferrous iron, sulfide, manganous manganese, etc., are oxidized quantitatively under the test conditions. For samples containing significant levels of these species, stoichiometric oxidation can be assumed from known initial concentration of the interfering species and corrections can be made to the COD value obtained.

The silver, hexavalent chromium, and mercury salts used in the COD determinations create hazardous wastes. The greatest problem is in the use of mercury. If the chloride contribution to COD is negligible, $HgSO_4$ can be omitted. Smaller sample sizes (see 5220C and D) reduce the waste. Recovery of the waste material may be feasible if allowed by regulatory authority.[3]

3. Sampling and Storage

Preferably collect samples in glass bottles. Test unstable samples without delay. If delay before analysis is unavoidable, preserve sample by acidification to pH ≤ 2 using conc H_2SO_4. Blend (homogenize) all samples containing suspended solids before analysis. If COD is to be related to BOD, TOC, etc., ensure that all tests receive identical pretreatment. Make prelim-

* Approved by Standard Methods Committee, 1997.
Joint Task Group: 20th Edition–Clarence G. Johnson (chair), Donald G. Miller, John T. Pivinski.

inary dilutions for wastes containing a high COD to reduce the error inherent in measuring small sample volumes.

4. References

1. BURNS, E.R. & C. MARSHALL. 1965. Correction for chloride interference in the chemical oxygen demand test. *J. Water Pollut. Control Fed.* 37:1716.
2. BAUMANN, F.I. 1974. Dichromate reflux chemical oxygen demand: A proposed method for chloride correction in highly saline waters. *Anal. Chem.* 46:1336.
3. HOLM, T.R. 1996. Treatment of Spent Chemical Oxygen Demand Solutions for Safe Disposal. Illinois State Water Survey, Champaign.

5220 B. Open Reflux Method

1. General Discussion

a. Principle: Most types of organic matter are oxidized by a boiling mixture of chromic and sulfuric acids. A sample is refluxed in strongly acid solution with a known excess of potassium dichromate ($K_2Cr_2O_7$). After digestion, the remaining unreduced $K_2Cr_2O_7$ is titrated with ferrous ammonium sulfate to determine the amount of $K_2Cr_2O_7$ consumed and the oxidizable matter is calculated in terms of oxygen equivalent. Keep ratios of reagent weights, volumes, and strengths constant when sample volumes other than 50 mL are used. The standard 2-h reflux time may be reduced if it has been shown that a shorter period yields the same results. Some samples with very low COD or with highly heterogeneous solids content may need to be analyzed in replicate to yield the most reliable data. Results are further enhanced by reacting a maximum quantity of dichromate, provided that some residual dichromate remains.

2. Apparatus

a. Reflux apparatus, consisting of 500- or 250-mL erlenmeyer flasks with ground-glass 24/40 neck and 300-mm jacket Liebig, West, or equivalent condenser with 24/40 ground-glass joint, and a hot plate having sufficient power to produce at least 1.4 W/cm^2 of heating surface, or equivalent.

b. Blender.

c. Pipets, Class A and wide-bore.

3. Reagents

a. Standard potassium dichromate solution, 0.04167*M:* Dissolve 12.259 g $K_2Cr_2O_7$, primary standard grade, previously dried at 150°C for 2 h, in distilled water and dilute to 1000 mL. This reagent undergoes a six-electron reduction reaction; the equivalent concentration is $6 \times 0.04167M$ or 0.2500*N*.

b. Sulfuric acid reagent: Add Ag_2SO_4, reagent or technical grade, crystals or powder, to conc H_2SO_4 at the rate of 5.5 g Ag_2SO_4/kg H_2SO_4. Let stand 1 to 2 d to dissolve. Mix.

c. Ferroin indicator solution: Dissolve 1.485 g 1,10-phenanthroline monohydrate and 695 mg $FeSO_4 \cdot 7H_2O$ in distilled water and dilute to 100 mL. This indicator solution may be purchased already prepared.*

* GFS Chemicals, Inc., Columbus, OH, or equivalent.

d. Standard ferrous ammonium sulfate (FAS) titrant, approximately 0.25*M:* Dissolve 98 g $Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$ in distilled water. Add 20 mL conc H_2SO_4, cool, and dilute to 1000 mL. Standardize this solution daily against standard $K_2Cr_2O_7$ solution as follows:

Dilute 25.00 mL standard $K_2Cr_2O_7$ to about 100 mL. Add 30 mL conc H_2SO_4 and cool. Titrate with FAS titrant using 0.10 to 0.15 mL (2 to 3 drops) ferroin indicator.

$$\text{Molarity of FAS solution} = \frac{\text{Volume } 0.04167M\ K_2Cr_2O_7 \text{ solution titrated, mL}}{\text{Volume FAS used in titration, mL}} \times 0.2500$$

e. Mercuric sulfate, $HgSO_4$, crystals or powder.

f. Sulfamic acid: Required only if the interference of nitrites is to be eliminated (see 5220A.2 above).

g. Potassium hydrogen phthalate (KHP) standard, $HOOCC_6H_4COOK$: Lightly crush and then dry KHP to constant weight at 110°C. Dissolve 425 mg in distilled water and dilute to 1000 mL. KHP has a theoretical COD[1] of 1.176 mg O_2/mg and this solution has a theoretical COD of 500 µg O_2/ mL. This solution is stable when refrigerated, but not indefinitely. Be alert to development of visible biological growth. If practical, prepare and transfer solution under sterile conditions. Weekly preparation usually is satisfactory.

4. Procedure

a. Treatment of samples with COD of >50 mg O_2/L: Blend sample if necessary and pipet 50.00 mL into a 500-mL refluxing flask. For samples with a COD of >900 mg O_2/L, use a smaller portion diluted to 50.00 mL. Add 1 g $HgSO_4$, several glass beads, and very slowly add 5.0 mL sulfuric acid reagent, with mixing to dissolve $HgSO_4$. Cool while mixing to avoid possible loss of volatile materials. Add 25.00 mL $0.04167M$ $K_2Cr_2O_7$ solution and mix. Attach flask to condenser and turn on cooling water. Add remaining sulfuric acid reagent (70 mL) through open end of condenser. Continue swirling and mixing while adding sulfuric acid reagent. CAUTION: *Mix reflux mixture thoroughly before applying heat to prevent local heating of flask bottom and a possible blowout of flask contents.*

Cover open end of condenser with a small beaker to prevent foreign material from entering refluxing mixture and reflux for 2 h. Cool and wash down condenser with distilled water. Disconnect reflux condenser and dilute mixture to about twice its volume with

distilled water. Cool to room temperature and titrate excess $K_2Cr_2O_7$ with FAS, using 0.10 to 0.15 mL (2 to 3 drops) ferroin indicator. Although the quantity of ferroin indicator is not critical, use the same volume for all titrations. Take as the end point of the titration the first sharp color change from blue-green to reddish brown that persists for 1 min or longer. Duplicate determinations should agree within 5% of their average. Samples with suspended solids or components that are slow to oxidize may require additional determinations. The blue-green may reappear. In the same manner, reflux and titrate a blank containing the reagents and a volume of distilled water equal to that of sample.

b. Alternate procedure for low-COD samples: Follow procedure of ¶ 4*a*, with two exceptions: (*i*) use standard 0.004167*M* $K_2Cr_2O_7$, and (*ii*) titrate with standardized 0.025*M* FAS. Exercise extreme care with this procedure because even a trace of organic matter on the glassware or from the atmosphere may cause gross errors. If a further increase in sensitivity is required, concentrate a larger volume of sample before digesting under reflux as follows: Add all reagents to a sample larger than 50 mL and reduce total volume to 150 mL by boiling in the refluxing flask open to the atmosphere without the condenser attached. Compute amount of $HgSO_4$ to be added (before concentration) on the basis of a weight ratio of 10:1, $HgSO_4$:Cl^-, using the amount of Cl^- present in the original volume of sample. Carry a blank reagent through the same procedure. This technique has the advantage of concentrating the sample without significant losses of easily digested volatile materials. Hard-to-digest volatile materials such as volatile acids are lost, but an improvement is gained over ordinary evaporative concentration methods. Duplicate determinations are not expected to be as precise as in 5220B.4*a*.

c. Determination of standard solution: Evaluate the technique and quality of reagents by conducting the test on a standard potassium hydrogen phthalate solution.

5. Calculation

$$\text{COD as mg } O_2/\text{L} = \frac{(A - B) \times M \times 8000}{\text{mL sample}}$$

where:

A = mL FAS used for blank,
B = mL FAS used for sample,
M = molarity of FAS, and
8000 = milliequivalent weight of oxygen × 1000 mL/L.

6. Precision and Bias

A set of synthetic samples containing potassium hydrogen phthalate and NaCl was tested by 74 laboratories. At a COD of 200 mg O_2/L in the absence of chloride, the standard deviation was ±13 mg/L (coefficient of variation, 6.5%). At COD of 160 mg O_2/L and 100 mg Cl^-/L, the standard deviation was ±14 mg/L (coefficient of variation, 10.8%).

7. Reference

1. Pitwell, L.R. 1983. Standard COD. *Chem. Brit.* 19:907.

8. Bibliography

Moore, W.A., R.C. Kroner & C.C. Ruchhoft. 1949. Dichromate reflux method for determination of oxygen consumed. *Anal. Chem.* 21: 953.

Medalia, A.I. 1951. Test for traces of organic matter in water. *Anal. Chem.* 23:1318.

Moore, W.A., F.J. Ludzack & C.C. Ruchhoft. 1951. Determination of oxygen-consumed values of organic wastes. *Anal. Chem.* 23:1297.

Dobbs, R.A. & R.T. Williams. 1963. Elimination of chloride interference in the chemical oxygen demand test. *Anal. Chem.* 35:1064.

5220 C. Closed Reflux, Titrimetric Method

1. General Discussion

a. Principle: See 5220B.1*a*.

b. Interferences and limitations: See 5220A.2. Volatile organic compounds are more completely oxidized in the closed system because of longer contact with the oxidant. Before each use inspect culture-tube caps for breaks in the TFE liner. Select culture-tube size according to block heater capacity and degree of sensitivity desired. Use the 25- × 150-mm tube for samples with low COD content because a larger volume sample can be treated.

This procedure is applicable to COD values between 40 and 400 mg/L. Obtain higher values by dilution. Alternatively, use higher concentrations of dichromate digestion solution to determine greater COD values. COD values of 100 mg/L or less can be obtained by using a more dilute dichromate digestion solution or a more dilute FAS titrant. Overall accuracy can be improved by using an FAS titrant which is less than the 0.10*M* solution specified below. Higher dichromate concentrations or reduced FAS concentrations probably require titrations to be done in a separate vessel, rather than in the digestion vessel, because of the volumes of titrant required.

2. Apparatus

a. Digestion vessels: Preferably use borosilicate culture tubes, 16- × 100-mm, 20- × 150-mm, or 25- × 150-mm, with TFE-lined screw caps. Alternatively, use borosilicate ampules, 10-mL capacity, 19- to 20-mm diam.

Digestion vessels with premixed reagents and other accessories are available from commercial suppliers. Contact supplier for specifications.*

b. Block heater or similar device to operate at 150 ± 2°C, with holes to accommodate digestion vessels. Use of culture tubes probably requires the caps to be outside the vessel to protect caps from heat. Caution: *Do not use an oven because of*

* Hach Co., Bioscience, Inc., or equivalent.

the possibility of leaking samples generating a corrosive and possibly explosive atmosphere. Also, culture tube caps may not withstand the 150°C temperature in an oven.

c. Microburet.

d. Ampule sealer: Use only a mechanical sealer to insure strong, consistent seals.

3. Reagents

a. Standard potassium dichromate digestion solution, 0.01667M: Add to about 500 mL distilled water 4.903 g $K_2Cr_2O_7$, primary standard grade, previously dried at 150°C for 2 h, 167 mL conc H_2SO_4, and 33.3 g $HgSO_4$. Dissolve, cool to room temperature, and dilute to 1000 mL.

b. Sulfuric acid reagent: See Section 5220B.3*b*.

c. Ferroin indicator solution: See Section 5220B.3*c*. Dilute this reagent by a factor of 5 (1 + 4).

d. Standard ferrous ammonium sulfate titrant (FAS), approximately 0.10M: Dissolve 39.2 g $Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$ in distilled water. Add 20 mL conc H_2SO_4, cool, and dilute to 1000 mL. Standardize solution daily against standard $K_2Cr_2O_7$ digestion solution as follows:

Pipet 5.00 mL digestion solution into a small beaker. Add 10 mL reagent water to substitute for sample. Cool to room temperature. Add 1 to 2 drops diluted ferroin indicator and titrate with FAS titrant.

$$\text{Molarity of FAS solution} = \frac{\text{Volume 0.01667}M\ K_2Cr_2O_7\text{ solution titrated, mL}}{\text{Volume FAS used in titration, mL}} \times 0.1000$$

e. Sulfamic acid: See Section 5220B.3*f*.

f. Potassium hydrogen phthalate standard: See Section 5220B.3*g*.

4. Procedure

Wash culture tubes and caps with 20% H_2SO_4 before first use to prevent contamination. Refer to Table 5220:I for proper sample and reagent volumes. Make volumetric measurements as accurate as practical; use Class A volumetric ware. The most critical volumes are of the sample and digestion solution. Use a microburet for titrations. Measure H_2SO_4 to ±0.1 mL. The use of hand-held pipettors with non-wetting (polyethylene) pipet tips is practical and adequate. Place sample in culture tube or ampule and add digestion solution. Carefully run sulfuric acid reagent down inside of vessel so an acid layer is formed under the sample-digestion solution layer. Tightly cap tubes or seal ampules, and invert each several times to mix completely. CAUTION: *Wear face shield and protect hands from heat produced when contents of vessels are mixed. Mix thoroughly before applying heat to prevent local heating of vessel bottom and possible explosive reaction.*

Place tubes or ampules in block digester preheated to 150°C and reflux for 2 h behind a protective shield. CAUTION: *These sealed vessels may be under pressure from gases generated during digestion. Wear face and hand protection when handling. If sulfuric acid is omitted or reduced in concentration, very high and dangerous pressures will be generated at 150°C.* Cool to room temperature and place vessels in test tube rack. Some mercuric sulfate may precipitate out but this will not affect the analysis. Remove culture tube caps and add small TFE-covered magnetic stirring bar. If ampules are used, transfer contents to a larger container for titrating. Add 0.05 to 0.10 mL (1 to 2 drops) ferroin indicator and stir rapidly on magnetic stirrer while titrating with standardized 0.10*M* FAS. The end point is a sharp color change from blue-green to reddish brown, although the blue-green may reappear within minutes. In the same manner reflux and titrate a blank containing the reagents and a volume of distilled water equal to that of the sample.

TABLE 5220:I. SAMPLE AND REAGENT QUANTITIES FOR VARIOUS DIGESTION VESSELS

Digestion Vessel	Sample mL	Digestion Solution mL	Sulfuric Acid Reagent mL	Total Final Volume mL
Culture tubes:				
16 × 100 mm	2.50	1.50	3.5	7.5
20 × 150 mm	5.00	3.00	7.0	15.0
25 × 150 mm	10.00	6.00	14.0	30.0
Standard 10-mL ampules	2.50	1.50	3.5	7.5

5. Calculation

$$\text{COD as mg } O_2\text{/L} = \frac{(A-B) \times M \times 8000}{\text{mL sample}}$$

where:

A = mL FAS used for blank,
B = mL FAS used for sample,
M = molarity of FAS, and
8000 = milliequivalent weight of oxygen × 1000 mL/L.

Preferably analyze samples in duplicate because of small sample size. Samples that are inhomogeneous may require multiple determinations for accurate analysis. Results should agree within ±5% of their average unless the condition of the sample dictates otherwise.

6. Precision and Bias

Sixty synthetic samples containing potassium hydrogen phthalate and NaCl were tested by six laboratories. At an average COD of 195 mg O_2/L in the absence of chloride, the standard deviation was ±11 mg O_2/L (coefficient of variation, 5.6%). At an average COD of 208 mg O_2/L and 100 mg Cl^-/L, the standard deviation was ±10 mg O_2/L (coefficient of variation, 4.8%).

5220 D. Closed Reflux, Colorimetric Method

1. General Discussion

a. Principle: See Section 5220B.1*a*. When a sample is digested, the dichromate ion oxidizes COD material in the sample. This results in the change of chromium from the hexavalent (VI) state to the trivalent (III) state. Both of these chromium species are colored and absorb in the visible region of the spectrum. The dichromate ion ($Cr_2O_7^{2-}$) absorbs strongly in the 400-nm region, where the chromic ion (Cr^{3+}) absorption is much less. The chromic ion absorbs strongly in the 600-nm region, where the dichromate has nearly zero absorption. In 9*M* sulfuric acid solution, the approximate molar extinction coefficients for these chromium species are as follows: Cr^{3+} — 50 L/mole cm at 604 nm; $Cr_2O_7^{2-}$ — 380 L/mole cm at 444 nm; Cr^{3+} — 25 L/mole cm at 426 nm. The Cr^{3+} ion has a minimum in the region of 400 nm. Thus a working absorption maximum is at 420 nm.

For COD values between 100 and 900 mg/L, increase in Cr^{3+} in the 600-nm region is determined. Higher values can be obtained by sample dilution. COD values of 90 mg/L or less can be determined by following the decrease in $Cr_2O_7^{2-}$ at 420 nm. The corresponding generation of Cr^{3+} gives a small absorption increase at 420 nm, but this is compensated for in the calibration procedure.

b. Interferences and limitations: See Section 5220C.1*b*.

For this procedure to be applicable, all visible light-absorbing interferents must be absent or be compensated for. This includes insoluble suspended matter as well as colored components. If either type of interference occurs, the test is not necessarily lost because COD can be determined titrimetrically as in 5220C.

2. Apparatus

a. See Section 5220C.2. Ensure that reaction vessels are of optical quality. Other types of absorption cells with varying path lengths may be used. Use the extinction coefficients of the ions of interest for this approach.

b. Spectrophotometer, for use at 600 nm and/or 420 nm with access opening adapter for ampule or 16-, 20-, or 25-mm tubes. Verify that the instrument operates in the region of 420 nm and 600 nm. Values slightly different from these may be found, depending on the spectral bandpass of the instrument.

3. Reagents

a. Digestion solution, high range: Add to about 500 mL distilled water 10.216 g $K_2Cr_2O_7$, primary standard grade, previously dried at 150°C for 2 h, 167 mL conc H_2SO_4, and 33.3 g $HgSO_4$. Dissolve, cool to room temperature, and dilute to 1000 mL.

b. Digestion solution, low range: Prepare as in 3*a*, but use only 1.022 g potassium dichromate.

c. Sulfuric acid reagent: See Section 5220B.3*b*.

d. Sulfamic acid: See Section 5220B.3*f*.

e. Potassium hydrogen phthalate standard: See Section 5220B.3*g*.

4. Procedure

a. Treatment of samples: Measure suitable volume of sample and reagents into tube or ampule as indicated in Table 5220:I. Prepare, digest, and cool samples, blank, and one or more standards as directed in Section 5220C.4. *Note the safety precautions.* It is critical that the volume of each component be known and that the total volume be the same for each reaction vessel. If volumetric control is difficult, transfer digested sample, dilute to a known volume, and read. Premixed reagents in digestion tubes are available commercially.

b. Measurement of dichromate reduction: Cool sample to room temperature slowly to avoid precipitate formation. Once samples are cooled, vent, if necessary, to relieve any pressure generated during digestion. Mix contents of reaction vessels to combine condensed water and dislodge insoluble matter. Let suspended matter settle and ensure that optical path is clear. Measure absorption of each sample blank and standard at selected wavelength (420 nm or 600 nm). At 600 nm, use an undigested blank as reference solution. Analyze a digested blank to confirm good analytical reagents and to determine the blank COD; subtract blank COD from sample COD. Alternately, use digested blank as the reference solution once it is established that the blank has a low COD.

At 420 nm, use reagent water as a reference solution. Measure all samples, blanks, and standards against this solution. The absorption measurement of an undigested blank containing dichromate, with reagent water replacing sample, will give initial dichromate absorption. Any digested sample, blank, or standard that has a COD value will give lower absorbance because of the decrease in dichromate ion. Analyze a digested blank with reagent water replacing sample to ensure reagent quality and to determine the reagents' contribution to the decrease in absorbance during a given digestion. The difference between absorbances of a given digested sample and the digested blank is a measure of the sample COD. When standards are run, plot differences of digested blank absorbance and digested standard absorbance versus COD values for each standard.

c. Preparation of calibration curve: Prepare at least five standards from potassium hydrogen phthalate solution with COD equivalents to cover each concentration range. Make up to volume with reagent water; use same reagent volumes, tube, or ampule size, and digestion procedure as for samples. Prepare calibration curve for each new lot of tubes or ampules or when standards prepared in ¶ 4*a* differ by ≥5% from calibration curve. Curves should be linear. However, some nonlinearity may occur, depending on instrument used and overall accuracy needed.

5. Calculation

If samples, standards, and blanks are run under same conditions of volume and optical path length, calculate COD as follows:

$$\text{COD as mg } O_2/\text{L} = \frac{\text{mg } O_2 \text{ in final volume} \times 1000}{\text{mL sample}}$$

Preferably analyze samples in duplicate because of small sample size. Samples that are inhomogeneous may require multiple determinations for accurate analysis. These should not differ from their average by more than ±5% for the high-level COD test unless the condition of the sample dictates otherwise.

In the low-level procedure, results below 25 mg/L may tend to be qualitative rather than quantitative.

6. Precision and Bias

Forty-eight synthetic samples containing potassium hydrogen phthalate and NaCl were tested by five laboratories. At an average COD of 193 mg O_2/L in the absence of chloride, the standard deviation was ±17 mg O_2/L (coefficient of variation 8.7%). At an average COD of 212 mg O_2/L and 100 mg Cl^-/L, the standard deviation was ±20 mg O_2/L (coefficient of variation, 9.6%). Additional QA/QC data for both high- and low-level procedures may be found elsewhere.[1]

7. Reference

1. American Society for Testing and Materials. 1995. Standard test methods for chemical oxygen demand (dichromate oxygen demand) of water. D1252-95, ASTM Annual Book of Standards. American Soc. Testing & Materials, Philadelphia, Pa.

8. Bibliography

Jirka, A.M. & M.J. Carter. 1975. Micro semi-automated analysis of surface and wastewaters for chemical oxygen demand. *Anal. Chem.* 47:1397.

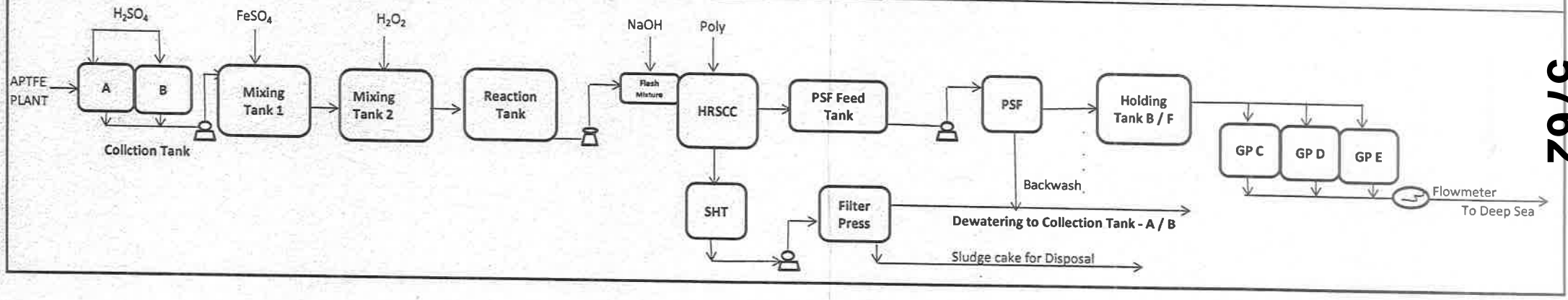
Himebaugh, R.R. & M.J. Smith. 1979. Semi-micro tube method for chemical oxygen demand. *Anal. Chem.* 51:1085.

Annexure :- III

GUJARAT FLUOROCHEMICALS LTD., DAHEJ

STREAM 1 PFD : 100 KLD

Doc. No.		UTILITY/ETP/F/01
Date:		01-04-2022
Revision No.	3.0	Page No. 1 of 1
Date:		



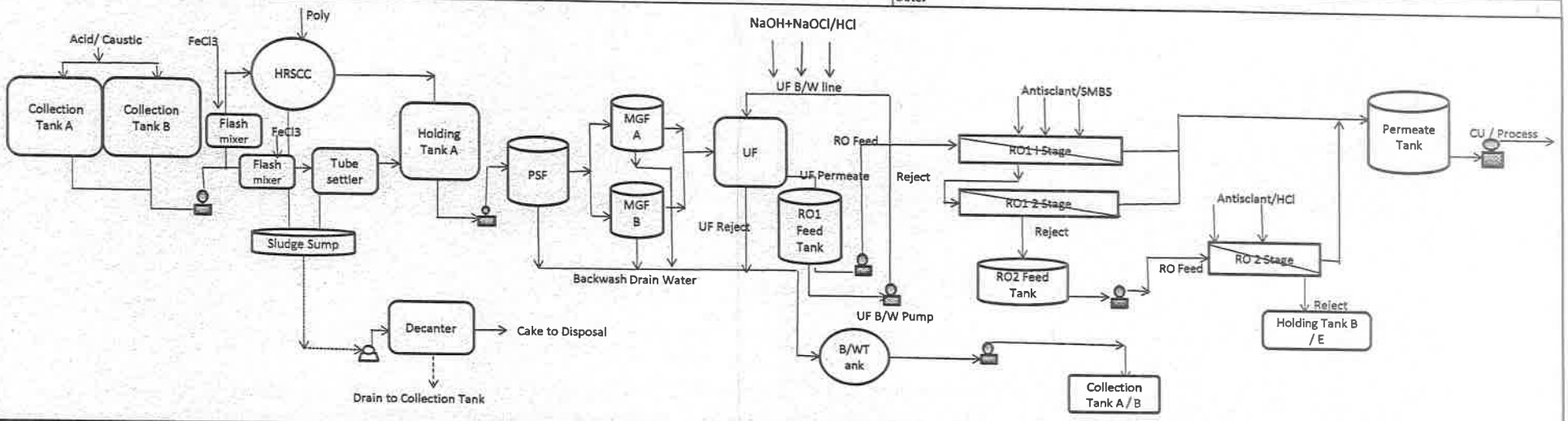
5762

GUJARAT FLUOROCHEMICALS LTD., DAHEJ

STREAM 2 PFD - 2400 KLD

Doc. No.			UTILITY/ETP/F/01
Date:			01-04-2022
Revision No.	3.0	Page No. 1	1 of 1
Date:			

CMS-1 REFF PLANT
CMS-2 REFF PLANT
POWER PLANT BLOW DOWN
TFE-2 UTILITY
TFE-3 UTILITY
DI DPTFE/DI WATER PLANT
DI PTFE DI PLANT
DI6 PLANT
FKM/PVDF/S&A PLANT
COMMON UTILITY
H2 BOILER PLANT
H2 BOTTLING PLANT
S-PTFE PLANT
FLAKER PLANT COND.
A&H UTILITY
S-PTFE UTILITY

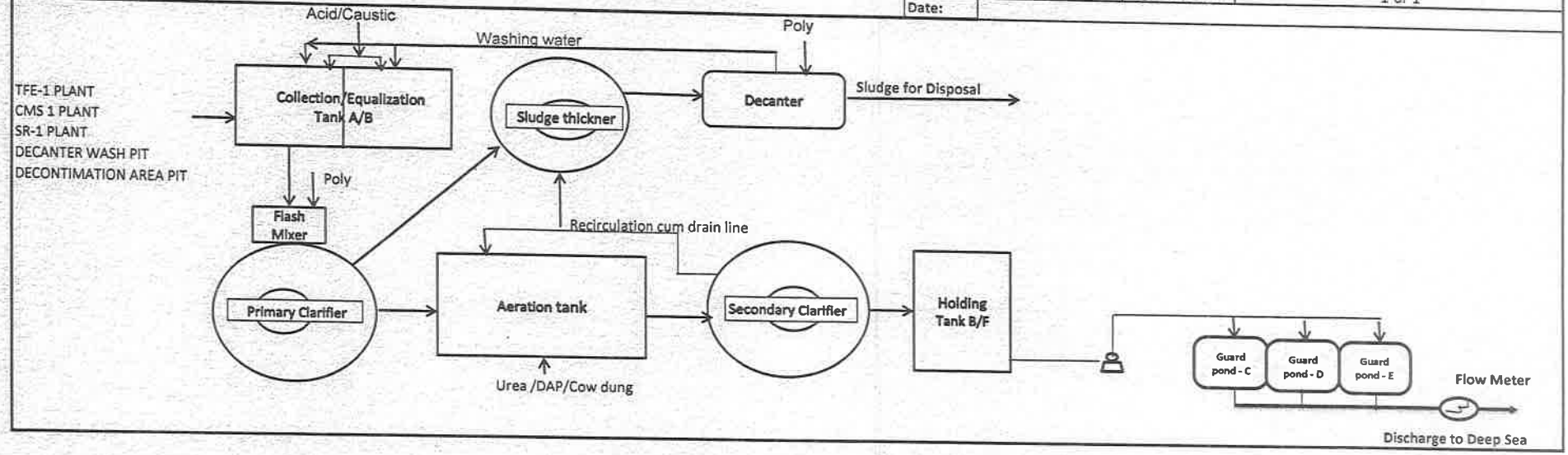


5763

GUJARAT FLUOROCHEMICALS LTD., DAHEJ

STREAM 3 PFD - 350 KLD

Doc. No.			UTILITY/ETP/F/01
Date:			01-04-2022
Revision No.	3.0	Page No. 1 of 1	1 of 1
Date:			

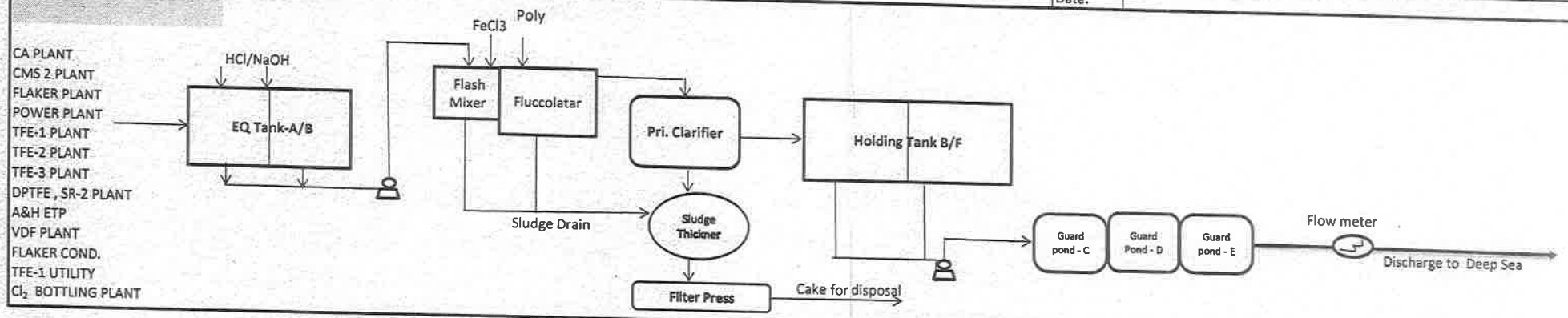


5764

GUJARAT FLUOROCHEMICALS LTD., DAHEJ

Stream 4 PFD - 765 KLD

Doc. No.		UTILITY/ETP/F/01
Date:		01-04-2022
Revision No.	3.0	Page No. 1 of 1
Date:		

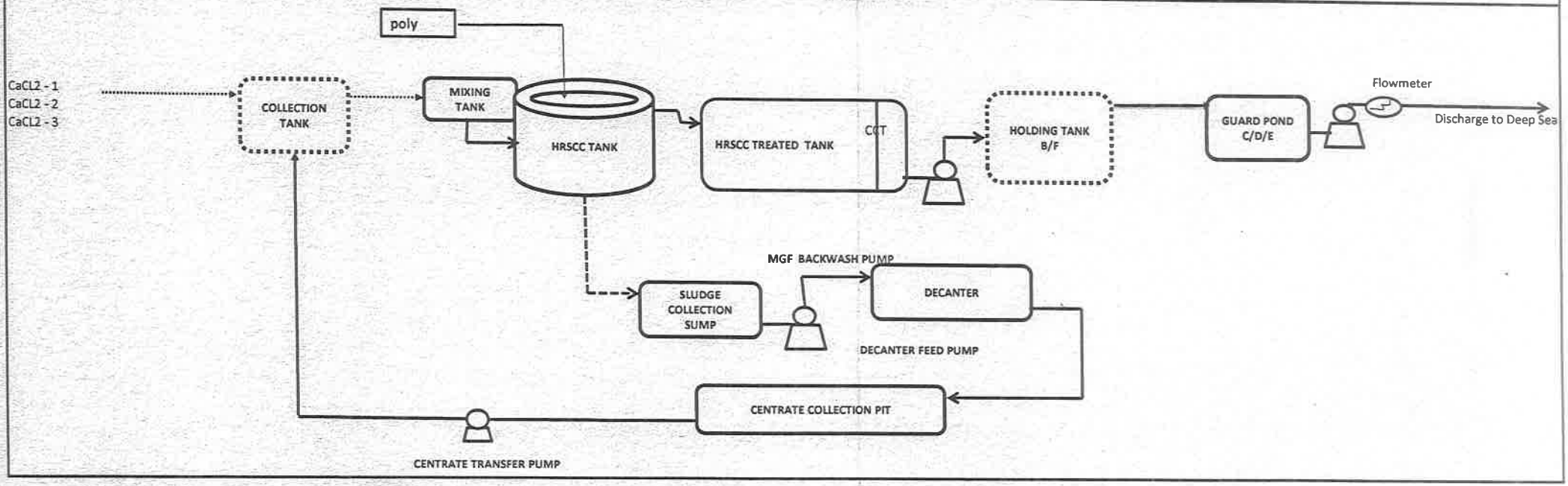


5765

GUJARAT FLUOROCHEMICALS LTD., DAHEJ

STREAM 5 PFD - 985 KLD

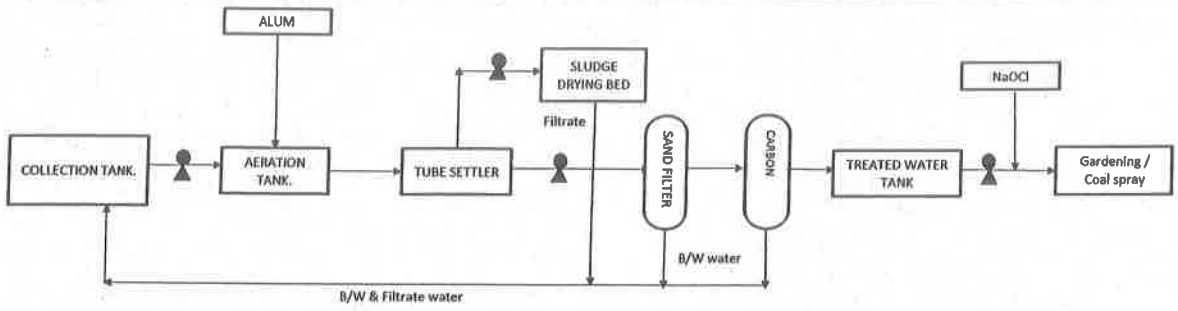
Doc. No.			UTILITY/ETP/F/01
Date:			01-04-2022
Revision No.	3.0	Page No. 1 of 1	
Date:			



5766

GUJARAT FLUOROCHEMICALS LTD., DAHEJ
Stream 6 PFD - 552 KLD
Doc. No.
UTILITY/ETP/F/01
Date:
01-04-2022
Revision No.
3.0
Page No.
1 of 1
Date:
1 of 1
R 8/9 PLANT
AQUEOUS PLANT
PTFE PLANT PIT C
PFA/FEP/New Polymer PLANT
MICRO POWDER
COLLECTION TANK A
COLLECTION TANK B
H_2SO_4
$FeSO_4$
Mixing Tank 1
H_2O_2
Mixing Tank 2
Reaction Tank
Poly / NaOH
HRSCC
HRSCC Treated Water
PSF
Holding Tank B/F
Guard Pond C
Guard Pond D
Guard Pond E
Flow Meter
Discharge to Deep Sea
Sludge collection Sump
Filter Press
Filtrate
Sludge cake for Disposal

GUJARAT FLUOROCHEMICALS LTD., DAHEJ			
STP PFD - 200 KLD	Doc. No.		UTILITY/ETPF/01
	Date:		01-04-2022
	Revision No.	3.0	Page No. 1 of 1
	Date:		



Annexure : IV

Annexure-IV Energy meters reading for ETP						
DATE	OLD ETP READING(KWH)	OLD ETP CONSUMPTION(KWH)	NEW ETP-1 READING(MWH)	NEW ETP-1 CONSUMPTION(KWH)	NEW ETP-2 READING(KWH)	NEW ETP-2 CONSUMPTION(KWH)
28-02-2022	88580.165	254.237	260275.78	1177.46	58302.131	657.961
01-03-2022	88834.402	426.924	261453.24	1189.64	58960.092	708.517
02-03-2022	89261.326	500.588	262642.88	1088.76	59668.609	696.886
03-03-2022	89761.914	543.861	263731.64	1147.88	60365.495	670.28
04-03-2022	90305.775	492.194	264879.52	1158.82	61035.775	750.736
05-03-2022	90797.969	403.811	266038.34	1227.72	61786.511	682.187
06-03-2022	91201.78	423.87	267266.06	1157.48	62468.698	680.329
07-03-2022	91625.65	403.742	268423.54	1151.9	63149.027	756.087
08-03-2022	92029.392	508.675	269575.44	1161.42	63905.114	761.396
09-03-2022	92538.067	524.88	270736.86	1216.26	64666.51	834.277
10-03-2022	93062.947	1109.726	271953.12	1202.12	65500.787	677.188
11-03-2022	94172.673	221.822	273155.24	1135.06	66177.975	537.935
12-03-2022	94394.495	312.385	274290.3	1280.86	66715.91	699.882
13-03-2022	94706.88	2258.093	275571.16	1194.56	67415.792	676.074
14-03-2022	96964.973	2122.132	276765.72	1153.42	68091.866	674.584
15-03-2022	99087.105	2146.895	277919.14	1105.78	68766.45	676.074
16-03-2022	101234	510	279024.92	1271.02	69442.524	-68883.445
17-03-2022	101744	4141	280295.94	1208.82	559.079	672
18-03-2022	105885	2289	281504.76	1146.58	1231.079	979.099
19-03-2022	108174	1557	282651.34	1198.04	2210.178	918.9004
20-03-2022	109731	2901	283849.38	1206.11	3129.0784	761.9926
21-03-2022	112632	2885	285055.49	1191.53	3891.071	852.542
22-03-2022	115517	2858	286247.02	1187.34	4743.613	861.407
23-03-2022	118375	2718	287434.36	1300	5605.02	836.865
24-03-2022	121093	2723	288734.36	1202.56	6441.885	818.99
25-03-2022	123816	1983	289936.92	1191.66	7260.875	776.39
26-03-2022	125799	2793	291128.58	1206.6	8037.265	855.658
27-03-2022	128592	972	292335.18	1045.14	8892.923	700.08

5770

Annexure-V

Recycling Solutions Private Limited [66336]

Manifest No: 1535986
02/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Pre- processing
Facility Details	Recycling Solutions Private Limited [66336]		
Contact Details	9328261613 jvm@rs-pl.com	GPS Coordinates	Lat :21.5626 Long:73.0006
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, Taluka :ANK Distict:ANK Pin no:394116		

Waste Details					
Waste Details	I~36~36.1~Any process or distillation residue				
Waste Intended for	Preprocessing	Total Qty	4.620MT	Consistency	Solid

Transporter Details			
Name	SAI WASTE MANAGEMENT CO.	Contact Details	9327417479 Shastri.jyotiprakash@gobolt.co.in
Address	Plot No.208/2 Panoli GIDC,ANKLESHWAR District :Bharuch Taluka :Bharuch		

Vehicle Details					
Vehicle no	GJ16AU8601	GPS Enabled	Yes	Type of Vehicle	Tempo
Driver name	Shiv Pal	Driver Contact No	8200944067		

Waste Transportation Details					
Vehicle Depart.	02/02/2022 11:05AM	Number of Drums	80	Loose Waste	0.000
Remarks	Process waste		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and stamp of sender: Gujarat Fluorochemicals Ltd. Plot No. 12/A GIDC Dahej Industrial State Tal Vagra Distt Bharuch-392 130

Date: 02/02/2022

Signature: DAHEJ

Transporter's Acknowledgement of Receipt of waste

Stamp:

Date: 02/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp:

Date: 2/2/22

Signature:

5771

Recycling Solutions Private Limited [66336]

Manifest No: 1538562 04/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Pre- processing
Facility Details	Recycling Solutions Private Limited [66336]		
Contact Details	9328261613 jvm@rs-pl.com	GPS Coordinates	Lat :21.5626 Long:73.0006
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, Taluka :ANK Distict:ANK Pin no:394116		

Waste Details					
Waste Details	I~36~36.1~Any process or distillation residue				
Waste Intended for	Preprocessing	Total Qty	9.450MT	Consistency	Solid

Transporter Details			
Name	RSPL	Contact Details	7069028336 marketing@rs.pl.com
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, City :Pan,Bharuch District :Bharuch Taluka :Bharuch		

Vehicle Details					
Vehicle no	GJ26T8617	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	OM PRAKASH	Driver Contact No	9724930165		

Waste Transportation Details					
Vehicle Depart.	04/02/2022 1:30PM	Number of Drums	0	Loose Waste	0.000
Remarks	Spent Resin		No of bags	9	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and Stamp of sender: Gujarat Fluorochemicals Ltd. 12/A, GIDC Dahej Industrial State Tal Vagra Distt Bharuch-392 130

Date: 04/02/2022

Signature:

Transporter's Acknowledgement of Receipt of waste

Stamp:

Date: 04/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp:

Date:

Signature:

5772

Recycling Solutions Private Limited [66336]

Manifest No: 1544710
10/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details

Sender Name	**Gujarat Fluorochemicals Limited [15136]**		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	**GPS Coordinates**	**Lat :**21.4100 **Long :**72.3500

Receiver's Details

State	Gujarat	**Type of Facility**	Pre- processing
Facility Details	Recycling Solutions Private Limited [66336]		
Contact Details	9328261613 jvm@rs-pl.com	**GPS Coordinates**	**Lat :**21.5626 **Long:**73.0006
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, Taluka :ANK Distict:ANK Pin no:394116		

Waste Details

Waste Details	1~36~36.1~Any process or distillation residue				
Waste Intended for	Preprocessing	**Total Qty**	4.000MT	**Consistency**	Solid

Transporter Details

Name	RSPL	**Contact Details**	9327417479 sashtri.jyotiprakash@gobolt.co.in
Address	Plot No.223.panoli,panoli gidc District :Bharuch Taluka :Bharuch		

Vehicle Details

Vehicle no	GJ16Z6330	**GPS Enabled**	Yes	**Type of Vehicle**	Truck
Driver name	HARIKESH YADAV	**Driver Contact No**	7388810361		

Waste Transportation Details

Vehicle Depart.	10/02/2022 11:15AM	**Number of Drums**	80	**Loose Waste**	0.000
Remarks	Process waste		**No of bags**	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and stamp of sender: Gujarat Fluorochemicals Ltd. 12/A GIDC Dahej Industrial State Tal Vagra Distt Bharuch-392 130

Date: 10/02/2022

Signature: Gujarat Fluorochemicals Ltd. DAHEJ

Transporter's Acknowledgement of Receipt of waste

Stamp:

Date: 10/02/2022

Signature: RECYCLING SOLUTIONS PVT LTD UNIT-2

Receiver's Certification of Receipt of Hazardous waste

Stamp:

Date: 10/2/22

Signature: RECYCLING SOLUTIONS PVT LTD UNIT-2

5773

Recycling Solutions Private Limited [66336]

Manifest No: 1540012 05/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Pre- processing
Facility Details	Recycling Solutions Private Limited [66336]		
Contact Details	9328261613 jvm@rs-pl.com	GPS Coordinates	Lat :21.5626 Long:73.0006
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, Taluka :ANK Distict:ANK Pin no:394116		

Waste Details					
Waste Details	I~36~36.1~Any process or distillation residue				
Waste Intended for	Preprocessing	Total Qty	6.630MT	Consistency	Solid

Transporter Details			
Name	RSPL	Contact Details	9327417479 sashtri.jyotiprakash@gobolt.co.in
Address	Plot No.223.panoli,panoli gidc District :Bharuch Taluka :Bharuch		

Vehicle Details					
Vehicle no	GJ16Z6330	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	HARIKESH YADAV	Driver Contact No	7388810361		

Waste Transportation Details					
Vehicle Depart.	05/02/2022 4:50PM	Number of Drums	0	Loose Waste	0.000
Remarks	Process waste		No of bags	10	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and stamp of sender: Gujarat Fluorochemicals Ltd. 12/A GIDC Dahej Industrial Estate Taluka VAGRA Distt Bharuch-392130

Date: 05/02/2022 **Signature:**

Transporter's Acknowledgement of Receipt of waste

Stamp: **Date:** 05/02/2022 **Signature:** Harikesh YADAV

Receiver's Certification of Receipt of Hazardous waste

Stamp: **Date:** 5/2/22 **Signature:**

5774

Recycling Solutions Private Limited [66336]

Manifest No: 1537137 03/02/2022 — **Copy 6**

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Pre- processing
Facility Details	Recycling Solutions Private Limited [66336]		
Contact Details	9328261613 jvm@rs-pl.com	GPS Coordinates	Lat :21.5626 Long:73.0006
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, Taluka :ANK Distict:ANK Pin no:394116		

Waste Details					
Waste Details	I~36~36.1~Any process or distillation residue				
Waste Intended for	Preprocessing	Total Qty	7.940MT	Consistency	Solid

Transporter Details			
Name	Murlidhar Services	Contact Details	9328261613 jvm@rs-pl.com
Address	Plot No.208/2,GIDC Estate, ,District :Ankleshwar District :Ankleshwar Taluka :Ankleshwar		

Vehicle Details					
Vehicle no	GJ01DX7304	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	RAJU BHAI	Driver Contact No	8000941622		

Waste Transportation Details					
Vehicle Depart.	03/02/2022 11:05AM	Number of Drums	0	Loose Waste	0.000
Remarks	Process waste		No of bags	10	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and Stamp of sender: Gujarat Fluorochemicals Ltd. Dahej Industrial State Tal Vagra Distt Bharuch-392 130

Date: 03/02/2022 **Signature:** HEJ

Transporter's Acknowledgement of Receipt of waste

Stamp: **Date:** 03/02/2022 **Signature:**

Receiver's Certification of Receipt of Hazardous waste

Stamp: **Date:** 3/2/22 **Signature:**

5775

Recycling Solutions Private Limited [66336]

Manifest No: 1537735 03/02/2022 — **Copy 6**

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Pre- processing
Facility Details	Recycling Solutions Private Limited [66336]		
Contact Details	9328261613 jvm@rs-pl.com	GPS Coordinates	Lat :21.5626 Long:73.0006
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, Taluka :ANK Distict:ANK Pin no:394116		

Waste Details					
Waste Details	I~36~36.1~Any process or distillation residue				
Waste Intended for	Preprocessing	Total Qty	8.570MT	Consistency	Solid

Transporter Details			
Name	RSPL	Contact Details	9328261613 pankaj.sinha@rs-pl.com
Address	Plot No.208/2 GIDC PANOLI.,RSPL-Panoli District :Ankleshwar Taluka :Ankleshwar		

Vehicle Details					
Vehicle no	GJ16Z4216	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	sailender kumar	Driver Contact No	7778950526		

Waste Transportation Details					
Vehicle Depart.	03/02/2022 4:05PM	Number of Drums	0	Loose Waste	0.000
Remarks	Spent Carbon		No of bags	10	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and stamp of sender: Gujarat Fluorochemicals Ltd. 12/A GIDC Dahej Industrial Estate Tal Vagra Distt Bharuch-392 130 **Date:** 03/02/2022 **Signature:** Fluorochemicals Ltd. DAHEJ

Transporter's Acknowledgement of Receipt of waste

Stamp: **Date:** 03/02/2022 **Signature:**

Receiver's Certification of Receipt of Hazardous waste

Stamp: **Date:** 3/2/22 **Signature:**

5776

BEIL Infrastructure Ltd [40137]

Manifest No: 1543809
09/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC , DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details					
Waste Details	Others-1~S~S1~Insulation waste				
Waste Intended for	LandFill	Total Qty	3.240MT	Consistency	Solid

Transporter Details			
Name	MAA CHAMUNDA EARTH MOVERS	Contact Details	8866029350 aagohil1411@gmail.com
Address	NEAR BARBORI MATA TEMPLE,Dahej District :Bharuch Taluka :Vagra		

Vehicle Details					
Vehicle no	GJ22T0851	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	Mansa ram	Driver Contact No	6386513104		

Waste Transportation Details					
Vehicle Depart.	09/02/2022 1:20PM	Number of Drums	0	Loose Waste	3.240
Remarks	Insulation waste		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and Stamp of sender: Gujarat Fluorochemicals Ltd. 12/A Dahej Industrial State Tal Vagra Distt Bharuch-392 130

Date: 09/02/2022

Signature: Gujarat Fluorochemicals Ltd. HEJ

Transporter's Acknowledgement of Receipt of waste

Stamp: Maa Chamunda Earth Movers Barbori Mata Temple, Dahej, Vagra, Dist.Bharuch Mob:- 8866029350 / 9978919279

Date: 09/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp: BEIL INFRASTRUCTURE LIMITED DAHEJ

Date: 09 FEB 2022

Signature:

5777

BEIL Infrastructure Ltd [40137]

Manifest No: 1536463
02/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC , DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details					
Waste Details	I~35~35.3~Chemical sludge from waste water treatment				
Waste Intended for	LandFill	Total Qty	9.460MT	Consistency	Solid

Transporter Details			
Name	MAA CHAMUNDA EARTH MOVERS	Contact Details	9978910279 aagohil1411@gmail.com
Address	NEAR BARBORI MATA TEMPLE,GIDC District :Bharuch Taluka :Bharuch		

Vehicle Details					
Vehicle no	GJ17UU1797	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	Priyaranjan	Driver Contact No	8910556517		

Waste Transportation Details					
Vehicle Depart.	02/02/2022 3:00PM	Number of Drums	0	Loose Waste	9.460
Remarks	ETP Sludge		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and stamp of sender: Gujarat Fluorochemicals Ltd. Dahej Industrial State Tal Vagra Distt Bharuch-392 130

Date: 02/02/2022

Signature:

Gujarat Fluorochemicals Ltd. DAHEJ

Transporter's Acknowledgement of Receipt of waste

Stamp: Maa Chamunda Earth Movers Nr. Barbori Mata Temple, Dahej, Vagra, Dist.Bharuch Mob.: 8866029350 / 9978910279

Date: 02/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp:

RECEIVED 03 FEB 2022

Date:

Signature:

INFRASTRUCTURE DAHEJ

N I C

5778

BEIL Infrastructure Ltd [40137]

Manifest No: 1538950 04/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC , DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details					
Waste Details	Others-1~S~S1~Insulation waste				
Waste Intended for	LandFill	Total Qty	2.280MT	Consistency	Solid

Transporter Details			
Name	MAA CHAMUNDA EARTH MOVERS	Contact Details	8866029350 aagohil1411@gmail.com
Address	NEAR BARBORI MATA TEMPLE,Dahej District :Bharuch Taluka :Vagra		

Vehicle Details					
Vehicle no	GJ22T0851	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	Mansa ram	Driver Contact No	6386513104		

Waste Transportation Details					
Vehicle Depart.	04/02/2022 5:15PM	Number of Drums	0	Loose Waste	2.280
Remarks	Filter Cloth		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and Stamp of sender: Gujarat Fluorochemicals Ltd. 12/A GIDC Dahej Industrial State Tal Vagra Distt Bharuch-392 130

Date: 04/02/2022 **Signature:** Gujarat Fluorochemicals Ltd. DAHEJ

Transporter's Acknowledgement of Receipt of waste

Stamp: Maa Chamunda Earth Movers Nr. Barbori Mata Temple, Dahej, Vagra, Dist.Bharuch Mob.: 8866029350 / 9979010279

Date: 04/02/2022 **Signature:**

Receiver's Certification of Receipt of Hazardous waste

Stamp: BEIL INFRASTRUCTURE LIMITED DAHEJ

Date: RECEIVED 05 FEB 2022

Signature:

5779

BEIL Infrastructure Ltd [40137]

Manifest No: 1541325
07/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC , DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details					
Waste Details	Others-1~S~S1~Insulation waste				
Waste Intended for	LandFill	Total Qty	2.560MT	Consistency	Solid

Transporter Details			
Name	MAA CHAMUNDA EARTH MOVERS	Contact Details	9978910279 aagohil1411@gmail.com
Address	NEAR BARBORI MATA TEMPLE,GIDC District :Bharuch Taluka :Bharuch		

Vehicle Details					
Vehicle no	GJ17UU1797	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	Priyaranjan	Driver Contact No	8910556517		

Waste Transportation Details					
Vehicle Depart.	07/02/2022 12:40PM	Number of Drums	0	Loose Waste	2.560
Remarks	Insulation waste		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Gujarat Fluorochemicals Ltd,
12/A, GIDC Dahej Industrial Estate
Tal Vagra Distt Bharuch-392 130

Name and stamp of sender

Date: 07/02/2022

Signature:

Gujarat Fluorochemicals Ltd. DAHEJ

Transporter's Acknowledgement of Receipt of waste

Maa Chamunda Earth Movers
Stamp: Barbori Mata Temple,
Dahej, Vagra, Dist.Bharuch
Mob.: 8866029350 / 9978910279

Date: 07/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp:

Date:

Signature:

BEIL INFRASTRUCTURE LIMITED DAHEJ

RECEIVED 07 FEB 2022

N I C

5780

BEIL Infrastructure Ltd [40137]

Manifest No: 1544867 10/02/2022 **Copy 6**

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC , DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details					
Waste Details	Others-1~S~S1~Insulation waste				
Waste Intended for	LandFill	Total Qty	2.120MT	Consistency	Solid

Transporter Details			
Name	MAA CHAMUNDA EARTH MOVERS	Contact Details	9978910279 aagohil1411@gmail.com
Address	NEAR BARBORI MATA TEMPLE,GIDC District :Bharuch Taluka :Bharuch		

Vehicle Details					
Vehicle no	GJ17UU1797	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	Priyaranjan	Driver Contact No	8910556517		

Waste Transportation Details					
Vehicle Depart.	10/02/2022 12:25PM	Number of Drums	0	Loose Waste	2.120
Remarks	Insulation waste		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and stamp of sender: Gujarat Fluorochemicals Ltd. Plot No. 12/A GIDC Dahej Industrial State Tal Vagra Distt Bharuch-392 130

Date: 10/02/2022

Signature: GFL

Transporter's Acknowledgement of Receipt of waste

Stamp: Maa Chamunda Earth Movers Nr. Barbori Mata Temple, Dahej, Vagra, Dist.Bharuch Mob.: 8866029350 / 9978910279

Date: 10/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp: BEIL INFRASTRUCTURE LIMITED DAHEJ

RECEIVED Date: 9 FEB 2022

Signature:

5781

BEIL Infrastructure Ltd [40137]

Manifest No: 1544899
10/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC , DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details					
Waste Details	Others-1~S~S1~Insulation waste				
Waste Intended for	LandFill	Total Qty	1.740MT	Consistency	Solid

Transporter Details			
Name	Maa Chamunda Earth Movers	Contact Details	9978910279 aagohil1411@gmail.com
Address	Nr. Babari Mata Temple,Dahej District :Bharuch Taluka :Vagra		

Vehicle Details					
Vehicle no	GJ16W1270	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	CHUNU SINGH	Driver Contact No	8406057356		

Waste Transportation Details					
Vehicle Depart.	10/02/2022 12:45PM	Number of Drums	0	Loose Waste	1.740
Remarks	Insulation waste		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name And Stamp of sender: Gujarat Fluorochemicals Ltd. 12/A, Dahej Industrial State Tal Vagra Distt Bharuch-392 130

Date: 10/02/2022

Signature:

Transporter's Acknowledgement of Receipt of waste

Stamp: Maa Chamunda Earth Movers Nr. Babari Mata Temple Dahej, Vagra, Dist.Bharuch

Date: 10/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

1.790 MT

Stamp:

Date: 10 FEB 2022

Signature:

BEIL INFRASTRUCTURE LIMITED DAHEJ

NIC

Annexure : VI

COMPLIANCE REPORT WITH RESPECT TO
CONSOLIDATED CONSENT AND AUTHORIZATION
(DAHEJ-A)

NAME OF UNIT : **GUJARAT FLUOROCHEMICALS LIMITED**
LOCATION : **12/A, GIDC INDUSTRIAL ESTATE, TALUKA: VAGRA, DIST.BHARUCH-392130, GUJARAT, INDIA**

CC&A NO : **GPCB/BRCH-B/-CCA-1080(11)/ID-15136/521670 DATED 09.07.2020**

The unit has been granted Consolidated Consent and Authorization vide no. AWH-85503 dated 25-04-2017, and amended vide letter no.: GPCB/BRCH-B/-CCA-1080(11)/ID-15136/414088 dated 03/06/2017 and further amended dated 04.07.2017, 27.06.2018, and 13.09.2019.

Conditions under CCA:

<table>
<tr><th>Conditions</th><th>Status of Compliance</th></tr>
<tr><td>Condition No.1

The list of proposed products to be manufactured shall be as follows.
<table>
<tr><th>Sr. No.</th><th>Name of Products</th><th>Total after Product Mix Change (MT/Month)</th></tr>
<tr><td>1</td><td>Hepta Fluoro Propane (HFPP)</td><td>0</td></tr>
<tr><td>2</td><td>Telomer Iodine</td><td>0</td></tr>
<tr><td>3</td><td>Telomer Alcohol</td><td>0</td></tr>
<tr><td>4</td><td>Hexa Fluoro Propylene Oxide (HFPO)</td><td>0</td></tr>
<tr><td>5</td><td>Anhydrous Potassium Fluoride (APF)</td><td>0</td></tr>
<tr><td>6</td><td>Tetra Fluoroethylene Tetramer

(TFE Tetramer)</td><td>0</td></tr>
<tr><td>7</td><td>Difluoro Methane Sulfonyl Chloride (DFMSC)</td><td>0</td></tr>
<tr><td>8</td><td>1,3- Difluoro Benzene (1,3 DFB)</td><td>0</td></tr>
</table>
</td><td>The same has been amended vide order no. GPCB/BRCH-B/CCA-1080(11)/ID-15136/564217, dated 09.07.2020.</td></tr>
</table>

9	Tetra Fluoro Benzyl Alcohol (TFBA)	0
10	1,1,3 Trichloro 2,3,3-Trifluoropropane (CFO1213ya) (P-200)	0
11	Ethyl Tetra Fluoro Ethyl Ether (ETFEE)	400
12	Carbon Dioxide-Food grade gas	2267
13	Carbon Dioxide-Dry Ice	533
14	Pentafluoroethane (HFC -125)	417
15	Chloroform	10090
16	Methylene Dichloride (MDC)	10090
17	Sulphuric Acid (70%- 88%)	713
18	Hydrochloric Acid (31 % +/- 1%)	37992
19	Carbon Tetrachloride (CTC) @	1440
20	Caustic Soda (Dry Basis)	15500
21	Chlorine Dry Basis	13167
22	Hydrogen	464
23	Hydrochloric Acid (31% ± 1 %)	357
24	Sodium hypochlorite (10% chlorine)	132
25	Calcium Chloride	4750
26	Tetra Fluoro Ethylene (TFE)	300
27	Dilute HF (20 %)	1000

28	High Boiler of Chloromethane	200
29	HexaFluoro Propylene (HFP)	300
30	Tetrafluoro Dimethyl Amine (TFE DMA)	90
31	DichloroFluoromethane (HCFC-21/R-21)	230
32	Dichloropentafluoro Propane (HCFC-225)	415
	Methyl Tetra Fluoro Ethyl Ether (MTFEE)	83
34	Br Ethyle Difluoroacetate (Br EDFA)	25
35	Tri fluoromethane	21
36	1,1,3Trichlorotetrafluoropropane (HCFC 224ca)	25
37	Polytetra Fluoro Ethylene (PTFE) *	2000
38	Gypsum	12768
39	Fluoro Elastomers (FKM) *	300
	PerfluoroAlkoxy (PFA) *	200
	Polyvenylidene Fluoride (PVDF) *	250
42	Fluorinated Ethylene Propylene (FEP) *	250
43	Intermediate Vinylidene Fluoride (VDF)	84
44	Hydrofluosilicic Acid (20%)	200
45	2, 6- Dichloro-4-Trifluoro Methyl Aniline (DCTFMA)	65
46	TFMA	20
47	Iodurate	1
48	Tetra Fluoro Beta Sulfone	25

49	Tetra Fluoro Ethyl Ether (Propyl, butyl, TF Propyl)	80
50	Di Chloro Tetra Fluoroethoxy aniline	10
51	I-SAN	20
52	PCTFE	4
53	C4 to C34 Surfactant (Non-fluorinated)	10
54	R&D Products	10
Total		**117298**
55	Gas Based COGEN	54.5 MW
56	Coal Base COGEN	
57	Gas Base CCGT	37 MW
	Total	**91.5 MW**

CONDITION NO 2:SPECIAL CONDITION

a. Total Production shall not exceed 117298 MT/Month in any case.	Unit is being complied with said condition.
b. Unit shall sell out their hazardous waste to authorized end-users who is having authorization with valid CCA and rule 9 permissions on receive this waste. Unit shall make MoU with such authorized end –users and submit MoU at time of application of CCA.	Yes, unit is following.
c. All the efforts shall be made to send hazardous waste to cement industry for Co-processing first & there after it shall be disposed through other option.	**Complied.** Unit is sending their hazardous waste to cement industry for Co-processing first.
d. Unit shall follow spent solvent management guideline framed by board and shall make MoU with outside distillation units, if any. Also submit the prescribed forms as per guideline.	**Noted & Agreed.**
e. There shall not be increase in pollution load due to proposed change in product mix.	**Complied.** Unit is not increasing in any way pollution load due to proposed change in product mix.

f. There shall not be any change in plant building, Equipments & machineries to manufacture the proposed new products after change in product mix.		Yes, Unit is not doing any change in plant building, Equipments & machineries to manufacture the proposed new products after change in product mix.
g. In the case of submission of the false or misleading data, this CTE amendment will be forfeited immediately.		**Agreed with said condition.**
h. Hydrochloric acid (12% ± 1%) shall be removed from product list as unit is using it to manufacturing CaCl2 in house.		**Complied.** Unit has been removed Hydrochloric acid (12% + 1%) from product list.
i. Unit shall install scrubber with coal based utilities for desulphurization.		**Agreed with said condition.**
CONDITION NO.3:CONDITION UNDER THE WATER ACT:		
Condition No.3.1 The condition No. 4.1 for Water consumption under Water Act of the CCA Order No AWH: 85503 Issued wide latter no. GPCB/BRCH-B/CCA-1080(11)/ID-15136/414088, dated 03/06/2019 and further amended dated 04/07/2017, 27/06/2018, and 13/09/2019 is amended and shall now be read as under. a. Domestic: 52.5KL/Day (Existing 52.5 KLD+ Proposed Nil) b. Industrial: 13254.22 KL/Day(Existing 13274 KLD+ Proposed (-19.78)KLD) Total: 13306.72KL/Day (Existing 13326.5 KLD+ Proposed (-19.78) KLD)		**Complied.** Unit is not using excess water quantity as mentioned in CCA.
Condition No.3.2 The condition No.4.2 for Wastewater generation under Water Act of the CCA order No: AWH-85503, issued vide letter no. GPCB/BRCH-B/CCA-1080(11)/ID-15136/414088, dated 03/06/2019 and further amended dated 04/07/2017, 27/06/2018, and 13/09/2019 is amended and shall now be read as under. a. Domestic: 45KL/Day (Existing 45 KLD+ Proposed Nil) b. Industrial: 4411.67KL/Day (Existing 4419KLD+Proposed (-7.33)KLD) Total: 4456.67KL/Day (Existing 4464KLD+ Proposed (-7.33)KLD)		**Complied.** Unit is not generating excess wastewater quantity as mentioned in CCA.
Condition No.3.3 The condition No.4.4 for wastewater generation under Water Act of the CCA order No: AWH-85503, issued vide letter no. GPCB/BRCH-B/CCA-1080(11)/ID-15136/414088, dated 03/06/2019 and further		**Complied.** Industrial effluent along with domestic wastewater is sent to ETP for primary, Secondary and tertiary

amended dated 04/07/2017, 27/06/2018, and 13/09/2019 is amended and shall now be read as under. Is amended and shall now be read as under.

"@4411.67KL/Day of industrial effluent along with domestic wastewater (sewage) 45KL/Day shall be sent to ETP for primary, Secondary and tertiary treatment. After treatment the 1600KL/Day of RO Permeate shall be used for cooling tower, 45KLD of treated sewage for gardening and plantation. 20KLD of treated wastewater for coal dust suppression. Total 3231.67KL/Day treated wastewater shall be discharged into deep sea through GIDC drainage line."

treatment and after treatment RO permeate is using for Cooling tower, treated sewage water for gardening and plantation. Total treated waste water is discharging into deep sea through GIDC drainage line.

CONDITION NO.4 CONDITION UNDER THE AIR ACT:

Condition No.3.4

The addition No.5.1 Fuel consumption under Air Act of the CCA order No: AWH-85503 issued vide letter no. GPCB/BRCH-B/CCA-1080(11)/ID-15136/414088, dated 03/06/2019 and further amended dated 04/07/2017, 27/06/2018, and 13/09/2019 is amended and shall now be read as under. Is amended and shall now be read as under.

Sr.No	Name of fuel	Quantity
		Total
1	Imported Coal (MT/Day)	1322.94
2	Natural Gas (SCM/Day)	50000
3	LDO (KL/Day)	10

Complied.
Unit is following the norms as per CCA.

Condition No.4.2

The concentration of the following parameters in the ambient air within the premises of the industry shall not exceed the limits specified hereunder.

Sr. No	Parameters	Permissible Limit (microgram/m³)	
		Annual	24 Hours Average
1	Particulate Matter(PM_{10})	60	100
2	Particulate Matter($PM_{2.5}$)	40	60
3	Oxides of Sulphur(SO_X)	50	80
4	Oxides of Nitrogen (NO_X)	40	80

- **Annual arithmetic mean of minimum 104 measures in a year at a particular site taken twice a week 24**

Complied.

Unit has continue emission monitoring system to monitor SPM, SOx & NOx and same record is being maintained and submitted time to time at GPCB.

hourly at uniform intervals. • **24 hourly or 08 hours monitored values, as application, shall be complies with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.**		
Condition No.4.6 Unit shall operate industrial plant/air pollution control equipment very efficiently and continuous so that the gaseous emission always conforms of the standard specified in condition as above.		**Complied.** Unit is being operated industrial plant/air pollution control equipment very efficiently and continuous so that the gaseous emission always conforms of the standard specified in condition as above.
Condition No.4.7 Unit shall take adequate measure for control of Noise levels from its own sources within the premises so as to maintain ambient air quality standard is respect of noise to less than 75 db(a) during Daytime and 70dB(A) during night time. Daytime is reckoned in between 6 am and 10 pm and nighttime is reckoned 10 pm and 6 am.		**Complied.** Unit is being monitored Noise levels from its own sources within the premises so as to maintain ambient air quality standard by MOEF & CC (GOI) recognized environment laboratory.
Condition Np.4.8 All efforts shall be made to control VOC emission and odor problem, if any.		**Complied.** Unit is being monitored VOC emission and maintain the record same.
Condition No.4.9 Total control of odor nuisance from the plant premises, shall be achieved & maintained by the unit continuously.		**Complied.** Unit is being monitored workplace by MOEF & CC (GOI) recognized environment laboratory and maintain the record same.
ConditionNo.4.10 Unit shall install continuous/online monitoring system in the stack and shall transmit online data so generated simultaneously to GPCB and CPCB as well for the parameters such as PM, SO_2, NO_X, NU_3, HCl, other specific parameters etc., if applicable as per CPCB guideline.		**Complied** Unit has installed Online Continuous Emission Monitoring system & connected to CPCB server.
CONDITION NO.5: CONDITION UNDER HAZARDOUS & OTHER WASTE (MANAGEMNET & TRANSBOUNDARY MOVEMENT) RULES, 2016		
Condition No.5.1 Unit shall comply with provisions of Hazardous & other wastes (Management & Transboundary Movement)Rules-2016		**Complied** Unit is following.
Condition No.5.2 The condition No.6.2 under authorization for Hazardous & other		

wastes of the CCA order No: AWH-85503 issued vide letter no. GPCB. GPCB/BRCH-B/CCA-1080(11)/ID-15136/414088, dated 03/06/2019 and further amended dated 04/07/2017, 27/06/2018, and 13/09/2019 is amended and shall now be read as under. Is amended and shall now be read as under.

Sr. NO	Type of waste	Category and Schedule as per HW Rules	Quantity (MT/Annum)	Disposal Method
1.	Used Oil	5.1	85.4 (KL/Annum)	Collection, Storage, Transportation and Disposal at GPCB approved Registered Refiners/Recycler.
2.	Empty Barrels/ Discarded Carboys/ Drums /Cylinders	33.1	25	Collection, Storage, Transportation and Disposal at GPCB Approved recyclers.
3.	Spent Resins from DM Plant	35.2	25	Collection, Storage, Transportation and Disposal at GPCB approved common TSDF site.
4.	ETP Sludge	35.3	4562	Collection, Storage, Transportation and Disposal at GPCB approved common TSDF site.

Complied.

Unit is being followed as per the said condition.

5.	Sludge from wet scrubber	16.2	2	Collection, Storage, Transportation and Disposal at GPCB Approved common TSDF site.	
6.	Spent Catalyst	17.2	29.2	Collection, Storage, Transportation and disposed at GPCB approved common TSDF/ Incineration/Co-processing facility.	
7.	Process Waste/ Dist. Residue	36.1	2406	Collection, Storage, Transportation and disposed at GPCB approved common TSDF/ Incineration/Co-processing facility.	
	PTFE Residue	1.4	189	Collection, Storage, Transportation and disposed at GPCB approved common TSDF/ Incineration/Co-processing facility.	
9.	Distillation Residue	20.3	2.4	Collection, Storage, Transportation and disposed at GPCB approved common Incineration/Co-processing facility.	
Non Hazardous waste					

10.	Brine sludge	--	10734	Collection, Storage, Transportation and Disposal at SLF.		
11.	Insulation Waste	--	150	Collection, Storage, Transportation and Disposal at GPCB Approved common TSDF site.		
12.	Ash	--	60-65 (MT/Day)	Disposed as per Fly Ash management Rule 2009, Selling Ash to Cement Plants/Brick Making industries/Filling in Low lying area.		
6.All other conditions of CCA order No: AWH-85503, issued vide letter no. GPCB/BRCH-B/CCA-1080(11)/ID-15136/414088, dated 03/06/2017 and further amended dated 04/07/2017,27/06/2018, and 13/09/2019 will remain same.						Agreed with said condition.

5792

Annexure - 9

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:324582 - Analysis Completion:04/03/2022

Organic Chemicals manufacturing / LAB Inward : 46945

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 46945 **Date: 05/03/2022**

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By : Shri Niraj Patel , DEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 324582
7. Date & Time of Collection & Inwarding : 22/02/2022 , (1210 to 1215) & 23/02/2022
8. Date of Start & Completion of Analysis : 23/02/2022 & 04/03/2022
9. Sampling Point : ## Final Outlet of the ETP ~ From Final outlet of ETP
10. Flow Details (Remarks) : –
11. Mode of Disposal : into sea through GIDC pipeline
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 29 & pH Range on pH Strip :@6-7 on pH strip
14. Carboys Nos for : & Color & Appearance :Colourless
    : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD) : 13 ,Cap No & Weight :

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	6.97
2	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	05
3	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	62
4	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	12.32
5	Total Kjeldahl Nitrogen	mg/l	Titrimetric method followed by preliminary distillation s	1 – 5000 mg/l	15.68
6	Nitrate	mg/l	Cadmium reduction method As per Spectrophotometr	0.005 – 100 mg/l	3.20
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	37575
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	877
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	190
10	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	BDL
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	1.16
12	Sulphide	mg/l	APHA (23rd Edi.)4500-s2-F –iodometric Method	1-500.0 mg/l	p.nil
13	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	44

Laboratory Remarks : Approved By:399-lab_399 Dt.: 05/03/2022

R.C.VASAVA,S.O

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

5793

GUJARAT FLUOROCHEMICALS LIMITED, DAHEJ

Result dated 22.02.2022, analysed at ETP LAB as under,

Sr. No.	Parameters	Unit
1	pH	6.78
2	COD	233 ppm
3	TSS	79 ppm

UniStar
Environment and Research Labs Pvt. Ltd.

White House,
Near G.I.D.C. Office, Char Rasta,
Vapi-396 195, Gujarat, India.
Phone : +91 260 2433966 / 2425610
Email : response@uerl.in Website : www.uerl.in

MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA-1986 (12.01.2020 to17.03.2023) | QCI-NABET Accredited EIA Consultant Organization | GPCB Recognized Environmental Auditor (Schedule-II) | ISO 9001:2015 Certified Company | ISO 45001:2018 Certified Company

TEST REPORT

ULR No.	---	Report No.	URC /22/02/0903
Name & Address of Customer	M/s. Gujarat Fluorochemicals Limited Plot No.12/A, GIDC Dahej, Bharuch	Date of Report	01/03/2022
		Customer's Ref.	--
Sample Details	ETP Outlet Water Sample (GPCB Counter)	Location	--
Sample Qty.	10 Lit.	Appearance	Light Turbid
Sampling Date	22/02/2022	Sample Received Date	23/02/2022
Test Started Date	23/02/2022	Test Completion Date	28/02/2022
Sampled By	Party.	Sampling Method	--
UERL Lab ID. No.	22/02/0903		

TEST RESULTS:

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment			
Sr. No.	Parameters	Test Method Permissible	Permissible Limits (GPCB)	Unit of Measurement	Results
		PHYSIO-CHEMICAL PARAMETERS			
1.	pH @ 25 ° C	(APHA 23rd Ed.,2017,4500-H+B)	6.0 – 9.0	--	6.65
2.	Total Suspended Solids	IS 3025(Part 17)1984,Amd.1	100	mg/L	70
		GENERAL CHEMICAL PARAMETERS			
1.	Oil & Grease	IS 3025(Part39)1991, Amd. 2	10	mg/L	BDL(MDL:2.0)
2.	Fluoride	(APHA 23rd Ed.,2017,4500 F,D)	15	mg/L	4.45
3.	Sulphide	(APHA 23rd Ed.,2017,4500 S^{-2} F)	5	mg/L	BDL(MDL:0.05)
4.	TKN	(APHA 23rd Ed.,2017,4500 NORG, B,)	50	mg/L	20.2
5.	Ammoniacal Nitrogen	IS 3025(Part 34)1988,	50	mg/L	15.1
6.	Copper	IS 3025(Part 42)1992amd.01,	3	mg/L	0.167
7.	Zinc	IS 3025(Part 49)1994	15	mg/L	0.248
8.	BOD (3 days at 27 °C)	IS 3025(Part 44)1993Amd.01	100	mg/L	80
9.	COD	IS 3025(Part 58)2006	250	mg/L	238.1
10.	Arsenic	APHA 23rd Ed.,2017,3114-C	0.2	mg/L	BDL(MDL:0.01)
11.	Mercury	(APHA 23rd Ed.,2017,3112-B)	0.01	mg/L	BDL(MDL:0.001)
12.	Lead	IS 3025(Part 47)1994Amd.02	0.1	mg/L	BDL(MDL:0.01)
13.	Cadmium	IS 3025(Part 41)1992,	0.05	mg/L	0.402
14.	Hexavalent Chromium	APHA 23rd Ed.,2017,3500CrB	0.1	mg/L	BDL(MDL:0.05)
15.	Nickel	IS 3025(Part 54)2003,	3	mg/L	0.995
16.	Cyanide	IS 3025(Part27)1986	0.2	mg/L	BDL(MDL:0.05)
17.	Phenolic Compound	IS 3025(Part 43)1992, Amd.2	5	mg/L	0.2
18.	Manganese	APHA 23rd Ed.,2017,3500 Mn B	2	mg/L	1.078
19.	Iron	IS 3025(Part 53)2003,	3	mg/L	0.286
20.	Nitrate	(APHA 23rd Ed.,2017,4500 NO3-B)	50	mg/L	7.6
21.	Total Residual Chlorine	IS 3025(Part 26)1986,	1	mg/L	01
22.	Chromium-Total	(APHA 23rdEd.,2017,3111-B)	1.0 Max.	mg/L	0.207
23.	Free Ammonia (as NH_3)	(APHA 23rdEd.,2017,4500 NH_3-B&C)	5 Max.	mg/L	BDL(MDL:0.2)
Remarks: BDL= Below Detection Limit, MDL = Minimum Detection Limit,					
Opinion & Interpretation (If required):					

******* End of Report *******

Checked By
N. C. P.
(Nilesh C. Patelp
(Sr. Chemist)

Authorized By
(N.B.T.)
(Nitin B. Tandel)
(Technical Manager)

UERL/CHM/F–2/05

Note: This report is subject to terms and conditions mentioned overleaf.

UniStar
Environment and Research Labs Pvt. Ltd.

White House,
Near G.I.D.C. Office, Char Rasta,
Vapi-396 195, Gujarat, India.
Phone : +91 260 2433966 / 2425610
Email : response@uerl.in Website : www.uerl.in

MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA-1986 (12.01.2020 to17.03.2023) | QCI-NABET Accredited EIA Consultant Organization | GPCB Recognized Environmental Auditor (Schedule-II) | ISO 9001:2015 Certified Company | ISO 45001:2018 Certified Company

TEST REPORT

ULR No.	---	Report No.	URC /22/02/0903
Name & Address of Customer	M/s. Gujarat Fluorochemicals Limited Plot No.12/A, GIDC Dahej, Bharuch	Date of Report	01/03/2022
		Customer's Ref.	--
Sample Details	ETP Outlet Water Sample (GPCB Counter)	Location	--
Sample Qty.	10 Lit.	Appearance	Light Turbid
Sampling Date	22/02/2022	Sample Received Date	23/02/2022
Test Started Date	23/02/2022	Test Completion Date	28/02/2022
Sampled By	Party.	Sampling Method	--
UERL Lab ID. No.	22/02/0903		

TEST RESULTS:

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment			
Sr. No.	**Parameters**	**Test Method Permissible**	**Permissible Limits (GPCB)**	**Unit of Measurement**	**Results**
PHYSIO-CHEMICAL PARAMETERS					
1.	Temperature	IS 3025(Part 9)1984	**Shall Not Exceed 5 °C Above the Receiving Water Temperature**	°C	29
GENERAL CHEMICAL PARAMETERS					
1.	Selenium	IS 3025(Part 56)2003	**0.05**	mg/L	BDL(MDL:0.1)
2.	Vanadium	APHA 23rd Ed.,2017,3500 - V	**0.2**	mg/L	BDL(MDL:0.1)
3.	Bio Assay test (%)	IS:6582-1971	**90 % survival of fish after 96 hrs.**	%	90 % survival of fish after 96 hrs.
Remarks: BDL= Below Detection Limit, **MDL** = Minimum Detection Limit,					

******* End of Report *******

Checked By
N. C. P.
Nilesh C. Patel
(Sr. Chemist)

Authorized By
(N.B.T.)
(Nitin B. Tandel)
(Technical Manager)

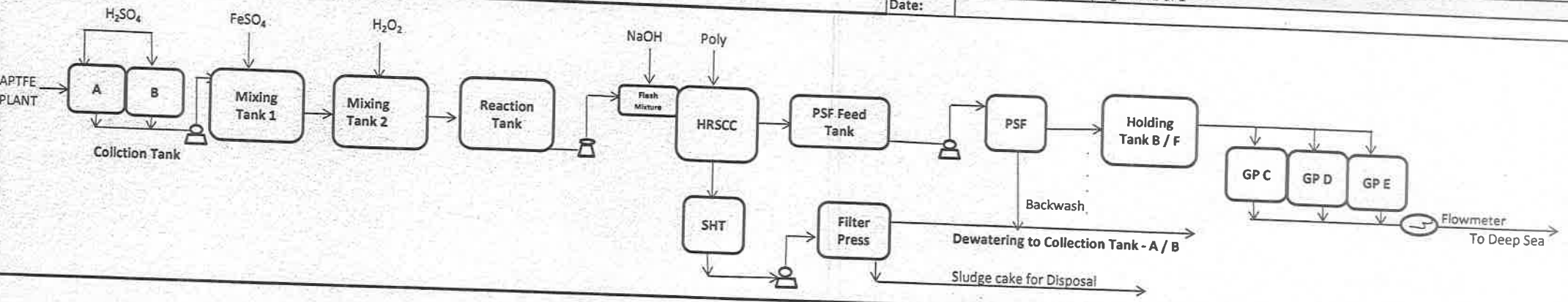
Note: This report is subject to terms and conditions mentioned overleaf.

Annexure :- ~~XI~~
Annexure :- X
(10)

GUJARAT FLUOROCHEMICALS LTD., DAHEJ

STREAM 1 PFD : 100 KLD

Doc. No.		UTILITY/ETP/F/01
Date:		01-04-2022
Revision No.	3.0	Page No. 1 of 1
Date:		



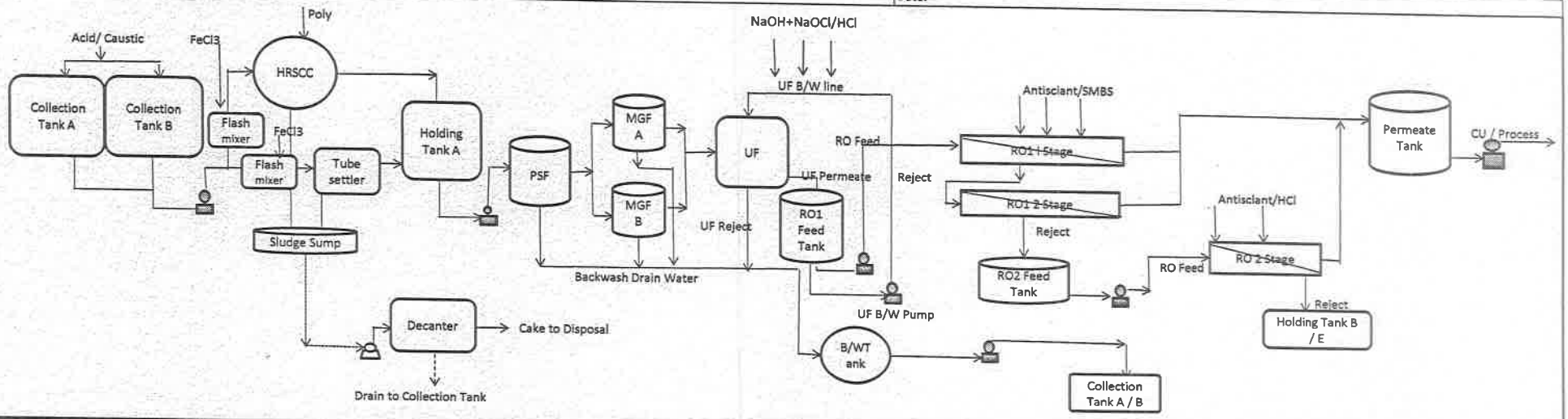
5796

GUJARAT FLUOROCHEMICALS LTD., DAHEJ

STREAM 2 PFD - 2400 KLD

Doc. N			UTILITY/ETP/F/01
Date:			01-04-2022
Revision No.	3.0	Page No. 1	1 of 1
Date:			

CMS-1 REFF PLANT
CMS-2 REFF PLANT
POWER PLANT BLOW DOWN
TFE-2 UTILITY
TFE-3 UTILITY
DI DPTFE/DI WATER PLANT
DI PTFE DI PLANT
DI6 PLANT
FKM/PVDF/S&A PLANT
COMMON UTILITY
H2 BOILER PLANT
H2 BOTTLING PLANT
S-PTFE PLANT
FLAKER PLANT COND.
A&H UTILITY
S-PTFE UTILITY

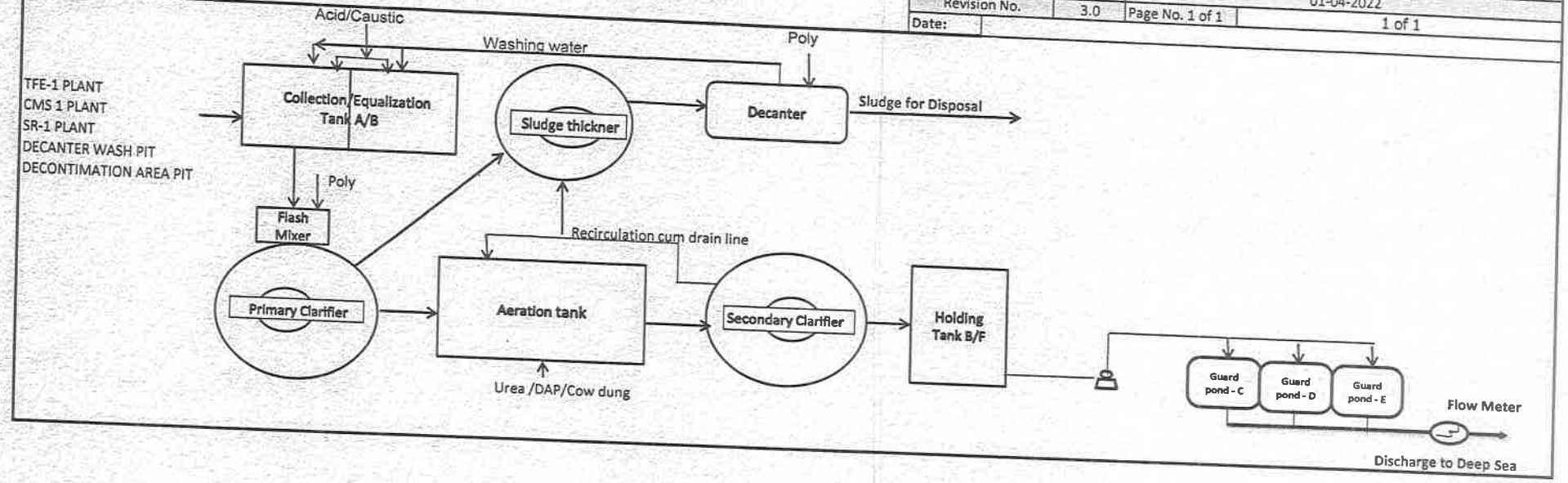


5797

GUJARAT FLUOROCHEMICALS LTD., DAHEJ

STREAM 3 PFD - 350 KLD

Doc. No.			UTILITY/ETP/F/01
Date:			01-04-2022
Revision No.	3.0	Page No. 1 of 1	1 of 1
Date:			

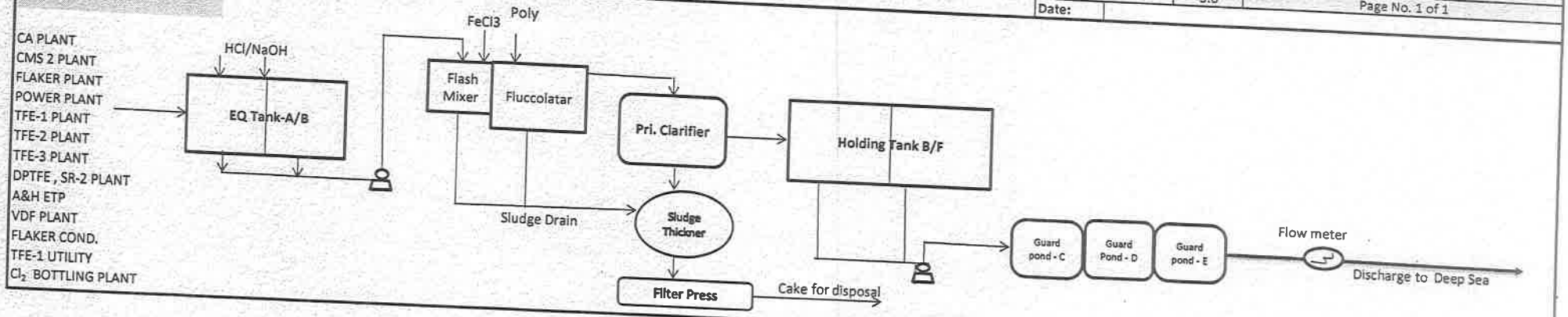


5798

GUJARAT FLUOROCHEMICALS LTD., DAHEJ

Stream 4 PFD - 765 KLD

Doc. No.		UTILITY/ETP/F/01
Date:		01-04-2022
Revision No.	3.0	Page No. 1 of 1
Date:		

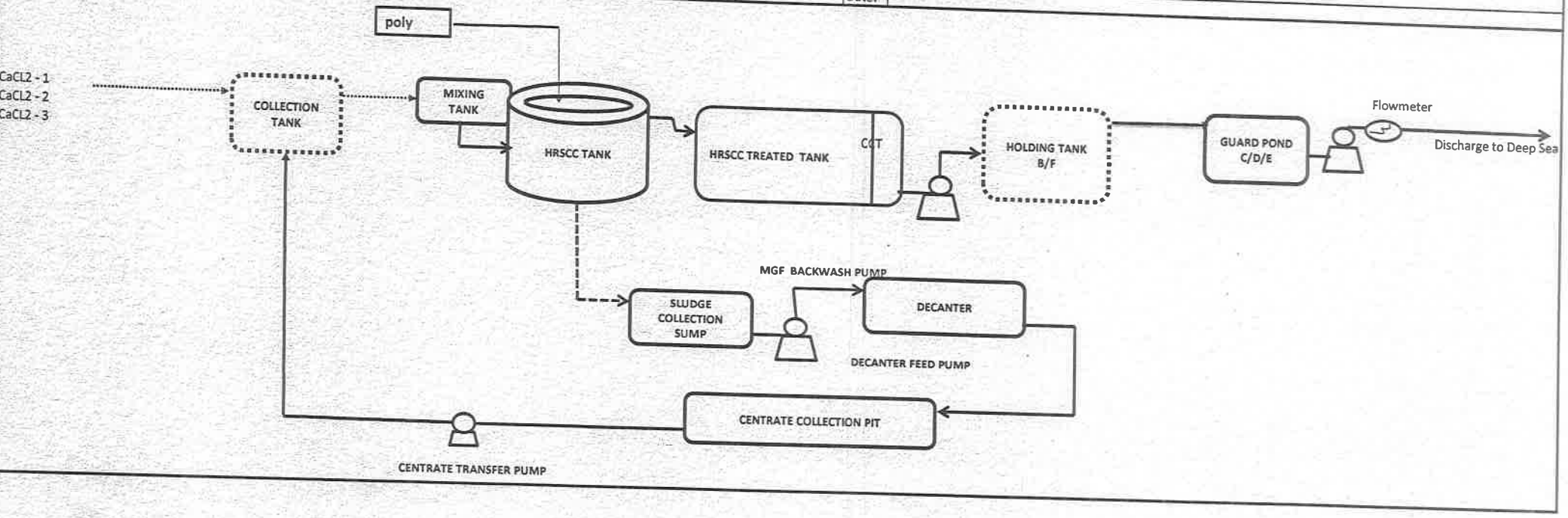


5799

GUJARAT FLUOROCHEMICALS LTD., DAHEJ

STREAM 5 PFD - 985 KLD

Doc. No.			UTILITY/ETP/F/01
Date:			01-04-2022
Revision No.	3.0	Page No. 1 of 1	
Date:			



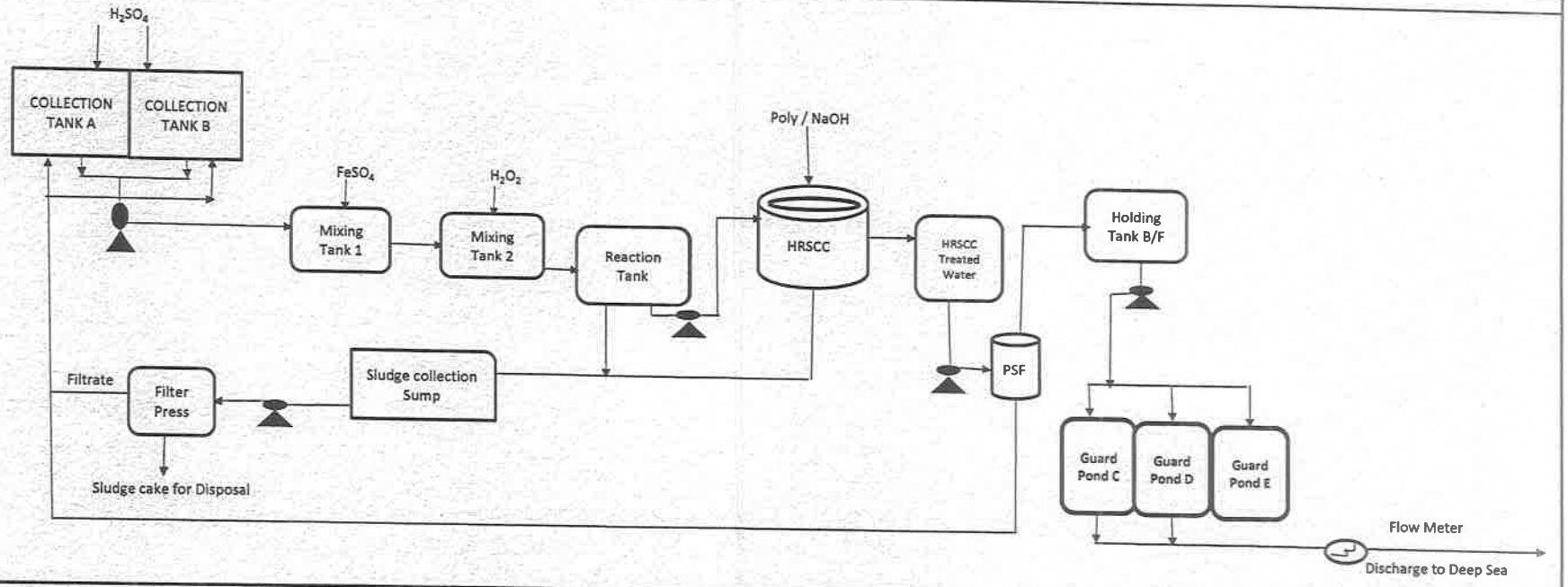
5800

GUJARAT FLUOROCHEMICALS LTD., DAHEJ

Stream 6 PFD - 552 KLD

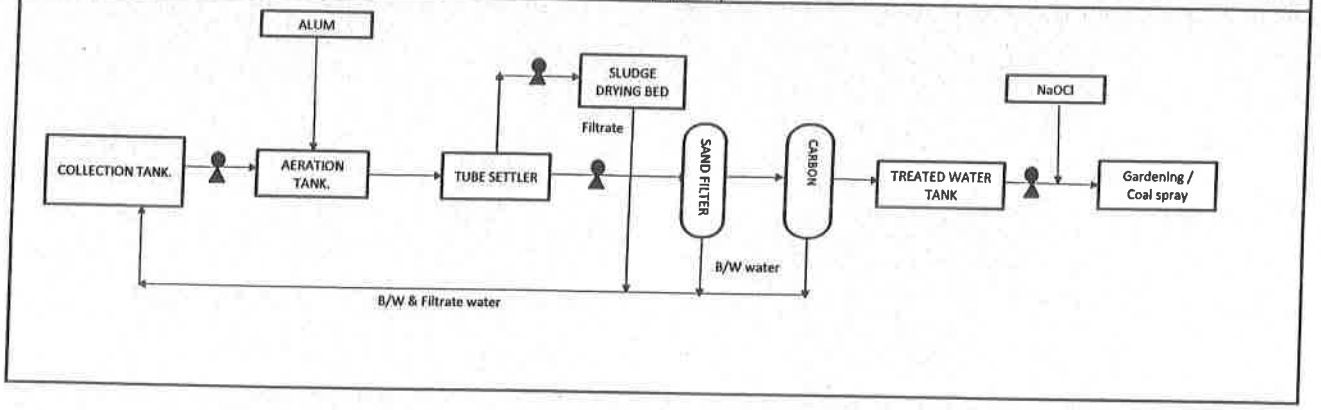
Doc. No.			UTILITY/ETP/F/01
Date:			01-04-2022
Revision No.	3.0	Page No.	1 of 1
Date:			

R 8/9 PLANT
AQUEOUS PLANT
PTFE PLANT PIT C
PFA/FEP/New Polymer PLANT
MICRO POWDER



5801

GUJARAT FLUOROCHEMICALS LTD., DAHEJ				
STP PFD - 200 KLD	Doc. No.		UTILITY/ETPF/01	
	Date:		01-04-2022	
	Revision No.	3.0	Page No. 1 of 1	
	Date:			



Annexure - II

THE ADEQUACY CERTIFICATE OF ENVIRONMENT MANAGEMENT SYSTEM

M/s Dharmsinh Desai University, Department of Chemical Engineering is recognized by the GPCB, Gandhinagar under the Environmental Audit Scheme introduced by the Hon'ble High Court Gujarat, vide its Orders dated. 20/12/96 & 13/3/97 and modified vide Order dated. 16/9/99 as an Environmental Auditor for the purpose of the auditing, having carried out Environmental Audit of

a) M/S :Gujarat Fluorochemicals Ltd.

b) Located at :12/A, GIDC Dahej

c) Manufacturing products as under :

Sr. No.	PRODUCT / BY-PRODUCT	Consented Quantity (TPM)
	POLY TETRA FLUORO ETHYLENE PLANT (PTFE)	
1.	POLY TETRA FLUORO ETHYLENE (PTFE)#	2000
2.	CHLOROFORM	10090
3.	METHYLENE DICHLORIDE (MDC)	10090
4.	GYPSUM	12768
5.	SULPHURIC ACID (70% - 88%)	713
6.	HYDROCHLORIC ACID (31 % ± 1 %)	37992
7.	CARBON TETRACHLORIDE (CTC)	1440
	CHLOR ALKALI PLANT (CA PLANT)	
8.	CHLORINE GAS (DRY BASIS)	13167
9.	CAUSTIC SODA (DRY BASIS)	15500
10.	HYDROGEN GAS (DRY BASIS)	464
11.	HYDROCHLORIC ACID (31% ± 1 %)	357
12.	SODIUM HYPO CHLORIDE (10% CHLORINE)	132
	CAPTIVE POWER PLANT	
13.	GAS BASED PLANT CCGT	37 MW
14.	GAS BASED PLANT COGEN	54.5 MW
15.	COAL BASED PLANT COGEN	
	ADDITIONAL PRODUCTS	
16.	CALCIUM CHLORIDE	4750
17.	CARBON DIOXIDE - FOOD GRADE GAS	2267
18.	CARBON DIOXIDE -DRY ICE	533
19.	TETRA FLUOROTHYLENE(TFE)	300
20.	HEXAFLUORO PROPYLENE (HFP)	300
21.	HEXA FLUORO PROPYLENE OXIDE(HFPO)	0
22.	HEPTAFLUOROPROPANE(HFPP)	0
23.	TETRAFLUORO DIMETHYLAMINE (TFE DMA)	90
24.	TELOMER IODINE	0

Sr. No.	PRODUCT / BY-PRODUCT	Consented Quantity (TPM)
25.	TELOMER ALCOHOL	0
26.	HIGH BOILER OF CHLOROMETHANE	200
27.	DILUTE HF (20%)	1000
28.	ANHYDROUS POTASSIUM FLUORIDE	0
29.	DICHLOROFLUORO CHLOROMETHANE (HCFC-21)	230
30.	ETHYL TETRA FLUORO ETHYL ETHER (ETFEE)	400
31.	DICHLORO PENTA FLUORO PROPANE (HFC-225)	415
32.	FLUORO ELASTOMERS (FKM)	300
33.	PERFLUORO ALKOXY (PFA)	200
34.	POLYVENYLENE FLUORIDE (PVDF)	250
35.	FLUORINATED ETHYLENE PROPYLENE (FEP)	250
36.	PENTAFLUOROETHANE (HFC 125)	417
37.	METHYL TETRA FLUORO ETHYL ETHER (MTFEE)	83
38.	BR ETHYLEDIFLUOROACETATE (BR EDFA)	25
39.	TETRA FLUOROETHYLENE (TFE TETRAMER)	0
40.	TRI FLUOROMETHANE	21
41.	2,6-DICHLORO-4-TRIFLUORO METHYL ANILINE (DCTFMA)	65
42.	DIFLUORO METHANE SULFONYL CHLORIDE (DFMSC)	0
43.	INTERMEDIATE VINYLIDENE FLUORIDE (VDF)	84
44.	HYDROFLUOSILICIC ACID (20%)	200
45.	1,1,3-TRICHLORO 2,3,3 – TRIFUOROPROPEN(CFO1213YA)(P-200)	0
46.	1,1,3-TERACHLORO TERAFLUOROPROPANOL(HCFC224CA)	25
47.	1,3 DOFLUOROBENZENE(1,3 DFB)	0
48.	TFMA	20
49.	IODURATE	1
50.	TETRA FLUORO BETA SULFONE	25
51.	TETRA FLUORO ETHYL ETHER(PROPYL,BUTYL,TF PROPYL)	80
52.	DI CHLORO TETRA FLUOROETHOXY ANILINE	10
53.	I-SAN	20
54.	PCTFE	4
55.	C4 TO C34 SURFACTANT (NON FLORINATED)	10
56.	R & D PRODUCTS	10
57.	TETRA FLUORO BENZENE ALCOHOL (TFBA)	0

Having completed the Environmental Audit period on personal monitoring, and audit report, prepared as per the direction of Hon'ble High Court in Environmental Audit Scheme, it is certified that the Environmental Management System (EMS) provided by this industry for the products manufactured and capacity as stated above is adequate and efficient to achieve the quality of effluents (Air + Wastewater + Solid Waste) as specified in Consent/Notifications by GPCB, Gandhinagar for the following quantity of waste generation.

a) Liquid effluent : **3231.67 Kl/Day**

b) Solid Waste :

Sr. No.	Waste	Quantity MT/Yr
1	Used Oil	85.4
2	Discarded Container, Nos./Year	25
3	Spent Resin from DM Plant,	25
4	ETP Sludge,	4562
5	Brine Sludge	10734
6	Sludge form wet Scrubber	02
7	Spent Catalyst,	29.2
8	Process Waste/Distillation Residue	2406
9	PTFE Residue	189
10	Insulation Waste	150
11	Ash	60-65 (MT/Day)
12	Distillation Residue	2.4

c) **Air Emission (Flue gas stack as well as process stacks)** : Refer Annexure - XV

This certificate is valid for the audit period only. However, it is subject to automatic cancellation in case of any change in product profile/capacity, quality & quantity of effluents (Air + Water + Solid/Hazardous) and efficiency of EMS equipment.

This certificate forms part of Environmental Audit report.

Date:
Place: Nadiad

Name & Address of the Auditor:
Dharmsinh Desai University,
College Road,
Nadiad – 387 001.

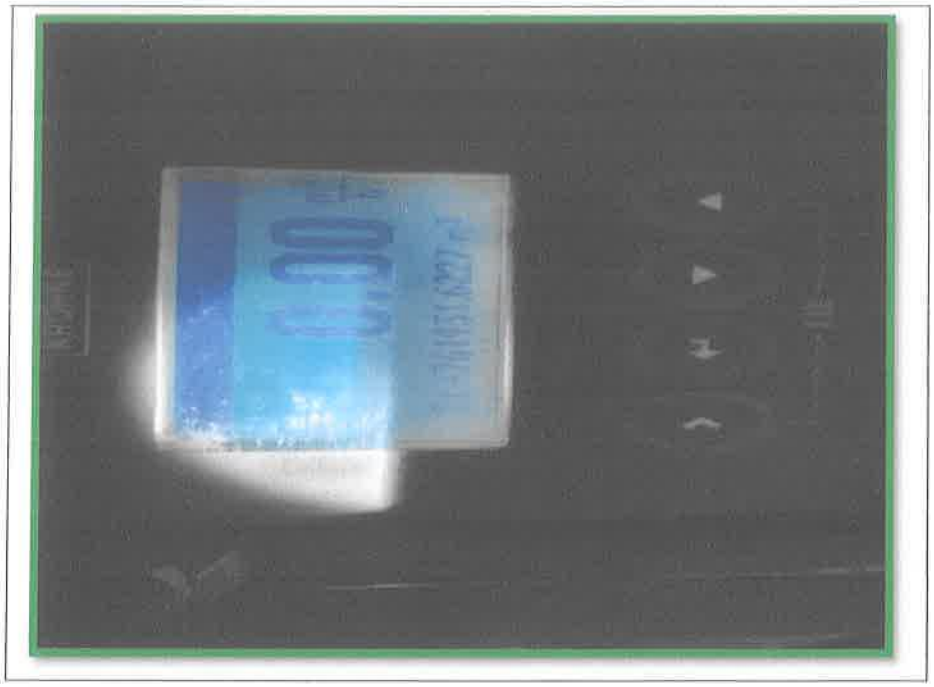
Signature of the Authorized Person

Coordinator
Environmental Consultancy Cell

5807

Annexure-12

Photo of Flow meter as a reference



Annexure :- 13

5808

5809

Annexure-14

Recycling Solutions Private Limited
[66336]

Manifest No: 1535986
02/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Pre- processing
Facility Details	Recycling Solutions Private Limited [66336]		
Contact Details	9328261613 jvm@rs-pl.com	GPS Coordinates	Lat :21.5626 Long:73.0006
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, Taluka :ANK Distict:ANK Pin no:394116		

Waste Details					
Waste Details	I~36~36.1~Any process or distillation residue				
Waste Intended for	Preprocessing	Total Qty	4.620MT	Consistency	Solid

Transporter Details			
Name	SAI WASTE MANAGEMENT CO.	Contact Details	9327417479 Shastri.jyotiprakash@gobolt.co.in
Address	Plot No.208/2 Panoli GIDC,ANKLESHWAR District :Bharuch Taluka :Bharuch		

Vehicle Details					
Vehicle no	GJ16AU8601	GPS Enabled	Yes	Type of Vehicle	Tempo
Driver name	Shiv Pal	Driver Contact No	8200944067		

Waste Transportation Details					
Vehicle Depart.	02/02/2022 11:05AM	Number of Drums	80	Loose Waste	0.000
Remarks	Process waste		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and stamp of sender: Gujarat Fluorochemicals Ltd. P2/A, GIDC Dahej Industrial State Tal Vagra Dist Bharuch-392 130

Date: 02/02/2022

Signature: DAHEJ

Transporter's Acknowledgement of Receipt of waste

Stamp:

Date: 02/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp:

Date: 2/2/22

Signature:

5810

Recycling Solutions Private Limited [66336]

Manifest No: 1538562 04/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Pre- processing
Facility Details	Recycling Solutions Private Limited [66336]		
Contact Details	9328261613 jvm@rs-pl.com	GPS Coordinates	Lat :21.5626 Long:73.0006
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, Taluka :ANK Distict:ANK Pin no:394116		

Waste Details					
Waste Details	I~36~36.1~Any process or distillation residue				
Waste Intended for	Preprocessing	Total Qty	9.450MT	Consistency	Solid

Transporter Details			
Name	RSPL	Contact Details	7069028336 marketing@rs.pl.com
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, City :Pan,Bharuch District :Bharuch Taluka :Bharuch		

Vehicle Details					
Vehicle no	GJ26T8617	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	OM PRAKASH	Driver Contact No	9724930165		

Waste Transportation Details					
Vehicle Depart.	04/02/2022 1:30PM	Number of Drums	0	Loose Waste	0.000
Remarks	Spent Resin		No of bags	9	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and Stamp of sender: Gujarat Fluorochemicals Ltd. 12/A GIDC Dahej Industrial State Tal Vagra Distt Bharuch-392 130

Date: 04/02/2022

Signature:

Transporter's Acknowledgement of Receipt of waste

Stamp:

Date: 04/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp:

Date:

Signature:

5811

Recycling Solutions Private Limited [66336]

Manifest No: 1544710 10/02/2022 | **Copy 6**

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details

Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	**GPS Coordinates**	Lat :21.4100 Long :72.3500

Receiver's Details

State	Gujarat	**Type of Facility**	Pre- processing
Facility Details	Recycling Solutions Private Limited [66336]		
Contact Details	9328261613 jvm@rs-pl.com	**GPS Coordinates**	Lat :21.5626 Long:73.0006
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, Taluka :ANK Distict:ANK Pin no:394116		

Waste Details

Waste Details	I~36~36.1~Any process or distillation residue				
Waste Intended for	Preprocessing	**Total Qty**	4.000MT	**Consistency**	Solid

Transporter Details

Name	RSPL	**Contact Details**	9327417479 sashtri.jyotiprakash@gobolt.co.in
Address	Plot No.223.panoli,panoli gidc District :Bharuch Taluka :Bharuch		

Vehicle Details

Vehicle no	GJ16Z6330	**GPS Enabled**	Yes	**Type of Vehicle**	Truck
Driver name	HARIKESH YADAV	**Driver Contact No**	7388810361		

Waste Transportation Details

Vehicle Depart.	10/02/2022 11:15AM	**Number of Drums**	80	**Loose Waste**	0.000
Remarks	Process waste		**No of bags**	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and Stamp of sender: Gujarat Fluorochemicals Ltd, 12/A GIDC Dej Industrial State Tal Vagra Distt Bharuch-392 130

Date: 10/02/2022

Signature: DAHEJ

Transporter's Acknowledgement of Receipt of waste

Stamp:

Date: 10/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp:

Date: 10/2/22

Signature:

5812

Recycling Solutions Private Limited [66336]

Manifest No: 1540012 dt 05/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Pre- processing
Facility Details	Recycling Solutions Private Limited [66336]		
Contact Details	9328261613 jvm@rs-pl.com	GPS Coordinates	Lat :21.5626 Long:73.0006
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, Taluka :ANK Distict:ANK Pin no:394116		

Waste Details					
Waste Details	I~36~36.1~Any process or distillation residue				
Waste Intended for	Preprocessing	Total Qty	6.630MT	Consistency	Solid

Transporter Details			
Name	RSPL	Contact Details	9327417479 sashtri.jyotiprakash@gobolt.co.in
Address	Plot No.223.panoli,panoli gidc District :Bharuch Taluka :Bharuch		

Vehicle Details					
Vehicle no	GJ16Z6330	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	HARIKESH YADAV	Driver Contact No	7388810361		

Waste Transportation Details					
Vehicle Depart.	05/02/2022 4:50PM	Number of Drums	0	Loose Waste	0.000
Remarks	Process waste		No of bags	10	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and stamp of sender: Gujarat Fluorochemicals Ltd. 2/A GIDC Dahej Industrial Estate Taluka Vagra Dist Bharuch 392130

Date: 05/02/2022

Signature:

Transporter's Acknowledgement of Receipt of waste

Stamp:

Date: 05/02/2022

Signature: Harikesh Yadav

Receiver's Certification of Receipt of Hazardous waste

Stamp:

Date: 5/2/22

Signature:

5813

Recycling Solutions Private Limited [66336]

Manifest No: 1537137 03/02/2022 **Copy 6**

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Pre- processing
Facility Details	Recycling Solutions Private Limited [66336]		
Contact Details	9328261613 jvm@rs-pl.com	GPS Coordinates	Lat :21.5626 Long:73.0006
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, Taluka :ANK Distict:ANK Pin no:394116		

Waste Details					
Waste Details	I~36~36.1~Any process or distillation residue				
Waste Intended for	Preprocessing	Total Qty	7.940MT	Consistency	Solid

Transporter Details			
Name	Murlidhar Services	Contact Details	9328261613 jvm@rs-pl.com
Address	Plot No.208/2,GIDC Estate, ,District :Ankleshwar District :Ankleshwar Taluka :Ankleshwar		

Vehicle Details					
Vehicle no	GJ01DX7304	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	RAJU BHAI	Driver Contact No	8000941622		

Waste Transportation Details					
Vehicle Depart.	03/02/2022 11:05AM	Number of Drums	0	Loose Waste	0.000
Remarks	Process waste		No of bags	10	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and stamp of sender: Gujarat Fluorochemicals Ltd. Dahej Industrial State Tal Vagra Dist Bharuch-392 130

Date: 03/02/2022 Signature: HEJ

Transporter's Acknowledgement of Receipt of waste

Stamp:

Date: 03/02/2022 Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp:

Date: 3/2/22 Signature:

5814

Recycling Solutions Private Limited [66336]

Manifest No: 1537735 03/02/2022 — **Copy 6**

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Pre- processing
Facility Details	Recycling Solutions Private Limited [66336]		
Contact Details	9328261613 jvm@rs-pl.com	GPS Coordinates	Lat :21.5626 Long:73.0006
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, Taluka :ANK Distict:ANK Pin no:394116		

Waste Details					
Waste Details	I~36~36.1~Any process or distillation residue				
Waste Intended for	Preprocessing	Total Qty	8.570MT	Consistency	Solid

Transporter Details			
Name	RSPL	Contact Details	9328261613 pankaj.sinha@rs-pl.com
Address	Plot No.208/2 GIDC PANOLI.,RSPL-Panoli District :Ankleshwar Taluka :Ankleshwar		

Vehicle Details					
Vehicle no	GJ16Z4216	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	sailender kumar	Driver Contact No	7778950526		

Waste Transportation Details					
Vehicle Depart.	03/02/2022 4:05PM	Number of Drums	0	Loose Waste	0.000
Remarks	Spent Carbon		No of bags	10	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and stamp of sender: Gujarat Fluorochemicals Ltd. 12/A GIDC Dahej Industrial Estate Tal Vagra Distt Bharuch-392 130 **Date:** 03/02/2022 **Signature:**

Transporter's Acknowledgement of Receipt of waste

Stamp: **Date:** 03/02/2022 **Signature:**

Receiver's Certification of Receipt of Hazardous waste

Stamp: **Date:** 3/2/22 **Signature:**

5815

BEIL Infrastructure Ltd [40137]

Manifest No: 1543809
09/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC , DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details					
Waste Details	Others-1~S~S1~Insulation waste				
Waste Intended for	LandFill	Total Qty	3.240MT	Consistency	Solid

Transporter Details			
Name	MAA CHAMUNDA EARTH MOVERS	Contact Details	8866029350 aagohil1411@gmail.com
Address	NEAR BARBORI MATA TEMPLE,Dahej District :Bharuch Taluka :Vagra		

Vehicle Details					
Vehicle no	GJ22T0851	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	Mansa ram	Driver Contact No	6386513104		

Waste Transportation Details					
Vehicle Depart.	09/02/2022 1:20PM	Number of Drums	0	Loose Waste	3.240
Remarks	Insulation waste		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and Stamp of sender: Gujarat Fluorochemicals Ltd. 12/A, GIDC Industrial State Tal Vagra Distt Bharuch-392 130

Date: 09/02/2022

Signature: HEJ

Gujarat Fluorochemicals Ltd.

Transporter's Acknowledgement of Receipt of waste

Stamp: Barbori Mata Temple, Dahej, Vagra, Dist.Bharuch Mob- 8866029350 / 9978941279

Date: 09/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp:

Date:

Signature:

BEIL INFRASTRUCTURE LIMITED DAHEJ

09 FEB 2022

5816

BEIL Infrastructure Ltd [40137]

Manifest No: 1536463 02/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC , DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details					
Waste Details	I~35~35.3~Chemical sludge from waste water treatment				
Waste Intended for	LandFill	Total Qty	9.460MT	Consistency	Solid

Transporter Details			
Name	MAA CHAMUNDA EARTH MOVERS	Contact Details	9978910279 aagohil1411@gmail.com
Address	NEAR BARBORI MATA TEMPLE,GIDC District :Bharuch Taluka :Bharuch		

Vehicle Details					
Vehicle no	GJ17UU1797	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	Priyaranjan	Driver Contact No	8910556517		

Waste Transportation Details					
Vehicle Depart.	02/02/2022 3:00PM	Number of Drums	0	Loose Waste	9.460
Remarks	ETP Sludge		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and Stamp of sender: Gujarat Fluorochemicals Ltd. Dahej Industrial State Tal Vagra Distt Bharuch-392 130

Date: 02/02/2022

Signature:

Gujarat Fluorochemicals Ltd. DAHEJ

Transporter's Acknowledgement of Receipt of waste

Stamp: Maa Chamunda Earth Movers Nr. Barbori Mata Temple, Dahej, Vagra, Dist.Bharuch Mob.: 8866029350 / 9978910279

Date: 02/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp:

Date: 03 FEB 2022

Signature:

RECEIVED

5817

BEIL Infrastructure Ltd [40137]

Manifest No: 1538950 04/02/2022 **Copy 6**

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC , DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details					
Waste Details	Others-1~S~S1~Insulation waste				
Waste Intended for	LandFill	Total Qty	2.280MT	Consistency	Solid

Transporter Details			
Name	MAA CHAMUNDA EARTH MOVERS	Contact Details	8866029350 aagohil1411@gmail.com
Address	NEAR BARBORI MATA TEMPLE,Dahej District :Bharuch Taluka :Vagra		

Vehicle Details					
Vehicle no	GJ22T0851	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	Mansa ram	Driver Contact No	6386513104		

Waste Transportation Details					
Vehicle Depart.	04/02/2022 5:15PM	Number of Drums	0	Loose Waste	2.280
Remarks	Filter Cloth		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and stamp of sender: Gujarat Fluorochemicals Ltd. 12/A, GIDC Dahej Industrial Estate Tal Vagra Distt Bharuch-392 130

Date: 04/02/2022

Signature:

Transporter's Acknowledgement of Receipt of waste

Stamp: Maa Chamunda Earth Movers Mr. Barbori Mata Temple, Dahej, Vagra, Dist.Bharuch Mob.: 8866029350 / 9979010679

Date: 04/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp: BEIL INFRASTRUCTURE LIMITED DAHEJ

RECEIVED 05 FEB 2022

Signature:

5818

BEIL Infrastructure Ltd [40137]

Manifest No: 1541325
07/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC , DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details					
Waste Details	Others-1~S~S1~Insulation waste				
Waste Intended for	LandFill	Total Qty	2.560MT	Consistency	Solid

Transporter Details			
Name	MAA CHAMUNDA EARTH MOVERS	Contact Details	9978910279 aagohil1411@gmail.com
Address	NEAR BARBORI MATA TEMPLE,GIDC District :Bharuch Taluka :Bharuch		

Vehicle Details					
Vehicle no	GJ17UU1797	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	Priyaranjan	Driver Contact No	8910556517		

Waste Transportation Details					
Vehicle Depart.	07/02/2022 12:40PM	Number of Drums	0	Loose Waste	2.560
Remarks	Insulation waste	No of bags	0		

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and stamp of sender
Gujarat Fluorochemicals Ltd,
P/A, GIDC Dahej Ind. Estate
Vagra, Dist. Bharuch-392 130

Date: 07/02/2022

Signature:

Gujarat Fluorochemicals Ltd.
DAHEJ

Transporter's Acknowledgement of Receipt of waste

Stamp: Maa Chamunda Earth Movers
Barbori Mata Temple,
Dahej, Vagra, Dist.Bharuch
Mob.: 8866020950

Date: 07/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp:

Date:

Signature:

BEIL INFRASTRUCTURE LIMITED
DAHEJ

RECEIVED
07 FEB 2022

5819

BEIL Infrastructure Ltd [40137]

Manifest No: 1544867 10/02/2022 — **Copy 6**

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details

Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details

State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC , DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details

Waste Details	Others-1~S~S1~Insulation waste				
Waste Intended for	LandFill	Total Qty	2.120MT	Consistency	Solid

Transporter Details

Name	MAA CHAMUNDA EARTH MOVERS	Contact Details	9978910279 aagohil1411@gmail.com
Address	NEAR BARBORI MATA TEMPLE,GIDC District :Bharuch Taluka :Bharuch		

Vehicle Details

Vehicle no	GJ17UU1797	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	Priyaranjan	Driver Contact No	8910556517		

Waste Transportation Details

Vehicle Depart.	10/02/2022 12:25PM	Number of Drums	0	Loose Waste	2.120
Remarks	Insulation waste		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and stamp of sender: Gujarat Fluorochemicals Ltd. GIDC Dahej Industrial State Tal Vagra Distt Bharuch-392 130 — **Date:** 10/02/2022 — **Signature:** EJ

Transporter's Acknowledgement of Receipt of waste

Stamp: Maa Chamunda Earth Movers, Nr. Barbori Mata Temple, Dahej, Vagra, Dist.Bharuch, Mob : 8866029350 / 9978910279 — **Date:** 10/02/2022 — **Signature:**

Receiver's Certification of Receipt of Hazardous waste

Stamp: BEIL INFRASTRUCTURE LIMITED DAHEJ — RECEIVED Date: 10 FEB 2022 — **Signature:**

5820

BEIL Infrastructure Ltd [40137]

Manifest No: 1544899
10/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC , DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details					
Waste Details	Others-1~S~S1~Insulation waste				
Waste Intended for	LandFill	Total Qty	1.740MT	Consistency	Solid

Transporter Details			
Name	Maa Chamunda Earth Movers	Contact Details	9978910279 aagohil1411@gmail.com
Address	Nr. Babari Mata Temple,Dahej District :Bharuch Taluka :Vagra		

Vehicle Details					
Vehicle no	GJ16W1270	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	CHUNU SINGH	Driver Contact No	8406057356		

Waste Transportation Details					
Vehicle Depart.	10/02/2022 12:45PM	Number of Drums	0	Loose Waste	1.740
Remarks	Insulation waste			No of bags	0

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and stamp of sender: Gujarat Fluorochemicals Ltd. Dahej Industrial Estate Tal Vagra Distt Bharuch-392 130

Date: 10/02/2022

Signature:

Transporter's Acknowledgement of Receipt of waste

Stamp: Maa Chamunda Earth Movers Nr. Babari Mata Temple Dahej, Vagra, Dist.Bharuch

Date: 10/2/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

1.790 MT

Stamp: BEIL INFRASTRUCTURE LIMITED DAHEJ

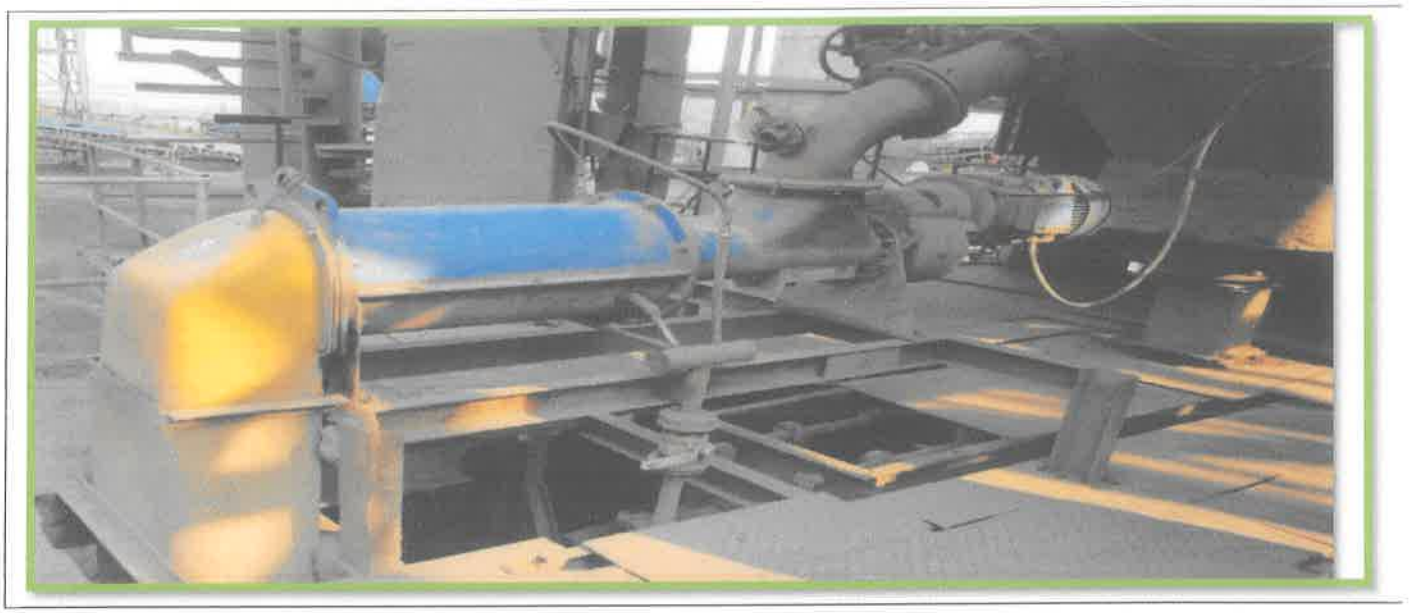
Date: 10 FEB 2022

Signature:

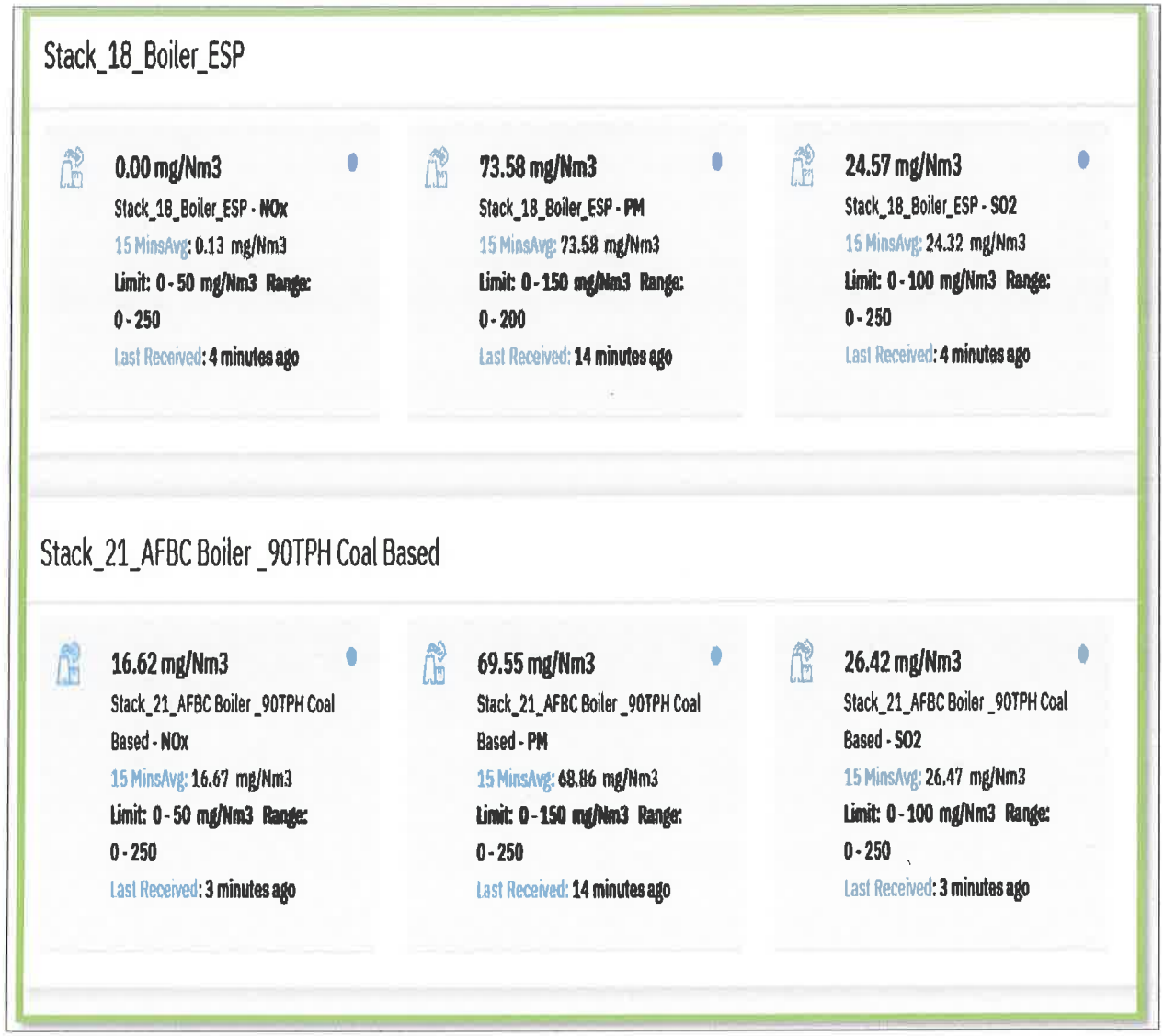
Annexure 2-15

Following are the systems / installations to improve handling of coal dust, fly ash and other wastes inside the premises and implement good housekeeping practices.

5822

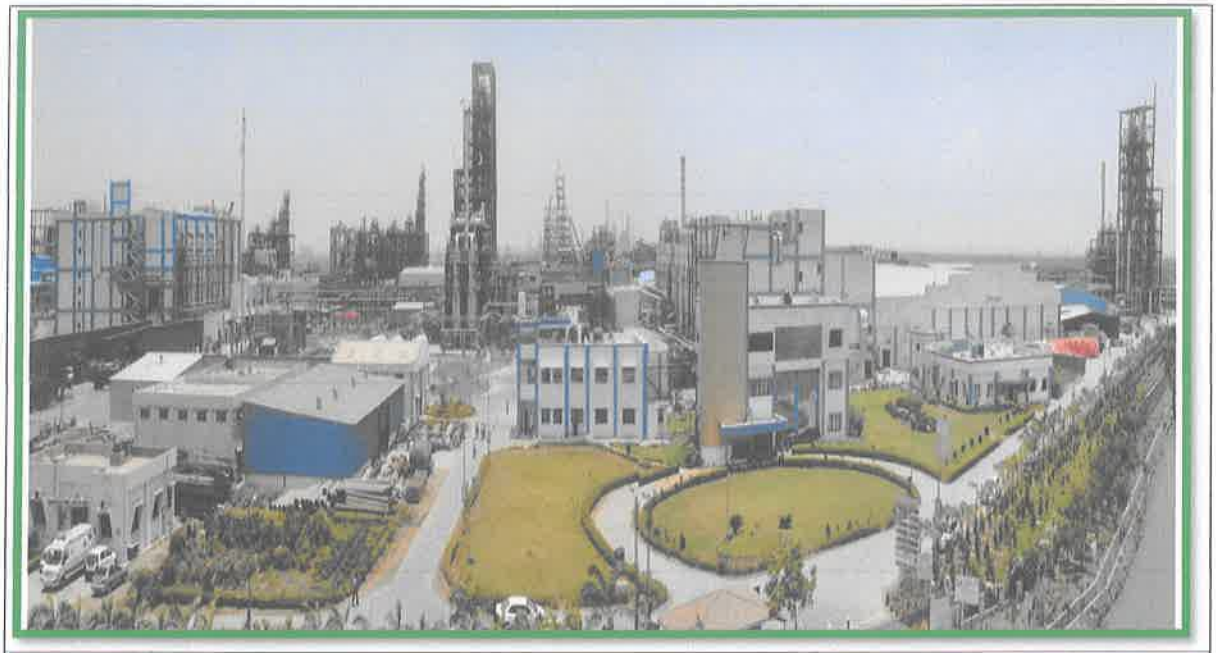


A photograph of Online monitoring of Stack dust



Annexure :16

Unit is being maintained good housekeeping within our premises and will continue to do the same. Please see the attached photographs.



5825

5826

Annexure-17

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:209001 - Analysis Completion:11/05/2017

Organic Chemicals manufacturing / LAB Inward : 30825

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 30825 Date: 21/05/2017

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By : Vijay K. Patel, AEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 209001
7. Date & Time of Collection & Inwarding : 11/04/2017 , (1515 to 1515) & 12/04/2017
8. Date of Start & Completion of Analysis : 12/04/2017 & 11/05/2017
9. Sampling Point : ## Final Outlet of the ETP ~ -
10. Flow Details (Remarks) : yes
11. Mode of Disposal : in to u/g drain
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 30 & pH Range on pH Strip :7 to 8 on PH strip
14. Carboys Nos for : Barcode & Color & Appearance :colorless,sl.turbid
    : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD) : 12 ,Cap No & Weight :

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	30
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.23
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edl. 2012	2 - to 99 Hazen & 1-50	20
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Methoc	10 – 200000 mg/L	33256
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Methoc	2 – 10000 mg/L	88
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standai	1 - 2000 mg/l.	7.28
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	15904
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	345
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	240
10	Oil & Grease	mg/l	Liquid – Liquid Partition Gravimetric method. (5520 B	01 – 1000 mg/l	1.2
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	13.5
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme(	05–50000 mg/l	71

Laboratory Remarks : freeze By:436-lab_436 Dt.: 21/05/2017

H.C. Solanki, Lab Head

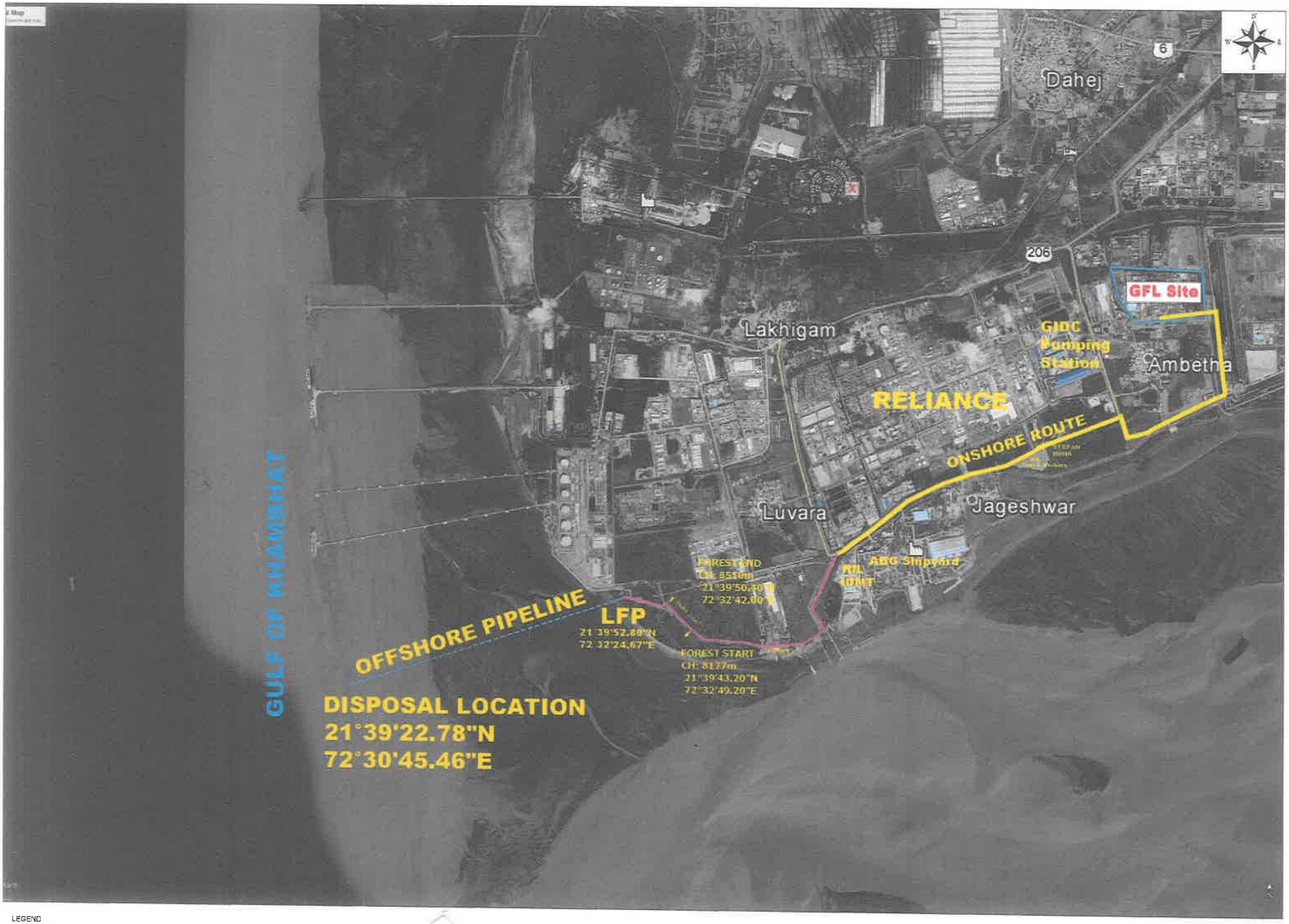
Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

Annexure I-20

5827

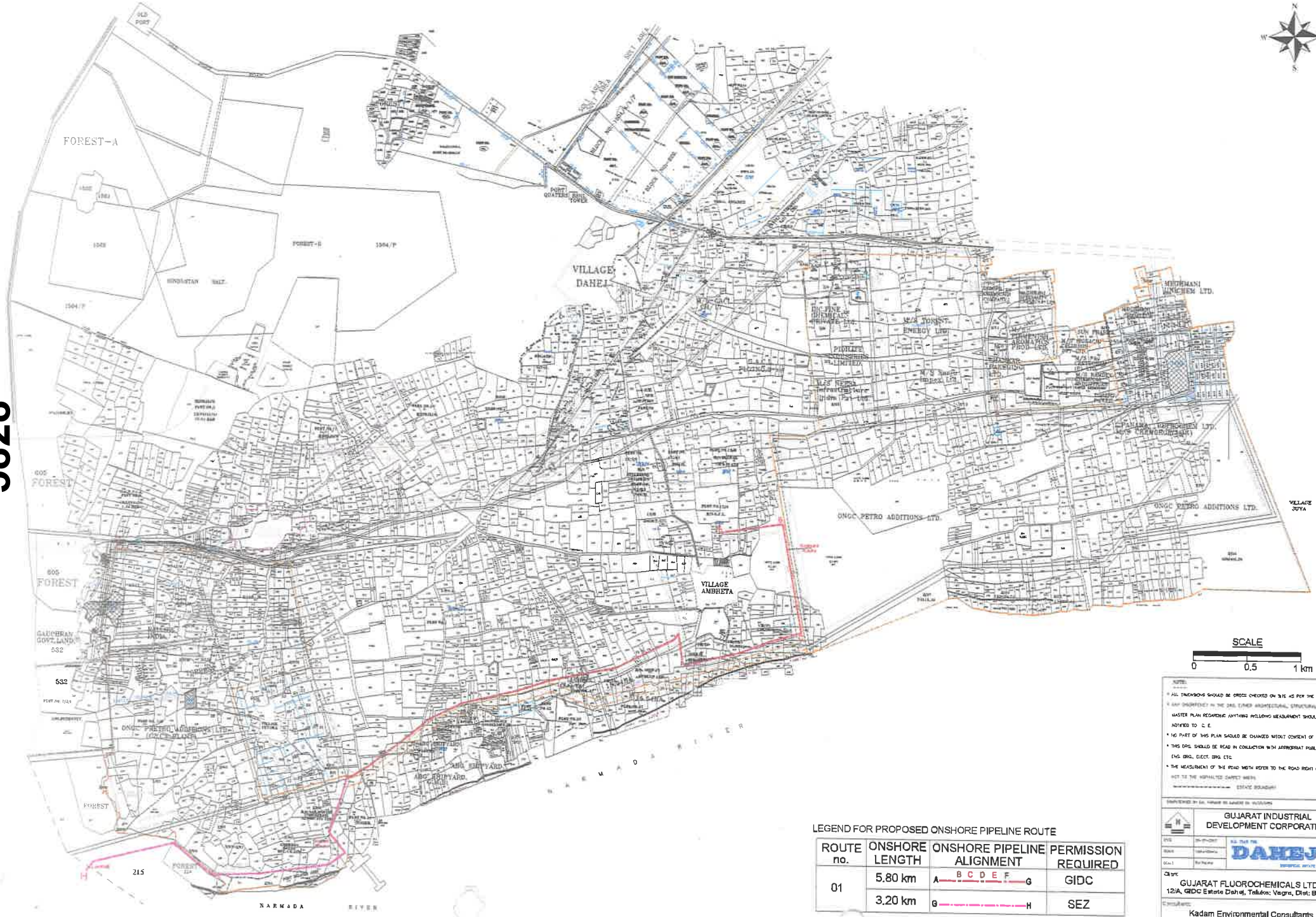


LEGEND

ONSHORE PIPELINE ROUTE - GIDC AREA
ONSHORE PIPELINE ROUTE - SEZ AREA
OFFSHORE PIPELINE ROUTE

E-1/1938468352.2 : MAP SHOWING ONSHORE & OFFSHORE PIPELINE ROUTE ON GOOGLE IMAGERY

5828



SCALE

0 0.5 1 km

LEGEND FOR PROPOSED ONSHORE PIPELINE ROUTE

ROUTE no.	ONSHORE LENGTH	ONSHORE PIPELINE ALIGNMENT	PERMISSION REQUIRED
01	5.80 km	A — B C D E F — G	GIDC
	3.20 km	G — H	SEZ

NOTE:

- ALL DIMENSIONS SHOULD BE CROSS CHECKED ON SITE AS PER THE FIELD BOOK.
- ANY DISCREPENCY IN THE DRG. EITHER ARCHITECTURAL, STRUCTURAL OR IN MASTER PLAN REGARDING ANYTHING INCLUDING MEASUREMENT SHOULD BE NOTIFIED TO C. E.
- NO PART OF THIS PLAN SHOULD BE CHANGED WITOUT CONSENT OF THE C. E
- THIS DRG. SHOULD BE READ IN CONJUCTION WITH APPROPRIAT PUBLIC HEALTH ENG. DRG., ELECT. DRG. ETC.
- THE MEASURMENT OF THE ROAD WIDTH REFER TO THE ROAD RIGHT OF WAY AND NOT TO THE ASPHALTED CARPET WIDTH.

ESTATE BOUNDARY

GUJARAT INDUSTRIAL DEVELOPMENT CORPORATION

DAHEJ-I

Client:
GUJARAT FLUOROCHEMICALS LTD.,
12/A, GIDC Estate Dahej, Taluka: Vagra, Dist: Bharuch

Consultant:
Kadam Environmental Consultants

Title:
Alternate Alignment Route Map

Drawing No.: Map/ 01

Annexure-21

Monthly Report from Industry

Form No D2

Gujarat Pollution Control Board

January , 2017

1. Name & address of Industry : Gujarat Fluorochemicals Limited,
-Plot No. 12 / A Dahej GIDC Industrial Estate,
-Dahej - -392130
DIST : Bharuch, TAL : Vagra, SIDC : Dahej

PCB ID : 15136

2. Phone No. : 02641618090

3. Date of commencement of Manufacturing process : 10/09/2009

4. CTEs No. & Date : CEP-117035,07/12/2028

5. CCA No . & Date of Expiry : AWH-118244, 15/02/2027

6. Water Cess (with Interest) paid up to which Period : 2017-2018

7. Laboratory charges pending if any : 0

8. Water consumed during the month (by all sources)in KL : Meter Reading=7355145,Kilo Litre=318846
Water Cess Cooling Boiler/Dom/BIO Degrable/Non BIO Degrable : 210439 / 6377 / 102030 / 0

9. Electricity consumed in PRODUCTION : 45203134 **ETP/CETP :** 45977 **APCM :** 0

9A. Stack attached to : Boiler,D.G. Sets,Furnace,.... Any Other

10. Fuel consumed during the month : Coal

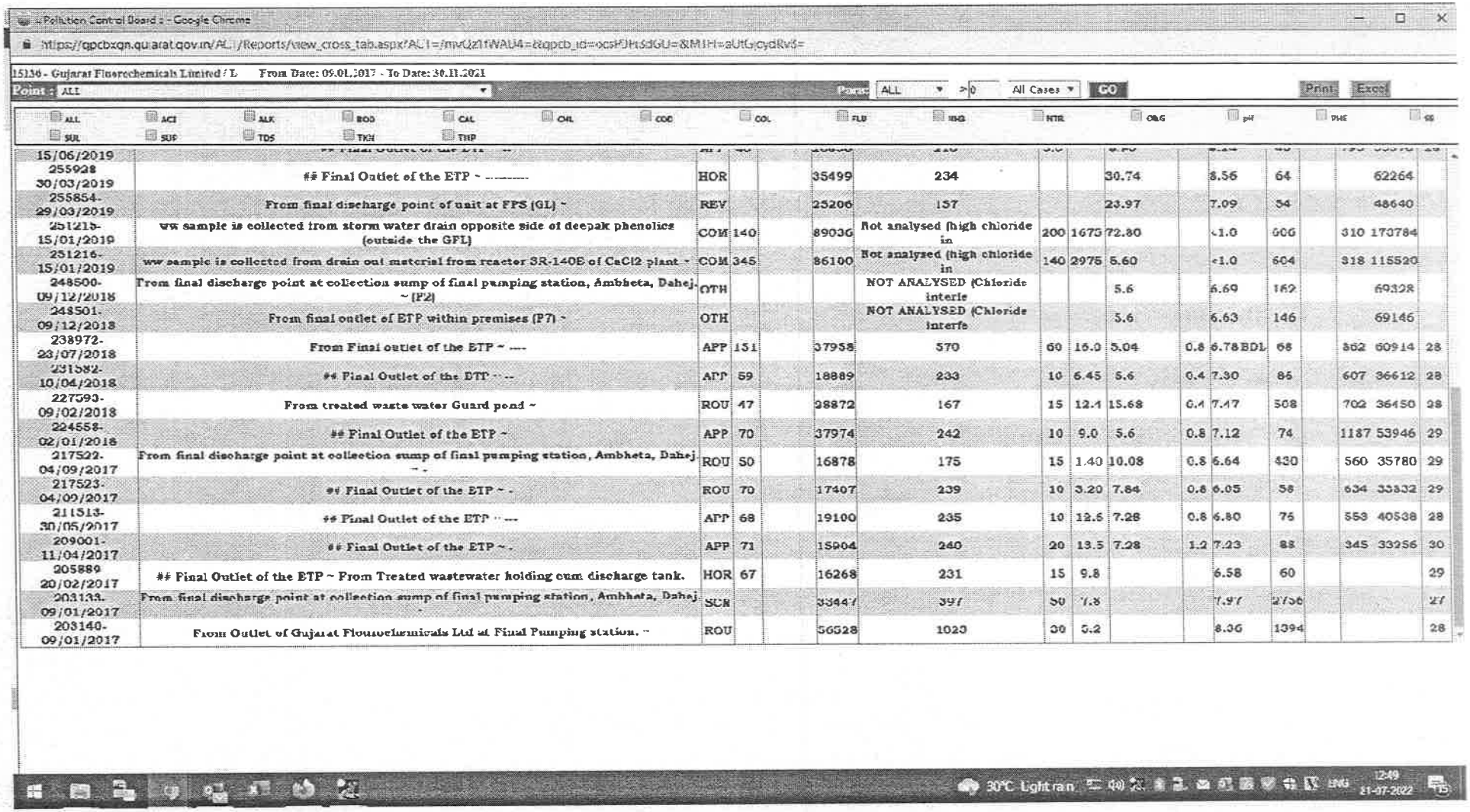
11. Products : carbon tetra chloride (99.5 %),caustic soda (dry basis),chlorine (dry basis),chloroform,fkm 26/246,fluorinated ethylene propylene (fep),gypsum,hexa fluoro propylene (hfp),hydro chloric acid (100 %),methylene dichloride,poly tetra fluoro ethelene (ptfe),sodium hypochlorite in terms of 10% chlorine),sulphuric acid 70% to 88 %

12. Work of Control Measures In Progress : Any other control technique,APCM Up gradation ,ETP Up gradation ,Reduction or safe treatment plant for COD,color,toxicity,solvent,acid etc,Solid Waste reduction or safe disposal method

13. Upgradation / Addition of PCM is Required : ETP

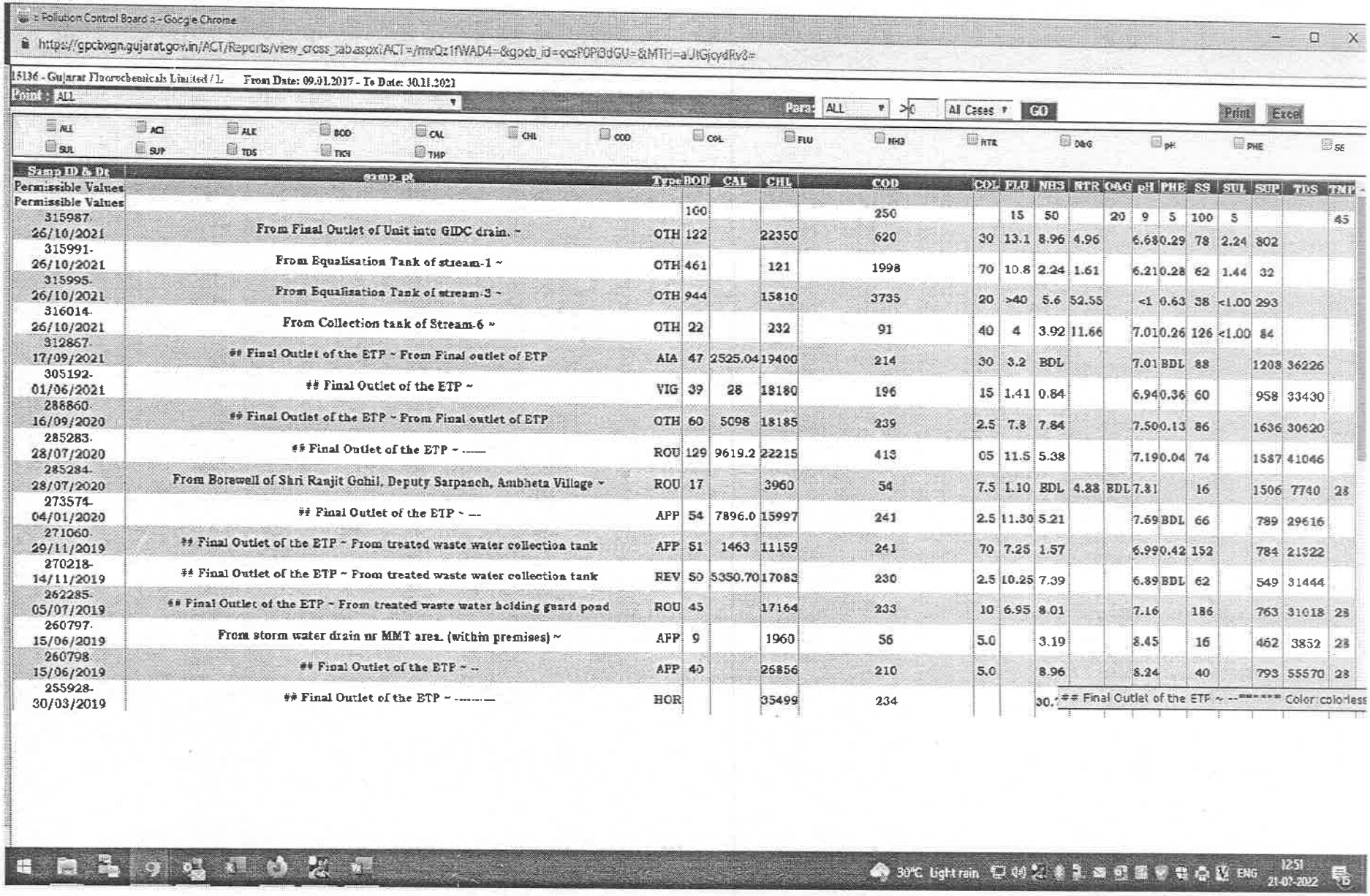
14. HAZ Waste Disposal(in Metric Tonne): Trucks despatched=78

Annexure :-22



15/06/2019 255928 30/03/2019	## Final Outlet of the ETP ~ ----------	HOR			35499	234			30.74		8.56	64		62264				
255854-29/03/2019	From final discharge point of unit at FPS (GL) ~	REV			25206	157			23.97		7.09	54		48640				
251215-15/01/2019	ww sample is collected from storm water drain opposite side of deepak phenolics (outside the GFL)	COM	140		89036	Not analysed (high chloride in	200	1675	72.80		<1.0	606		310	173784			
251216-15/01/2019	ww sample is collected from drain out material from reactor 3R-140E of CaCl2 plant ~	COM	345		86100	Not analysed (high chloride in	140	2975	5.60		<1.0	604		318	115520			
248500-09/12/2018	From final discharge point at collection sump of final pumping station, Ambheta, Dahej ~ (F2)	OTH				NOT ANALYSED (Chloride interfe			5.6		6.69	162			69328			
248501-09/12/2018	From final outlet of ETP within premises (P7) ~	OTH				NOT ANALYSED (Chloride interfe			5.6		6.63	146			69146			
238972-23/07/2018	From Final outlet of the ETP ~ ----	APP	151		37958	570	60	16.0	5.04	0.8	6.78	BDL	68	362	60914	28		
231582-10/04/2018	## Final Outlet of the ETP ~ --	APP	59		18889	233	10	6.45	5.6	0.4	7.30		86	607	36612	28		
227593-09/02/2018	From treated waste water Guard pond ~	ROU	47		28872	167	15	12.1	15.68	0.4	7.47		508	702	36450	28		
224558-02/01/2018	## Final Outlet of the ETP ~	APP	70		37974	242	10	9.0	5.6	0.8	7.12		74	1187	53946	29		
217522-04/09/2017	From final discharge point at collection sump of final pumping station, Ambheta, Dahej ~	ROU	50		16878	175	15	1.40	10.08	0.8	6.64		430	560	35780	29		
217523-04/09/2017	## Final Outlet of the ETP ~	ROU	70		17407	239	10	3.20	7.84	0.8	6.05		58	634	33832	29		
211513-30/05/2017	## Final Outlet of the ETP ~ ---	APP	68		19100	235	10	12.6	7.28	0.8	6.80		76	553	40538	28		
209001-11/04/2017	## Final Outlet of the ETP ~	APP	71		15904	240	20	13.5	7.28	1.2	7.23		88	345	33256	30		
205889 20/02/2017	## Final Outlet of the ETP ~ From Treated wastewater holding cum discharge tank.	HOR	67		16268	231	15	9.8			6.58		60			29		
203133-09/01/2017	From final discharge point at collection sump of final pumping station, Ambheta, Dahej	SUR			33447	397	50	7.8			7.97		2756			27		
203140-09/01/2017	From Outlet of Gujarat Fluorochemicals Ltd at Final Pumping station. ~	ROU			56528	1020	30	5.2			8.36		1394			28		

5830



: Pollution Control Board a - Google Chrome

https://gpcbxgn.gujarat.gov.in/ACT/Reports/view_cross_tab.aspx?ACT=/mvQz1fWAD4=&gpcb_id=ocsP0P0dGU=&MTH=aJtGjoydRv0=

15136 - Gujarat Fluorochemicals Limited / L From Date: 09.01.2017 - To Date: 30.11.2021

Print : ALL Para: ALL >0 All Cases GO Print Excel

ALL ACI ALK BOD CAL CHL COD COL FLU NH3 NTR O&G pH PHE SS SUL SUP TDS TKN THP

Samp ID & Dt	Samp_pt	Type	BOD	CAL	CHL	COD	COL	FLU	NH3	NTR	O&G	pH	PHE	SS	SUL	SUP	TDS	TMP
Permissible Values			100			250		15	50		20	9	5	100	5			45
315987-26/10/2021	From Final Outlet of Unit into GIDC drain. ~	OTH	122		22350	620	30	13.1	8.96	4.96		6.68	0.29	78	2.24	802		
315991-26/10/2021	From Equalisation Tank of stream-1 ~	OTH	461		121	1998	70	10.8	2.24	1.61		6.21	0.28	62	1.44	32		
315995-26/10/2021	From Equalisation Tank of stream-3 ~	OTH	944		15810	3735	20	>40	5.6	52.55		<1	0.63	38	<1.00	293		
316014-26/10/2021	From Collection tank of Stream-6 ~	OTH	22		232	91	40	4	3.92	11.66		7.01	0.26	126	<1.00	84		
312867-17/09/2021	## Final Outlet of the ETP ~ From Final outlet of ETP	AIA	47	2525.04	19400	214	30	3.2	BDL			7.01	BDL	88		1208	36226	
305192-01/06/2021	## Final Outlet of the ETP ~	VIG	39	28	18180	196	15	1.41	0.84			6.94	0.36	60		958	33430	
288860-16/09/2020	## Final Outlet of the ETP ~ From Final outlet of ETP	OTH	60	5098	18185	239	2.5	7.8	7.84			7.50	0.13	86		1636	30620	
285283-28/07/2020	## Final Outlet of the ETP ~ .——	ROU	129	9619.2	22215	413	05	11.5	5.38			7.19	0.04	74		1587	41046	
285284-28/07/2020	From Borewell of Shri Ranjit Gohil, Deputy Sarpanch, Ambheta Village ~	ROU	17		3960	54	7.5	1.10	BDL	4.88	BDL	7.81		16		1506	7740	28
273574-04/01/2020	## Final Outlet of the ETP ~ --	APP	54	7896.0	15997	241	2.5	11.30	5.21			7.69	BDL	66		789	29616	
271060-29/11/2019	## Final Outlet of the ETP ~ From treated waste water collection tank	APP	51	1463	11159	241	70	7.25	1.57			6.99	0.42	152		784	21322	
270218-14/11/2019	## Final Outlet of the ETP ~ From treated waste water collection tank	REV	50	5350.70	17083	230	2.5	10.25	7.39			6.89	BDL	62		549	31444	
262285-05/07/2019	## Final Outlet of the ETP ~ From treated waste water holding guard pond	ROU	45		17164	233	10	6.95	8.01			7.16		186		763	31018	28
260797-15/06/2019	From storm water drain nr MMT area. (within premises) ~	APP	9		1960	56	5.0		3.19			8.45		16		462	3852	28
260798-15/06/2019	## Final Outlet of the ETP ~ ..	APP	40		26856	210	5.0		8.96			8.24		40		793	55570	28
255928-30/03/2019	## Final Outlet of the ETP ~ ———	HOR			35499	234			30.									

Final Outlet of the ETP ~ -- Color: colorless

30°C Light rain ENG 12:51 21-07-2022

5831

5832

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:211513 - Analysis Completion:16/06/2017

Organic Chemicals manufacturing / LAB Inward : 31124

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 31124

Date: 30/06/2017

1. Name of the Customer	: Gujarat Fluorochemicals Limited - 15136
2. Address	: 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample	: REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By	: L. M. Ahir, AEE
5. Quantity of Sample Received	: 5lts
6. Code No. of the Sample	: 211513
7. Date & Time of Collection & Inwarding	: 30/05/2017 , (1450 to 1450) & 31/05/2017
8. Date of Start & Completion of Analysis	: 31/05/2017 & 16/06/2017
9. Sampling Point	: ## Final Outlet of the ETP ~ --
10. Flow Details (Remarks)	: --
11. Mode of Disposal	: Through pipeline into final pumping station
12. Ultimate Receiving Body	: Sea
13. Temperature on Collection	: 28 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for	: barcode & Color & Appearance :colorless
	: Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD)	: 12 ,Cap No & Weight : --

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	28
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	6.80
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	10
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	40538
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	76
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	7.28
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	19100
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	553
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	235
10	Oil & Grease	mg/l	Liquid – Liquid Partition Gravimetric method. (5520 B	01 – 1000 mg/l	0.8
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	12.6
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	68

Laboratory Remarks : freeze By:436-lab_436 Dt.: 30/06/2017

H.C. Solanki, Lab Head

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

5833

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:217523 - Analysis Completion:12/10/2017

Organic Chemicals manufacturing / LAB Inward : 32012

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 32012

Date: 16/10/2017

1. Name of the Customer	: Gujarat Fluorochemicals Limited - 15136
2. Address	: 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample	: REP-Representative/Grab, (Insp Type : ROU-Routine Visit)
4. Sample Collected By	: H.C. Solanki, Lab Head
5. Quantity of Sample Received	: 5lt
6. Code No. of the Sample	: 217523
7. Date & Time of Collection & Inwarding	: 04/09/2017 , (2355 to 2355) & 05/09/2017
8. Date of Start & Completion of Analysis	: 11/09/2017 & 12/10/2017
9. Sampling Point	: ## Final Outlet of the ETP ~ -
10. Flow Details (Remarks)	: —
11. Mode of Disposal	: GIDC underground effluent pipeline
12. Ultimate Receiving Body	: Sea
13. Temperature on Collection	: 29 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for	: 4 & Color & Appearance :colorless
15. Water Consumption & W.W.G (KLPD)	: Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
	: 12 ,Cap No & Weight :

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	29
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	6.05
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	10
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	33832
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	58
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	7.84
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	17407
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	634
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	239
10	Oil & Grease	mg/l	Liquid – Liquid Partition Gravimetric method. (5520 B	01 – 1000 mg/l	0.8
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	3.20
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	70

Laboratory Remarks : Freezed By:210-vig_210 Dt.: 16/10/2017

K. I. Karelia,SO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

14/05/2022 20:03:09

*** END OF TEST REPORT ***

5834

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:217522 - Analysis Completion:12/10/2017

Organic Chemicals manufacturing / LAB Inward : 32016

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 32016 Date: 16/10/2017

1. Name of the Customer	: Gujarat Fluorochemicals Limited - 15136
2. Address	: 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample	: REP-Representative/Grab, (Insp Type : ROU-Routine Visit)
4. Sample Collected By	: H.C. Solanki, Lab Head
5. Quantity of Sample Received	: 5lt
6. Code No. of the Sample	: 217522
7. Date & Time of Collection & Inwarding	: 04/09/2017 , (2325 to 2325) & 06/09/2017
8. Date of Start & Completion of Analysis	: 11/09/2017 & 12/10/2017
9. Sampling Point	: From final discharge point at collection sump of final pumping station, Ambheta, Dahej. ~ -
10. Flow Details (Remarks)	: —
11. Mode of Disposal	: GIDC underground effluent pipeline
12. Ultimate Receiving Body	: Sea
13. Temperature on Collection	: 29 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for	: 2 & Color & Appearance :Milky white
15. Water Consumption & W.W.G (KLPD)	: Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	29
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	6.64
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	15
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	35780
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	430
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	10.08
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	16878
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	560
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	175
10	Oil & Grease	mg/l	Liquid – Liquid Partition Gravimetric method. (5520 B	01 – 1000 mg/l	0.8
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	1.40
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	50

Laboratory Remarks : Freezed By:210-vig_210 Dt.: 16/10/2017

K. I. Karelia,SO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

14/05/2022 20:03:36

*** END OF TEST REPORT ***

5835

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:224558 - Analysis Completion:20/01/2018

Organic Chemicals manufacturing / LAB Inward : 32960

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 32960

Date: 20/01/2018

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej–392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By : Bhumika A. Bhuva, AEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 224558
7. Date & Time of Collection & Inwarding : 02/01/2018 , (1400 to 1400) & 03/01/2018
8. Date of Start & Completion of Analysis : 03/01/2018 & 20/01/2018
9. Sampling Point : ## Final Outlet of the ETP ~
10. Flow Details (Remarks) : —
11. Mode of Disposal : GIDC u/g drainage system
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 29 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for : Barcode & Color & Appearance :colorless
15. Water Consumption & W.W.G (KLPD) : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000 : 12 ,Cap No & Weight :

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	29
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.12
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	10
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	53946
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	74
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	5.6
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	37974
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	1187
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	242
10	Oil & Grease	mg/l	Liquid – Liquid Partition Gravimetric method. (5520 B	01 – 1000 mg/l	0.8
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	9.0
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	70

Laboratory Remarks : FREEZED By:210-vig_210 Dt.: 20/01/2018

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

14/05/2022 20:04:10

*** END OF TEST REPORT ***

5836

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:227593 - Analysis Completion:05/03/2018

Organic Chemicals manufacturing / LAB Inward : 33387

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 33387 **Date: 05/03/2018**

1. Name of the Customer	: Gujarat Fluorochemicals Limited - 15136
2. Address	: 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample	: REP-Representative/Grab, (Insp Type : ROU-Routine Visit)
4. Sample Collected By	: Bhumika A. Bhuva, AEE
5. Quantity of Sample Received	: 5lit
6. Code No. of the Sample	: 227593
7. Date & Time of Collection & Inwarding	: 09/02/2018 , (1420 to 1420) & 14/02/2018
8. Date of Start & Completion of Analysis	: 15/02/2018 & 05/03/2018
9. Sampling Point	: From treated waste water Guard pond ~ ---
10. Flow Details (Remarks)	: --
11. Mode of Disposal	: Through underground pipeline into FPS.
12. Ultimate Receiving Body	: Sea
13. Temperature on Collection	: 28 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for	: Barcode & Color & Appearance :Light Yellowish
	: Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD)	: 12 ,Cap No & Weight : ---

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	28
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.47
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	15
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	36450
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	508
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	15.68
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	28872
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	702
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	167
10	Oil & Grease	mg/l	Liquid – Liquid Partition Gravimetric method. (5520 B	01 – 1000 mg/l	0.4
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	12.4
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05--50000 mg/l	47

Laboratory Remarks : Freezed By:210-vig_210 Dt.: 05/03/2018

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

5837

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:231582 - Analysis Completion:05/05/2018

Organic Chemicals manufacturing / LAB Inward : 33992

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 33992

Date: 08/05/2018

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By : Vijay K. Patel, AEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 231582
7. Date & Time of Collection & Inwarding : 10/04/2018 , (1320 to 1320) & 12/04/2018
8. Date of Start & Completion of Analysis : 12/04/2018 & 05/05/2018
9. Sampling Point : ## Final Outlet of the ETP ~ --
10. Flow Details (Remarks) : ---
11. Mode of Disposal : Through GIDC underground line.
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 28 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for : barcode & Color & Appearance :Light Yellowish
    : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD) : 12 ,Cap No & Weight : ----

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	28
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.30
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	10
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Metho	10 – 200000 mg/L	36612
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Metho	2 – 10000 mg/L	86
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	5.6
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	18889
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	607
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2	5.0- 50000 mg/l	233
10	Oil & Grease	mg/l	Liquid – Liquid Partition Gravimetric method. (5520 B	01 – 1000 mg/l	0.4
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	6.45
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	59

Laboratory Remarks : freezed By:210-vig_210 Dt.: 08/05/2018

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

5838

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:248500 - Analysis Completion:11/12/2018

Organic Chemicals manufacturing / LAB Inward : 36511

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 36511 Date: 11/12/2018

1. Name of the Customer	: Gujarat Fluorochemicals Limited - 15136
2. Address	: 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample	: REP-Representative/Grab, (Insp Type : OTH-Others/Higher Authority)
4. Sample Collected By	: R.R.Vyas, R.O Head
5. Quantity of Sample Received	: 2 lit
6. Code No. of the Sample	: 248500
7. Date & Time of Collection & Inwarding	: 09/12/2018 , (1645 to 1645) & 10/12/2018
8. Date of Start & Completion of Analysis	: 10/12/2018 & 11/12/2018
9. Sampling Point	: From final discharge point at collection sump of final pumping station, Ambheta, Dahej. ~ (P2)
10. Flow Details (Remarks)	: ---
11. Mode of Disposal	: individual drainage pipeline to Final Pumping station at
12. Ultimate Receiving Body	: Sea
13. Temperature on Collection	: 29 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for	: Barcode & Color & Appearance :Slight turbid
15. Water Consumption & W.W.G (KLPD)	: Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	6.69
2	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	69328
3	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	162
4	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	5.6
5	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	LYSED (Chlor

Laboratory Remarks : freezed. Not Analyzed due to high chloride interference By:210-vig_210
Dt.: 11/12/2018

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

5839

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:255854 - Analysis Completion:31/03/2019

Organic Chemicals manufacturing / LAB Inward : 37597

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 37597

Date: 31/03/2019

1. Name of the Customer	: Gujarat Fluorochemicals Limited - 15136
2. Address	: 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej–392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample	: REP-Representative/Grab, (Insp Type : REV-On/For Revocation)
4. Sample Collected By	: A.V.Shah, Unit Head
5. Quantity of Sample Received	: 2 Lit
6. Code No. of the Sample	: 255854
7. Date & Time of Collection & Inwarding	: 29/03/2019 , (2315 to 2315) & 30/03/2019
8. Date of Start & Completion of Analysis	: 30/03/2019 & 31/03/2019
9. Sampling Point	: From final discharge point of unit at FPS (GL) ~
10. Flow Details (Remarks)	: —
11. Mode of Disposal	: Through GIDC underground line.
12. Ultimate Receiving Body	: Sea
13. Temperature on Collection	: 28 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for	: barcode & Color & Appearance :Yellowish
	: Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD)	: 6 ,Cap No & Weight : —

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.09
2	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	48640
3	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	54
4	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	23.97
5	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	25206
6	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	157

Laboratory Remarks : freezed By:210-vig_210 Dt.: 31/03/2019

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

5840

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:260798 - Analysis Completion:29/06/2019

Organic Chemicals manufacturing / LAB Inward : 38261

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 38261 **Date: 29/06/2019**

1. Name of the Customer	: Gujarat Fluorochemicals Limited - 15136
2. Address	: 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej–392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample	: REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By	: Vijay K. Patel, AEE
5. Quantity of Sample Received	: 5 lit
6. Code No. of the Sample	: 260798
7. Date & Time of Collection & Inwarding	: 15/06/2019 , (1535 to 1535) & 17/06/2019
8. Date of Start & Completion of Analysis	: 17/06/2019 & 29/06/2019
9. Sampling Point	: ## Final Outlet of the ETP ~ --
10. Flow Details (Remarks)	: —
11. Mode of Disposal	: Through GIDC underground line.
12. Ultimate Receiving Body	: Sea
13. Temperature on Collection	: 28 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for	: barcode & Color & Appearance :colorless
	: Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD)	: 10 ,Cap No & Weight : ----

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	28
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	8.24
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	5.0
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	55570
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	40
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	8.96
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	26856
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	793
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	210
10	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	40

Laboratory Remarks : freezed By:210-vig_210 Dt.: 29/06/2019

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

14/05/2022 20:11:11

5841

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:262285 - Analysis Completion:20/07/2019

Organic Chemicals manufacturing / LAB Inward : 38610

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 38610 **Date: 20/07/2019**

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej–392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : ROU-Routine Visit)
4. Sample Collected By : Bhumika A. Bhuva, AEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 262285
7. Date & Time of Collection & Inwarding : 05/07/2019 , (1540 to 1545) & 06/07/2019
8. Date of Start & Completion of Analysis : 06/07/2019 & 20/07/2019
9. Sampling Point : ## Final Outlet of the ETP ~ From treated waste water holding guard pond
10. Flow Details (Remarks) : —
11. Mode of Disposal : GIDC u/g drainage
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 28 & pH Range on pH Strip :@ 7 to 8 on pH strip
14. Carboys Nos for : Barcode & Color & Appearance :tinge yellow
15. Water Consumption & W.W.G (KLPD) : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	28
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.16
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	10
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	31018
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	186
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	8.01
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	17164
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	763
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	233
10	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	6.95
11	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	45

Laboratory Remarks : freezed By:210-vig_210 Dt.: 20/07/2019

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

14/05/2022 20:11:51

5842

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:270218 - Analysis Completion:25/11/2019

Organic Chemicals manufacturing / LAB Inward : 39721

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 39721 Date: 25/11/2019

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : REV-On/For Revocation)
4. Sample Collected By : Vijay K. Patel, AEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 270218
7. Date & Time of Collection & Inwarding : 14/11/2019 , (1500 to 1500) & 15/11/2019
8. Date of Start & Completion of Analysis : 15/11/2019 & 25/11/2019
9. Sampling Point : ## Final Outlet of the ETP ~ From treated waste water collection tank
10. Flow Details (Remarks) : —
11. Mode of Disposal : Through GIDC underground line.
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 28 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for : Barcode & Color & Appearance :Yellowish tinge
    : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD) : 12 ,Cap No & Weight : ---

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	6.89
2	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	2.5
3	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	31444
4	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	62
5	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	7.39
6	Calcium	mg/l	Ethylene Diamine Tetra Acetic Acid (EDTA) Titrimetric	1-5000 mg/l	5350.70
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	17083
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	549
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	230
10	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	BDL
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	10.25
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirmed	05–50000 mg/l	50

Laboratory Remarks : freezed By:210-vig_210 Dt.: 25/11/2019

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

5843

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:271060 - Analysis Completion:17/12/2019

Organic Chemicals manufacturing / LAB Inward : 39809

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 39809 Date: 17/12/2019

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By : Shri B.D.Prasad,DEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 271060
7. Date & Time of Collection & Inwarding : 29/11/2019 , (1325 to 1325) & 02/12/2019
8. Date of Start & Completion of Analysis : 02/12/2019 & 17/12/2019
9. Sampling Point : ## Final Outlet of the ETP ~ From treated waste water collection tank
10. Flow Details (Remarks) : —
11. Mode of Disposal : Through GIDC underground line.
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 28 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for : Barcode & Color & Appearance :Light Brown
    : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD) : 12 ,Cap No & Weight : ---

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	6.99
2	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	70
3	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Methoc	10 – 200000 mg/L	21322
4	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Methoc	2 – 10000 mg/L	152
5	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	1.57
6	Calcium	mg/l	Ethylene Diamine Tetra Acetic Acid (EDTA) Titrimetric	1-5000 mg/l	1463
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	11159
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	784
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	241
10	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	0.42
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	7.25
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme(	05–50000 mg/l	51

Laboratory Remarks : freezed By:210-vig_210 Dt.: 17/12/2019

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

5844

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:273574 - Analysis Completion:20/01/2020

Organic Chemicals manufacturing / LAB Inward : 40131

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 40131 Date: 23/01/2020

1. Name of the Customer	: Gujarat Fluorochemicals Limited - 15136
2. Address	: 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample	: REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By	: Shri B.D.Prasad,DEE
5. Quantity of Sample Received	: 5 Lit
6. Code No. of the Sample	: 273574
7. Date & Time of Collection & Inwarding	: 04/01/2020 , (1320 to 1320) & 06/01/2020
8. Date of Start & Completion of Analysis	: 06/01/2020 & 20/01/2020
9. Sampling Point	: ## Final Outlet of the ETP ~ ---
10. Flow Details (Remarks)	: ---
11. Mode of Disposal	: gidc effluent conveyance pipeline
12. Ultimate Receiving Body	: Sea
13. Temperature on Collection	: 28 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for	: barcode & Color & Appearance :colorless
	: Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD)	: 12 ,Cap No & Weight : —

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.69
2	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	2.5
3	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	29616
4	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	66
5	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	5.21
6	Calcium	mg/l	Ethylene Diamine Tetra Acetic Acid (EDTA) Titrimetric	1-5000 mg/l	7896.0
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	15997
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	789
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	241
10	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	BDL
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	11.30
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	54

Laboratory Remarks : Freezed By:210-vig_210 Dt.: 23/01/2020

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

5845

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:288860 - Analysis Completion:07/10/2020

Organic Chemicals manufacturing / LAB Inward : 41998

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 41998 Date: 07/10/2020

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : OTH-Others/Higher Authority)
4. Sample Collected By : Shri Niraj Patel
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 288860
7. Date & Time of Collection & Inwarding : 16/09/2020 , (1715 to 1718) & 17/09/2020
8. Date of Start & Completion of Analysis : 18/09/2020 & 07/10/2020
9. Sampling Point : ## Final Outlet of the ETP ~ From Final outlet of ETP
10. Flow Details (Remarks) : ---
11. Mode of Disposal : disposal to the GIDC pipeline/common disposal system ut to sea
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : & pH Range on pH Strip :@7-8 on pH Strip
14. Carboys Nos for : Bar code & Color & Appearance :turbide
    : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD) : 12 ,Cap No & Weight :

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.50
2	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	2.5
3	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	30620
4	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	86
5	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	7.84
6	Calcium	mg/l	Ethylene Diamine Tetra Acetic Acid (EDTA) Titrimetric	1-5000 mg/l	5098
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	18185
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	1636
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	239
10	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	0.13
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	7.8
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	60

Laboratory Remarks : Approved By:236-lab_236 Dt.: 07/10/2020

D. N. Vasadia, Lab Head

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

5846

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:305192 - Analysis Completion:01/07/2021

Organic Chemicals manufacturing / LAB Inward : 79959

Gujarat Pollution Control Board, Central Laboratory
Paryavaran Bhavan
Sector-10A
Gandhinagar-382010
Tele:23222756

TEST REPORT

Test Report No. : 79959 Date: 01/07/2021

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej–392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : VIG-By Vigilance Team)
4. Sample Collected By : J.M. Mahida, D.E.E
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 305192
7. Date & Time of Collection & Inwarding : 01/06/2021 , (1310 to 1310) & 03/06/2021
8. Date of Start & Completion of Analysis : 04/06/2021 & 01/07/2021
9. Sampling Point : ## Final Outlet of the ETP ~
10. Flow Details (Remarks) :
11. Mode of Disposal : into final pumping station of GIDC through pieline
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 30 & pH Range on pH Strip :7 to 8
14. Carboys Nos for : & Color & Appearance :Light yellow
15. Water Consumption & W.W.G (KLPD) : Ind :13306.720 , Dom :52.500 & Ind :4406.000 , Dom :45.000

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 22nd edi.2012	1 – 14 pH value As or	6.94
2	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	15
3	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	33430
4	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	60
5	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standar	1 - 2000 mg/l.	0.84
6	Calcium	mg/l	Ethylene Diamine Tetra Acetic Acid (EDTA) Titrimetric	1-5000 mg/l	28
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	18180
8	Sulphate	mg/l	APHA(22nd edi)4500 SO4 E	2-40mg/l	958
9	Chemical Oxygen Demand	mg/l	APHA (22nd Edition)- 5220 B Open Reflux Method-2	5.0- 50000 mg/l	196
10	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	0.36
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	1.41
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirmed	05–50000 mg/l	39

Laboratory Remarks : Approved. By:682-aee_682 Dt.: 01/07/2021

Dr. S. N. Agravat

Field Observation :

Note :

1. * - These parameters are NOT covered under the scope of NABL.
2. The results refer only to the tested samples and applicable parameters. Endorsement of products is neither inferred nor implied.
3. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
4. This report Is not to be reproduced wholly or in part or used in any advertising media without the permission of the Board in writing.
5. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
6. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report Is subject to Gujarat Jurisdiction only.
7. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
8. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23rd Edition by APHA.
9. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

17/07/2021 17:18:17

5847

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:312867 - Analysis Completion:06/10/2021

Organic Chemicals manufacturing / LAB Inward : 45346

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 45346 **Date: 06/10/2021**

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej–392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : AIA-Automated Insp /Random)
4. Sample Collected By : Shri Niraj Patel , DEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 312867
7. Date & Time of Collection & Inwarding : 17/09/2021 , (1500 to 1505) & 18/09/2021
8. Date of Start & Completion of Analysis : 18/09/2021 & 06/10/2021
9. Sampling Point : ## Final Outlet of the ETP ~ From Final outlet of ETP
10. Flow Details (Remarks) : –
11. Mode of Disposal : into GIDC u/g drain
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : & pH Range on pH Strip :@7-8 on pH strip
14. Carboys Nos for : Barcode & Color & Appearance :light yellowish
    : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD) : 12 ,Cap No & Weight :

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.01
2	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	30
3	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Metho	10 – 200000 mg/L	36226
4	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	88
5	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	BDL
6	Calcium	mg/l	Ethylene Diamine Tetra Acetic Acid (EDTA) Titrimetric	1-5000 mg/l	2525.04
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	19400
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	1208
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	214
10	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	BDL
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	3.2
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	47

Laboratory Remarks : Approved By:399-lab_399 Dt.: 06/10/2021

R.C.VASAVA,S.O

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

5848

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:319283 - Analysis Completion:28/12/2021

Organic Chemicals manufacturing / LAB Inward : 46219

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 46219 Date: 28/12/2021

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej–392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By : Shri B.D.Prasad,DEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 319283
7. Date & Time of Collection & Inwarding : 09/12/2021 , (1850 to 1855) & 10/12/2021
8. Date of Start & Completion of Analysis : 10/12/2021 & 28/12/2021
9. Sampling Point : ## Final Outlet of the ETP~-
10. Flow Details (Remarks) : —
11. Mode of Disposal : Gidc drainage
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 29 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for : Barcode & Color & Appearance :Faint Yellowish
    : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD) : 13 ,Cap No & Weight :

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	6.54
2	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	05
3	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Metho	2 – 10000 mg/L	70
4	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	10.64
5	Total Kjeldahl Nitrogen	mg/l	Titrimetric method followed by preliminary distillation	1 – 5000 mg/l	14
6	Nitrate	mg/l	Cadmium reduction method As per Spectrophotometr	0.005 – 100 mg/l	3.41
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	30345
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	1106
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	202
10	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	< 0.1
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	5.65
12	Sulphide	mg/l	APHA (23rd Edi.)4500-s2-F –iodometric Method	1-500.0 mg/l	p.nil
13	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	32

Laboratory Remarks : Approved By:399-lab_399 Dt.: 28/12/2021

R.C.VASASVA,S.O

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the involced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

5849

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:324582 - Analysis Completion:04/03/2022

Organic Chemicals manufacturing / LAB Inward : 46945

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 46945 Date: 05/03/2022

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej–392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By : Shri Niraj Patel , DEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 324582
7. Date & Time of Collection & Inwarding : 22/02/2022 , (1210 to 1215) & 23/02/2022
8. Date of Start & Completion of Analysis : 23/02/2022 & 04/03/2022
9. Sampling Point : ## Final Outlet of the ETP ~ From Final outlet of ETP
10. Flow Details (Remarks) : –
11. Mode of Disposal : into sea through GIDC pipeline
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 29 & pH Range on pH Strip :@6-7 on pH strip
14. Carboys Nos for : & Color & Appearance :Colourless
    : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD) : 13 ,Cap No & Weight :

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	6.97
2	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	05
3	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	62
4	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	12.32
5	Total Kjeldahl Nitrogen	mg/l	Titrimetric method followed by preliminary distillation	1 – 5000 mg/l	15.68
6	Nitrate	mg/l	Cadmium reduction method As per Spectrophotometr	0.005 – 100 mg/l	3.20
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	37575
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	877
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	190
10	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	BDL
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	1.16
12	Sulphide	mg/l	APHA (23rd Edi.)4500-s2-F –iodometric Method	1-500.0 mg/l	p.nil
13	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	44

Laboratory Remarks : Approved By:399-lab_399 Dt.: 05/03/2022

R.C.VASAVA,S.O

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

Annexure - 18

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 021.
Website : www.gpcb.gov.in

GPCB

R.P.A.D

DIRECTION UNDER SECTION 33-A OF THE WATER (PREVENTION AND CONTROL OF POLLUTION) Act-1974 (HEREINAFTER REFERRED TO AS THE WATER ACT) AS AMENDED FROM TIME TO TIME.

WHEREAS you GUJARAT FLUOROCHEMICALS LTD are having an industrial plant for manufacturing of Poly Tetra Fluoro Ethylene (PTFE), Methylene Dichloride (MDC), Carbon Tetrachloride (CTC) etc at PLOT NO 12-A, DAHEJ GIDC INDUSTRIAL ESTATE, DAHEJ-392 130, TAL: VAGRA, DIST: BHARUCH.

AND WHEREAS the Gujarat Pollution Control Board has granted you Consolidated Consent and Authorization (CC & A) under the provisions of the Environmental Acts/Rules by its Consent Order No. AWH-85503 Dated 25/04/2017 which was valid up to 16/02/2022 for the manufacture of above said product subject to the conditions mentioned therein.

AND WHEREAS, during the inspection of your industrial plant on 11/01/2019, 15/01/2019 and 18/01/2019 under Section-23 of the Water Act by the authorized officer of the Board, following was observed:

1. Discharge/leakage of effluent is going on through one hole (bakora) in boundary wall of GFL unit to adjacent storm water drainage line. A/R of the sample collected from storm water drain during visit indicates pH- <1, Fluoride- 1675 mg/lit, BOD- 140 mg/lit, S.S.- 606 mg/lit, Ammonical Nitrogen- 72.8 mg/lit, Chloride- 89036 mg/lit, TDS- 173784 mg/lit.
2. You have sold hazardous crude material (SULFOLANE CRUDE) to M/s. Padmavati Chemicals, GIDC Vapi violating conditions prescribed in CCA and without permission of the Board.
3. Selling of HCFC-22/R-22 as product is observed without obtaining permission of the Board.

UNDER THE CIRCUMSTANCES, I A.V.Shah, Senior Environmental Engineer of Gujarat Pollution Control Board is directed to issue the directions under Section –33A of the Water (Prevention and Control of Pollution) Act-1974 as under:-

1. To prohibit you from manufacturing of above said products unless you obtained necessary permission from the Board.
2. To close the operation of your industrial plant on the above mentioned site.
3. To direct the concerned authority to stop supply of electricity and water.
4. This order will be effective with immediate effect.

Outward No: 95416, 30/3/2019

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 021.
Website : www.gpcb.gov.in

GPCB

3. The Deputy Engineer,
O & M, Sub Division,
Dakshin Gujarat Vij Co Ltd,
Maktampur Road, Bharuch.

I am directed to request you to disconnect supply of electricity with immediate effect of date of issue of this order to the industrial plant of M/S. GUJARAT FLUOROCHEMICALS LTD. PLOT NO 12-A, DAHEJ GIDC INDUSTRIAL ESTATE, DAHEJ-392 130, TAL: VAGRA, DIST: BHARUCH & intimate to us accordingly.

For and on behalf of
Gujarat Pollution Control Board

(A.V.Shah)
Senior Environmental Engineer

Outward No:495416,20/02/2019

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 021.
Website : www.gpcb.gov.in

GPCB

BY RPAD

REVOCATION OF CLOSURE DIRECTION ISSUED UNDER SECTION 33-A OF THE WATER (PREVENTION AND CONTROL OF POLLUTION) ACT-1974.

WHEREAS you GUJARAT FLUOROCHEMICALS LTD are having an industrial plant at PLOT NO 12-A, DAHEJ GIDC INDUSTRIAL ESTATE, DAHEJ-392 130, TAL: VAGRA, DIST: BHARUCH.

AND WHEREAS closure direction was issued under Section 33-A of the Water (Prevention and Control of Pollution) Act, 1974, as amended from time to time vide letter No. GPCB/BRCH-B/CCA-1080(14)/ID-15136/495416 dated 20/02/2019.

AND WHEREAS, during the inspection of your industrial plant on 25/02/2019 under Section-23 of the Water Act by the authorized officer of the Board and observed that:

1. The electricity supply was disconnected.
2. You have repaired leakages in pit and 1 meter height of dyke wall is prepared to prevent overflow.
3. You have repaired hole of boundary wall.
4. You have stopped selling of crude Sulfolane and selling of R-22.

AND WHEREAS you have submitted the Bank Guarantee of Rs. 500000/- of ICICI Bank valid upto 20/02/2020.

AND WHEREAS you have submitted undertaking for providing pipeline for sea disposal on Rs.100/- stamp paper dated 26/02/2019.

AND WHEREAS you have submitted undertaking for compliance and corrective measures on Rs.100/- stamp paper dated 23/02/2019.

Outward No: 49609 Dt: 27/02/2019

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 021.
Website : www.gpcb.gov.in

GPCB

2. **The Executive Engineer, (O & M),**
O & M Rural Division,
Dakshin Gujarat Vij Co Ltd,
Maktampur Road, Bharuch.

3. **The Deputy Engineer, (O & M),**
O & M Sub Division,
Dakshin Gujarat Vij Co Ltd,
Maktampur Road, Bharuch.

With a request to Re-connect the supply of electricity with immediate effect from the date of issue of this order of **M/S. GUJARAT FLUOROCHEMICALS LTD PLOT NO 12-A, DAHEJ GIDC INDUSTRIAL ESTATE, DAHEJ-392130, TAL: VAGRA, DIST: BHARUCH** & intimate to us accordingly.

For and on behalf of
Gujarat Pollution Control Board

(A.V.Shah)
Senior Environmental Engineer

Outward No:496094,27/02/2019

GFL®

GUJARAT FLUOROCHEMICALS

VALUE THROUGH GREEN CHEMISTRY

An INOXGFL Group Company

DAHEJ-A GUJARAT INDIA

5854

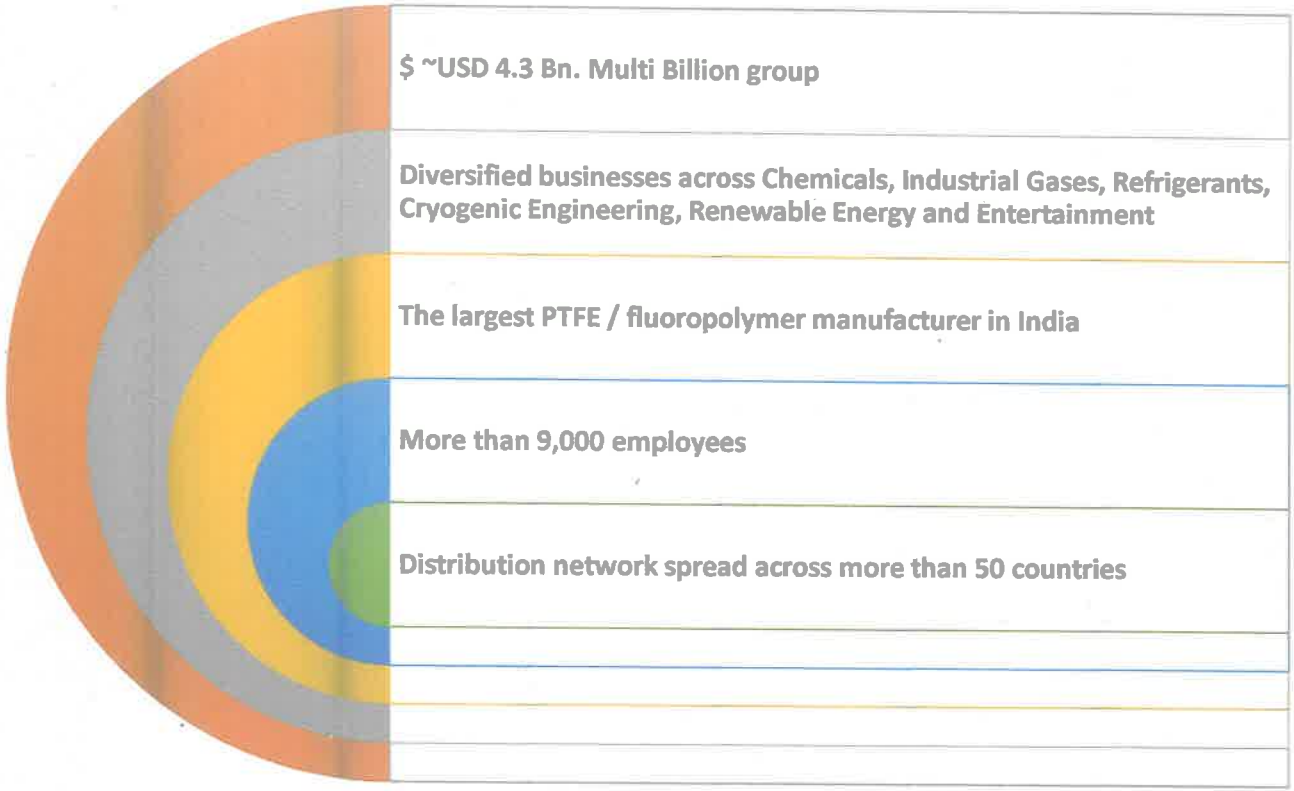
GFCL ev Products Limited

SOLAR & GREEN HYDROGEN GFCL

INOXWIND Greening INDIA

INOXGreen ENERGY SERVICES LIMITED

OVERVIEW

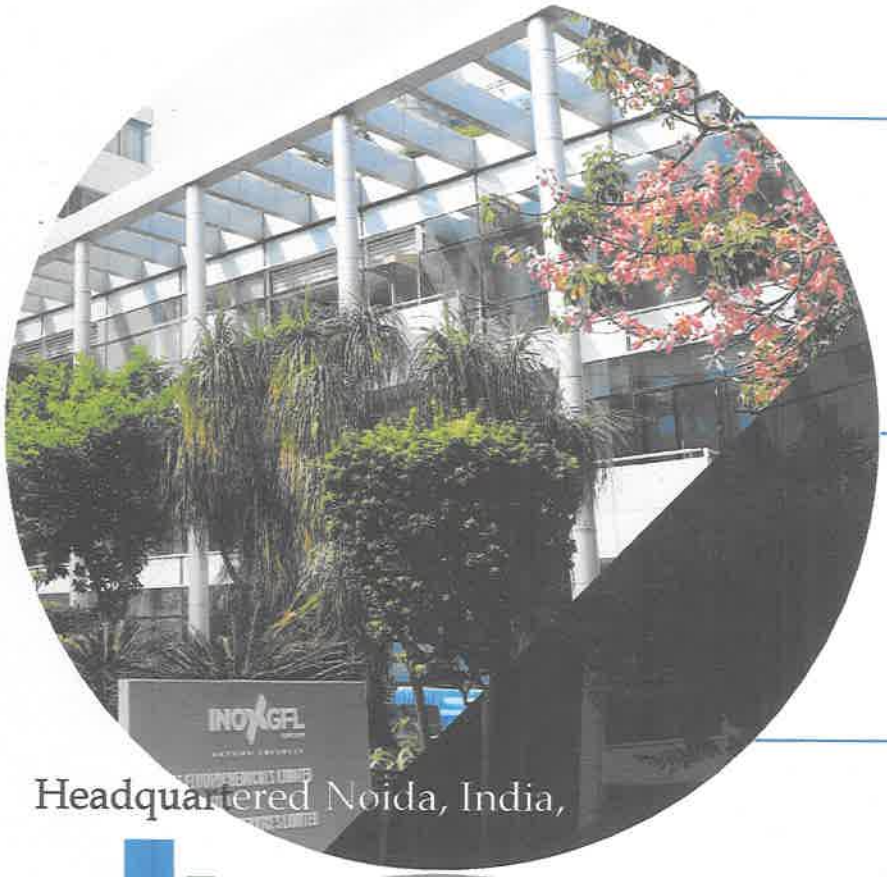


GROUP COMPANIES

5855

ABOUT GFL

Gujarat Fluorochemicals Limited (GFL) is an Indian Chemicals Company with over 30 years of expertise in Fluorine Chemistry.



Headquartered Noida, India,

1989 - commencement of Company's first commercial operations with India's largest Refrigerant manufacturing unit at Ranjit Nagar, Gujarat

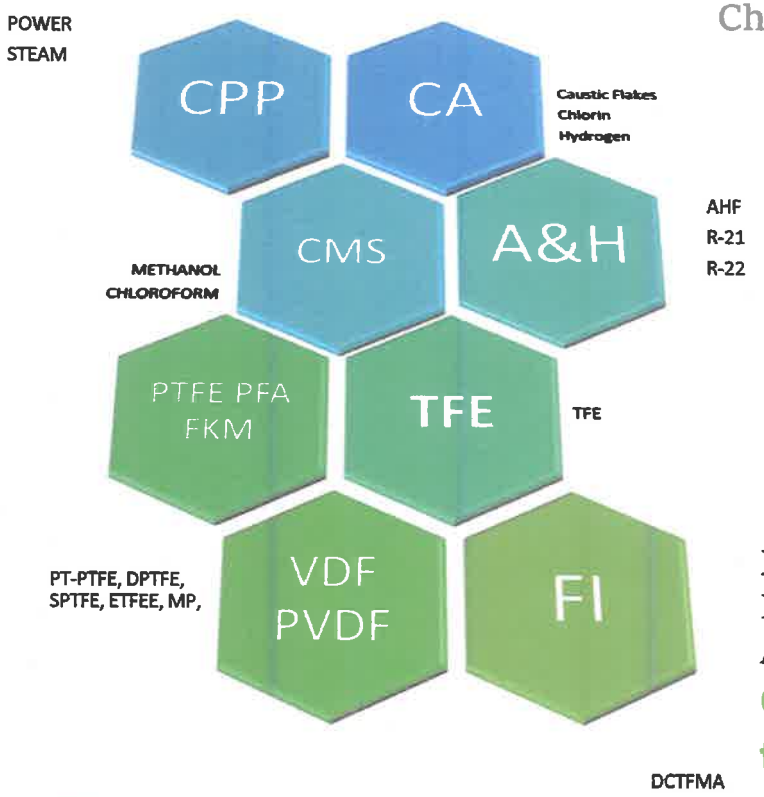
2007- started manufacturing facility Gujarat India, for Fluoropolymers, Polymers, Refrigerant's, Special Chemical.

Fluorspar Mine Morocco.

5856

MANUFACTURING STEPS

GFL is a major manufacturer segment of Fluoropolymer's (TFE,PTFE,PT-PTFE,S-PTFE,D-PTFE,FKM,PFA,FEP,VDF,PVDF,R-225) & Special Chemical's (Chlorine, Hydrogen, AHF, DCTFMA, Methanol, Chloroform).



The Polymer manufacturing process starts from manufacturing of Chlorine in Chloroalkyl plant, which reacts with Methanol in Chloromethane plant to produced Chloroform.

In AHF unit Fluorspar is reacted with Sulphuric Acid and Oleum to generate Hydrogen Fluoride. This Hydrogen Fluoride reacts with Chloroform to produced R-21 & R-22.

Cracked R-22 under high temperature by Distillation process in TFE unit, which is the base monomer for further Polymerization processes.

Finally TFE Used for different-different types of Polymers as per Market demand.

Also VDF Produced byR-142b creaked by Thermal Distillation .

Our one of the product PVDF, is being used for renewable energy through solar panel film as well as in Lithium battery for EV segment.

58857

Sustainability Awards & Certification

CERTIFICATIONS

Health – Safety - Environment	**BRITSH SAFETY COUNCIL** **ISO 14001 : 2015** **ISO 9001 : 2015** **ISO 45001 : 2018**
Ethics	ISO 37001 : 2016 ISO / IEC 27001 : 2013 SA8000:2014
Social Responsibility	We have aligned all our Internal & Supply chain processes as per the following standards ISO 26000 : 2010 ISO 20400 : 2017

United Nations Global Compact

BRITISH SAFETY COUNCIL Member

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

5858

Sustainability Awards & Certification

ISO CERTIFICATE : 9001:2015, 14001:2015, 45001:2018, 2600:2010, 20400:2017 T-2 Certificate CN, ISO/IEC:27001:2013

5859

Compliance w.r.t Joint Report In Reference To Hon'ble NGT Order dated 04.10.2021 in matter OA 60/2021 (WZ)

- **We have dedicated deep sea discharge pipeline, since Mar'22.**
  Final discharge norms are always being consistently met as per GPCB standards given in CCA.

- **ETP Treatment Efficiency**
  We have segregated all effluent sources based on type & quality parameters, accordingly designed & implemented treatment technique. All effluents are being treated and discharged as per GPCB norms at deep sea.

- **Flow Meter Installation**
  We have installed flow meters at all effluent pipelines which is being recorded in ETP Log Book on daily basis.

- **Storage of Calcium Chloride and Waste**
  Adequate covered storage is in place, to serve the purpose.

- **Handling of Coal Dust, Fly Ash, and Housekeeping**
  We have desired setup for safe handling of coal dust, fly ash, and other wastes as per best environment practices. Enhanced housekeeping practices are implemented to maintain a clean and safe working environment.

5860

GPCB Direction under section 33-A

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

BY R.P.A.D.

DIRECTION UNDER SECTION 33-A OF THE WATER (PREVENTION AND CONTROL OF POLLUTION) ACT-1974 (HEREINAFTER REFERRED TO AS THE "WATER ACT") AS AMENDED FROM TIME TO TIME

WHEREAS, you M/s. Gujarat Fluorochemicals Ltd are operating industrial unit at Plot No: 12-A, GIDC Dahej, Dahej, Tal: Vagra, Dist: Bharuch.

AND WHEREAS, you have obtained CCA of the Board with validity up to 16/02/2022 for manufacturing of Chloroform, Methylene Dichloride, Sulphuric Acid (70%-80%), etc.

AND WHEREAS, in compliance of Hon. NGT order dated 04.10.2021 in the matter of OA no. 60/2021 (WZ) (Aryavart Foundation v/s Hemani Industries Ltd. & Ors.), your unit was inspected by joint team of CPCB & GPCB on 26.10.2021 under Section -23 of the Water Act and following major non-compliances were observed:

1) The final treated wastewater discharged into the GIDC drain exceeded GPCB CCA standards as below:

Parameters (mg/l)	Final Outlet to GIDC drain	GPCB Discharge Standards as per CCA
BOD (3 days at 27°C)	122	100
COD	620	250

2) Unit has not provided flowmeters at wastewater inlet streams at ETPs.
3) The fly ash from captive power plant and Calcium chloride were found stored haphazardly in the industry near CPP.
4) Poor handling of coal dust, fly ash and calcium chloride was observed in the premises.
5) Housekeeping is observed poor.

AND WHEREAS, the non-compliances as narrated above is contributing to the Pollution problem in Dahej industrial area.

UNDER THE CIRCUMSTANCES, as directed, I Irfan Kagzi, Dy. Environment Engineer, Gujarat Pollution Control Board issue the direction under Section 33(A) of the Water Act - 1974 as under:

1) Unit shall carry out proper effluent stream segregation and treat each stream based on its quality/characteristics.
2) Unit shall upgrade ETP and operate it effectively & efficiently in such a way that treated effluent always confirms discharge norms prescribed in the CCA.
3) Unit shall provide separate flow meters and energy meters for ETP, RO and color coding of all pipeline networks of wastewater within the premises of industries with flow directions and nomenclatures.
4) Unit shall practice only single treated industrial effluent discharge point.
5) Unit shall handle, store and dispose various types of hazardous waste as per the Hazardous & Other Waste (Management and Handling) Rules, 2016.
6) Unit shall provide adequate in-house HW storage facility with roof, covered from all sides, impervious flooring and leachate management system.
7) Unit shall adopt good housekeeping practices.
8) Unit shall take adequate measures to prevent leakage, spillage while handling toxic, volatile and hazardous chemicals/wastes.

9) Unit shall explore possibilities to utilize or sell calcium chloride produced to actual end users by making MOU and through GPS mounted vehicles instead of disposing it in CHWTSDF.
10) Unit shall immediately take corrective measures for above non-compliances and submit compliance report/ time bound action plan for it.
11) Unit shall comply all conditions mentioned in CCA judiciously.
12) **Unit shall pay Environment Damage Compensation (EDC) as and when communicated by the Board.**

If the above direction is not complied, you are liable for prosecution under Section 41(2) of the Water (Prevention and Control of Pollution) Act-1974 which provides punishment with imprisonment for a term not less than one year and six months and may extend to six years and with fine.

This letter is issued with the approval of the competent authority of the Board.

FOR AND ON BEHALF OF
GUJARAT POLLUTION CONTROL BOARD

(IRFAN KAGZI)
DY. ENVIRONMENT ENGINEER

NO: GPCB/BRCH-B/CCA-1080(21)/ID: 15136/ 62431 Date: 25/03/2022

Issued to:
M/s. Gujarat Fluorochemicals Ltd.
Plot No: 12-A,
GIDC Dahej, Dahej,
Tal: Vagra, Dist: Bharuch.

Copy to:
1) **The Regional Director (West)**
Central Pollution Control Board,
Parivesh Bhawan, Aatmajyoti Ashram Rd,
Opp. VMC Ward Office No. 10,
Subhanpura, Vadodara .....for kind information and necessary action pl.

2) **The Regional Officer - Bharuch**
Gujarat Pollution Control Board,
Shed No. C - 1/119/3, GIDC Estate,
Phase II, Narmadanagar,
Bharuch .....for kind information and necessary action pl.

58611

Compliance of visit dated: 26/10/2021
w.r.t GPCB Direction under section 33-A

Sr. No	Observations	Compliances Status
1	The final treated wastewater discharged into the GIDC drain exceeded GPCB CCA standards as below: Parameters (mg/l) / Final Outlet to GIDC drain / GPCB Discharge Standards as per CCA BOD (3 days at 27°C) / 122 / 100 COD / 620 / 250	GPCB CCA final outlet norms are always being met. Deviation was observed due to analysis procedure of COD which was not followed for removal of chloride interference. We had submitted its details to CPCB dated 5th Nov'21. Final outlet results are complied & monitored on daily basis with GPCB CCA. Final outlet results are being transmitted to GPCB & CPCB server through online effluent monitoring system.
2	Unit has not provided flowmeters at wastewater inlet streams at ETPs.	We have installed Flow meters for all wastewater inlet streams at ETP and same is being recorded in ETP log book.
3	The fly ash from captive power plant and Calcium Chloride were found stored haphazardly in the industry near CPP.	We have provided separate & adequate covered storage area.
4	Poor handling of coal dust, fly ash and Calcium Chloride was observed in the premises.	GFL is following established systems / installations to handle coal dust, fly ash and other wastes inside the premises and maintain good housekeeping practices. ESP (Electro-static Precipitator), Online monitoring system, Water Spray Nozzles, Dust suppression system etc. are in place.
5	Housekeeping is observed Poor.	We have improved the overall housekeeping within our premises and will continue to do the same.

Compliance of the points as mentioned in Notice of Direction

Sr.No.	Observations	Compliances Status
1	Unit shall carry out proper effluent stream segregation and treat each stream based on its quality/characteristics.	We have segregated all waste water sources as per their nature, quality and parameters. Accordingly six various streams have been established for specific treatment of individual streams. We operate our ETPs based on the different streams as per the SOP defined for the stated streams.
2	Unit shall upgrade ETP and operate it effectively & efficiently in such a way that treated effluent always conforms discharge norms prescribed in the CCA.	We are operating the ETP diligently and effectively on a regular basis and have infact upgraded our ETP operation process so as to meet the requirement. The discharge norms of our effluent are in compliance with the norms as mentioned in the CCA.
3	Unit shall provide separate flow meters and energy meters for ETP, RO and color coding of all pipeline networks of wastewater within the premises of Industries with flow directions and nomenclatures.	Unit has separate flow meters and energy meters for ETP & RO along with color coding of all pipeline networks.
4	Unit shall practice only single treated industrial effluent discharge point.	We are practicing a single point of discharge only and discharging our effluent to deep sea through our dedicated deep sea pipeline.
5	Unit shall handle, store and dispose various types of hazardous waste as per the Hazardous & Other Waste (Management and Handling) Rules, 2016.	We are handling, storing and disposing various hazardous wastes as per Hazardous & Other Waste (Management and Handling) Rules, 2016.
6	Unit shall provide adequate in-house HW storage facility with roof, covered from all sides, impervious flooring and leachate management system.	We have already provided adequate in house hazardous waste storage facility covered on all sides, impervious flooring and leachate management system. The leachate whatsoever is generated is being sent to our ETP for treatment.
7	Unit shall adopt good housekeeping practices.	We have improved the overall housekeeping within our premises and will continue to do the same.

5863

Compliance of the points as mentioned in Notice of Direction

Sr.No.	Observations	Compliances Status
8	Unit shall take adequate measures to prevent leakage, spillage while handling toxic, volatile and hazardous chemicals/wastes.	The company have taken following steps for prevent leakage, spillage management: i) All reactors have double stage Condensers. ii) All pumps & pipelines are maintained as per preventive schedule and checked periodically and whenever required. iii) Breather valves, Flame arrestors & vent condensers have been provided for solvent storage tanks. fugitive emissions in the work area are being monitored. iv) Distillation reactors columns are connected with double stage condensers; the vent condensers are supplied with as per suitable utilities to minimize vapour loss. v) All solvent handling pumps have been provided double mechanical seal. vi) All condensers with sufficient Heat Transfer Assessment. vii) All storages of hazardous chemicals are stored in tanks, provided with adequate dykes for containment during any leakage and spillage. viii) Spill control kits are provided at strategic locations where such hazardous chemicals are being handled All majority of chemicals are transferred through closed loop systems. Controlling measures such as vent condensers, scrubbing mechanism are installed in manufacturing processes.
9	Unit shall explore possibilities to utilize or sell Calcium Chloride produced to actual end users by making MOU and through GPS mounted vehicles instead of disposing it in CHWTSDF.	We are selling Calcium Chloride to an actual user.
10	Unit shall immediately take corrective measures for above non-compliances and submit compliance report/ time bound action plan for it.	This response itself may please be taken to be a part of this particular requirements since we have taken suitable corrective measures.
11	Unit shall comply) all conditions mentioned in CCA judiciously.	We comply with all the conditions as mentioned in our CCA.

5864

GUJARAT FLUOROCHEMICALS

An INOX GFL Group Company

Thank You...!!!

5865

Parikh Samir

From:	Parikh Samir
Sent:	13 July 2025 17:04
To:	Irfan Kagzi; M.U. Patel, DEE (ro-gpcb-bhar)
Cc:	Sanath Kumar Muppirala; Sunil Bhatt; Sanjay P. Gandhi
Subject:	Revised Mail - GFL reply with reference to NGT Order dated 04.10.2021 - OA 60/2021 (WZ) - (GPCB ID: 15136)
Attachments:	GFL Reply for NGT Order OA 60 2021 (WZ).pdf

Kind Attn. : Shri M R Macwana (Unit Head – Bharuch) / Shri K N Vaghamshi (Regional Officer – Bharuch)

Respected Sir,

Ref.: Joint Report in Reference to Hon'ble NGT Order dated 04.10.2021 in matter OA 60/2021 (WZ)
GPCB ID: 15136

Sub.: Objections on behalf of Gujarat Fluorochemicals Ltd. Against proposed Environment Damage Compensation in Joint Committee Report of November 2021 & May 2022 submitted by NGT (Western Zone Branch) in OA No. 60/2021 (Aryavart Foundation v. Hemani Industries ltd) as directed by NGT

This has reference to the above stated subject matter. We are re - submitting our reply which was done earlier on 29th July 2022.
We request that no EDC to be imposed against GFL as per details attached.
As responsible corporate we assure your good office to have full compliance on the observations and stipulated norms by GPCB.

Thanking you,

Samir Parikh
Sr Manager – HSEF

Gujarat Fluorochemicals Limited
12/A, GIDC Dahej Industrial Estate, Taluka: Vagra, Bharuch 392 130, Gujarat, India
M: +91-9727555648 | D: +91-2641-618550| E: samir.parikh@gfl.co.in
W: www.gfl.co.in

G. P. C. BOARD BHARUCH

5866

5867

GUJARAT FLUOROCHEMICALS
VALUE THROUGH GREEN CHEMISTRY
An INOX GFL Group Company
CIN : L24304GJ2018PLC105479

Gujarat Fluorochemicals Limited
earlier known as Inox Fluorochemicals Limited

12/A, GIDC Dahej Industrial Estate, Taluka Vagra,
Distt. Bharuch-392130, Gujarat, India

Tel: +91-2641-618031 (Admin) / 618041-50 (Purchase) /
618086-87 (Security) | www.gfl.co.in

12/07/2025

GPCB ID: 15136

To,
Shri K N Vaghamshi
Regional Officer
Gujarat Pollution Control Board,
GIDC Phase - II
Bharuch -392015

CC,
Shri M R Macwana
The Unit Head – Bharuch Region
Gujarat Pollution Control Board
Sector – 10 A, Paryavaran Bhavan,
Gandhinagar – 382010.

Ref.: Joint Report in Reference to Hon'ble NGT Order dated 04.10.2021 in matter OA 60/2021 (WZ)

Sub.: Objections on behalf of Gujarat Fluorochemicals Ltd. Against proposed Environment Damage Compensation in Joint Committee Report of November 2021 & May 2022 submitted by NGT (Western Zone Branch) in OA No. 60/2021 (Aryavart Foundation v. Hemani Industries ltd) as directed by NGT

This has reference to the above stated subject matter. We are re - submitting our reply which was done earlier on 29th July 2022.
We request that no EDC to be imposed against GFL as per details enclosed.

As responsible corporate we assure your good office to have full compliance on the observations and stipulated norms by GPCB.

Thanking you,

Gujarat Fluorochemicals Ltd. DAHEJ

(Authorized Signatory)

5868

10/C

GUJARAT FLUOROCHEMICALS
VALUE THROUGH GREEN CHEMISTRY
CIN : L24304GJ2018PLC105479

Gujarat Fluorochemicals Limited
earlier known as Inox Fluorochemicals Limited

12/A, GIDC Dahej Industrial Estate, Taluka Vagra, Distt. Bharuch-392130, Gujarat, India

Tel: +91-2641-618031 (Admin) / 618041-50 (Purchase) / 618086-87 (Security) | www.gfl.co.in

Ref. GFL/GPCB-ID 15136/2022-23/21

July 29,2022

To
The Member Secretary
Gujarat Pollution Control Board
Gandhinagar – 382010
chairman-gpcb@gujarat.gov.in
ms-gpcb@gujarat.gov.in

Gujarat Pollution Control Board Receipt / 2022
Head Office
Sector No.-10-A,
Gandhinagar-382010

1/8/22
Post Received
Gujarat Pollution Control Board
BHARUCH

Dear Sir,

Subject: Objections on behalf of Gujarat Fluorochemicals Ltd. against proposed Environment Damage Compensation in Joint Committee Report of November 2021 and May 2022 submitted to National Green Tribunal (Western Zone Bench) in OA No. 60/2021 [Aryavart Foundation v. Hemani Industries Ltd.] as directed by NGT.

References:

a) Mail received on Implementation of Directions of Hon'ble NGT in the matter of O.A. No. 60/2021 from GPCB Head Office (Mr. Irfan Kagzi) dated on July 13th ,2022
b) Order dated 02.02.2022 of National Green Tribunal, Western Zone Bench, Pune passed in OA No. 60/2021
c) Report of Joint Committee of May 2022 submitted to NGT in OA No. 60/2021
d) Objections filed on behalf of Gujarat Fluorochemicals Ltd. on 05.07.2022 before the NGT in OA No. 60/2022
e) Order dated 06.07.2022 of National Green Tribunal, Western Zone Bench, Pune passed in OA No. 60/2021

Central Pollution Control Board RD (West), Vadodara

1. That Gujarat Fluorochemicals Ltd. ("GFL") is a public limited Company. It was incorporated in 1987 and commenced commercial operations at Dahej Industrial Area in 2007. It has over 30 years of expertise in fluorine chemistry and is one of the major producers of Fluoropolymers, Fluorospecialities, Refrigerants, and Chemicals. Currently, GFL manufactures various chemicals at its Plant in Dahej.

2. That OA No. 60/2021 relates to wastewater management by the industries and Gujarat Infrastructure Development Corporation ("GIDC") in Dahej Industrial area.

The Joint Report submitted by the members of Gujarat Pollution Control Board ("**GPCB**") and Central Pollution Control Board ("**CPCB**") in compliance of the order dated 04.10.2021 passed by the Hon'ble NGT alleged non-compliance of wastewater norms by GFL and calculated an environmental compensation of Rs. 5.19 crores to be imposed upon GFL. The environmental compensation remains unchanged in the subsequent Report filed by the Joint Committee in June 2022 in compliance of the order dated 02.02.2022 passed by the Hon'ble NGT.

3. It may be noted at the outset that GFL placed its objections to the Joint Committee Reports on record before the Hon'ble NGT on 05.07.2022. The said copy of objections was also served upon the Chairman, GPCB.

4. That vide order dated 06.07.2022 in the subject OA, the Hon'ble NGT has directed industries to place their grievances before the State PCB regarding the quantum of Environment Damage Compensation ("**EDC**") determined within a period of one month. Pursuant thereto, we have received email dated 13.07.2022 from your office requesting us to place our objections before the GPCB. Along with the email, you have also shared a detailed computation sheet as Annexure-A. In compliance with the said order and your email, GFL seeks to submit its objections to the computation of EDC in the Joint Committee Reports of November 2021 and May 2022.

5. At the outset, it is submitted that no EDC whatsoever ought to be imposed against GFL for the following reasons:

I. Collection of samples without following due process of law

a) That the Joint Committee has not complied with the mandatory requirement of complying with the provisions of Section 21 of the Water (Prevention and Control of Pollution) Act, 1974 ("**Water Act**") at the time of collecting the effluent samples from the GFL plant. The water samples were not divided in the presence of GFL's officers/representatives/agents.

It is trite law that if effluent samples are not collected in the manner provided under the Water Act, the said samples are not admissible under law and no action should be taken against the unit basis the test report of such samples. Therefore, it is submitted that no EDC ought to be levied upon GFL and re-sampling may be undertaken.

II. The Joint Committee has made erroneous and baseless observations against GFL

a) The Joint Committee has made various baseless and unsubstantiated findings against GFL in its report, as below:

i. ***"Industry discharging wastewater to Final Pumping Station of GIDC without complying with the CCA discharge norms. Industry needs to improve treatment efficiency of its ETP through regular maintenance and operations."***

b) That it has been alleged that the final treated wastewater discharged into the GIDC drain exceeded GPCB CCA standards as below:

Parameters (mg/l)	*Final Outlet to GIDC drain*	*GPCB Discharge Standards as per the CCA*
BOD (3 days at 27 degree Celsius)	*122*	*100*
COD	*620*	*250*

c) It is submitted that the sample results (as mentioned at Pg. 1906 in the Joint Committee Report) are erroneous. The results are in variation and contrary to the results of the samples analyzed by the NABL accredited third party laboratory and GFL's inhouse laboratory results on the same date which are as below:

Parameters (mg/l)	*Final Outlet to GIDC drain (third party laboratory)*	*Final Outlet to GIDC drain (GFL's inhouse laboratory)*	*GPCB Discharge Standards as per the CCA*
BOD (3 days at 27 degree Celsius)	*46*	*48.6*	*100*
COD	*161.7*	*198*	*250*

Copies of the analysis reports by third party NABL accredited laboratory and GFL's inhouse laboratory are annexed hereto and marked as **Annexure-1** and **Annexure-2**. The said analysis/test reports clearly show that the wastewater discharged from GFL's plant is meeting the standards prescribed in the CCA and that GFL is not discharging effluents in violation of the discharge conditions prescribed in the CC&A.

d) Moreover, it may be noted that for the same period, the online CPCB server recorded COD of 188.54. Copy of the screenshot of the CPCB server is annexed hereto and marked as **Annexure-3**.

e) It is submitted that the analysis results by the GPCB are erroneous. This has probably occurred due to the high chloride content in the sample which affects Chemical Oxygen Demand (**"COD"**) values. It is pertinent to mention that GFL produces chloro chemicals and uses inorganic chemicals as major raw materials. The main raw materials are sea salt, and chlorides. On many occasions, GFL has jointly tested COD with GPCB laboratory to understand the interference of chloride during estimation of COD. By using the APHA Method: 5220 on various samples, it has been confirmed that chlorides are interfering into COD digestion leading to erratic values of COD.

f) This has been acknowledged by the GPCB previously when GPCB did not analyse COD because of higher chloride content in sample Ref Sample ID 251215 dated 15.01.2019, 251216 dated 15.01.2019, 248500 dated 09.12.2018 and 248501 dated 09.12.2018. The remark is high chloride in the said samples. Copy of the result showing in A.R comparative sheet downloaded from GPCB XGN portal in which for four occasions COD was not analysed due to higher chloride is annexed hereto and marked as **Annexure-4**. Copy of a sample test result is also annexed hereto and marked as **Annexure-5**.

g) It may be noted that scientific research has well-documented the effects of chloride to the COD analysis. High content of chloride leads to higher COD results erroneously.

It may be noted that separate tests are required to be performed for determination of COD depending on the chloride content. In case the chloride content is high, a procedure to remove the chloride with mercuric sulphate is recommended. Removal of Chloride and dosing of Hg (mercury) is a critical stage of analysis where skill and accuracy plays a vital role.

GPCB has previously collected many samples for routine testing and our COD was found within limits when chloride removal has been done as per APHA guidelines. It appears, thus, that the said method was not used by the GPCB properly and the third-party laboratory in its examination possibly. This has led to higher COD in the GPCB results relied upon in the Joint Committee Report. Therefore, it is submitted that the GPCB has adopted flawed methodology in measurement of COD and BOD in the sample testing. Copy of the Standard Operating Procedure for determination of COD prepared by the GFL is annexed hereto and marked as **Annexure-6**.

h) *Vide* letter dated 25.11.2021, GFL highlighted the aforesaid issue of high chloride content and requested GPCB to undertake a re-sampling/joint analysis to eliminate the errors caused by the high chloride content. However, your office had failed to give any response or address the issue. The Joint Committee

Report also fails to mention the possibility of such an error. Copy of the letter dated 25.11.2021 is annexed hereto and marked as **Annexure-7**. This was again brought to your notice *vide* GFL's reply dated 28.03.2022 to the Direction dated 05.03.2022 issued by the GPCB under Section 33-A of the Water Act. The reply requested for a re-sampling to be undertaken by the GPCB due to the flawed methodologies adopted, as explained above. Copy of the reply dated 28.03.2022 is annexed hereto and marked as **Annexure-8**. However, GPCB has not taken into account the said issue and continued to recommend compensation of Rs. 5.19 crores upon GFL in the Joint Committee Report filed in June 2022.

i) In the meantime, GPCB has also undertaken sampling as a part of CCA amendment application on 22.02.2022 and inward date 23.02.2022 from final outlet of our ETP. The results for the sample tested was uploaded on 05.03.2022 (Test Report No. 46945) showing COD value 190 ppm as against the limit of 250 ppm. At the same time, GFL also tested the same sample in its laboratory and the result was 233 ppm while the results of the NABL approved laboratory was 238.1 ppm. This confirms that our discharge is well below the limit prescribed by Board. Copy of the GPCB and NABL approved laboratory test results are annexed hereto and marked as **Annexure-9**.

j) It is submitted that GFL has segregated all wastewater sources based on type and quality parameters and accordingly designed the ETP for treating six streams with specific treatment for each of them. The segregation has been noted at pg. 1902 of the Joint Committee Report filed in December 2021. GFL operates its ETPs based on the stream as per the SOP defined for the stated stream. Copy of the ETP Flow Diagram is annexed hereto and marked as **Annexure-10**.

k) Furthermore, it is noteworthy that GFL's plant is being continuously monitored by a third-party monitoring agency, namely M/s. **Unistar Environment and Research Labs Pvt. Ltd** accredited by National Accreditation Board for Testing and Calibration Laboratories (NABL). The test reports annexed above corroborate the fact that GFL has been discharging wastewater within the stipulated limits prescribed by GPCB. GIDC has also been undertaking regular testing of the sample by using the same Laboratory.

l) It can be inferred from the above that the Joint Committee Report suffers from various infirmities, especially in respect of waste water testing from the Plant. The contrary and erroneous effluent test results *qua* GFL in the Joint Committee Report signify the errors in sample collection and testing by the Joint Committee. Thus, no compensation ought to be imposed upon GFL.

m) Lastly, it has been wrongly observed by the Joint Committee that GFL needs to improve treatment efficiency of its ETP through regular maintenance and operations. GFL's ETP system is adequate and certified by M/s. Dharmsinh Desai University, Department of Chemical Engineering, a GPCB-appointed recognized auditor (Schedule-I). It was certified on 03.06.2022 by the Adequacy Certificate of Environment Management System that the environmental management system provided by GFL is adequate and efficacious to achieve the quality of effluents (Air, Waste water and Hazardous waste) as specified/required for consents/notifications issued by GPCB. A copy of the said certificate is annexed herein as **Annexure-11.** Further, GFL is operating the ETP diligently and effectively on a regular basis and have upgraded the ETP operation process.

ii. ***"The industry also needs to provide flow meter at wastewater inlet of ETP for each stream."***

a) The Joint Committee has wrongly and without any basis or proof observed that there are no flowmeters at inlet streams.

It is respectfully submitted that as per the GPCB guidelines, flow meters at inlet of effluent streams are not mandatory in law however, GFL has already placed flow meters for inlet streams for internal monitoring. Further, GFL also has a flow meter for outlet discharge point connected to GPCB server. All flow meters had been installed prior to the notice and are already in working condition. It is submitted that GFL has installed flow meters at all wastewater inlet streams and the same has been recorded in the ETP logbook.

In view thereof, it is submitted that GFL is not in non-compliance of the said condition. Photos of such flow meters installed at the six streams are annexed hereto and marked as **Annexure-12.**

iii. ***"The industry had stored calcium chloride along with other waste haphazardly inside the premises. The industry need to explore to utilize or sell calcium chloride produced instead of disposing it in CHWTSDF."***

a) GFL has provided sufficient covered storage area to store calcium chloride and fly ash under non-hazardous storage area. Copy of the photographs showing such storage area is annexed hereto and marked as **Annexure-13.**

b) Further, GFL has been exploring the possibility of selling the produced calcium chloride to users, but suitability of this material is not yet accepted by any buyer. The other industries find it difficult to treat the calcium chloride due to various impurities therefore, there are hardly any buyers for the same. Hence, GFL is

disposing this material to the Common Hazardous Waste Treatment, Storage and Disposal Facility (CHWTSDF) system/site. It may be noted that during the monsoon season, the landfill site had been closed as per GPCB guideline and hence the calcium chloride was stored in non-hazardous area on site.

c) It is submitted that GFL is handling, storing and disposing hazardous wastes as per the Hazardous & Other Waste (Management & Handling) Rules, 2016. GFL has also provided adequate in-house hazardous storage facility covered on all sides, impervious flooring and leachate management system. Copies of manifest of waste disposal at GPCB approved landfill site/recycler/coprocessor are annexed hereto and marked as **Annexure-14**.

iv. ***"The industry need to improve handling of coal dust, fly ash and other wastes inside the premises and implement good housekeeping practices."***

a) It is submitted that GFL is using the following systems to improve handling of coal dust, fly ash and other wastes inside the premises and implement good housekeeping practices.

i. ESP (Electro-static Precipitator) to control SPM in the stack
ii. Online Monitoring system for stack dust monitoring
iii. Water Spray Nozzles are available at coal unloading/grizzly Hopper area (Dust Suppression)
iv. Water Spray Nozzles at Belt Conveyors
v. Ash Conditioner with water spray arrangement surrounding ash unloading area

Copies of photographs evidencing the aforesaid measures are annexed hereto and marked as **Annexure-15**.

b) Moreover, GFL is following good housekeeping practices. Copies of photographs showing housekeeping practices of GFL are annexed hereto and marked as **Annexure-16**.

6. In addition, we state that we have not discharged any effluent directly in any river, pond, sea etc. and have discharged the same only in the designated sump of GIDC through pipeline. Moreover, we have not resorted to any ghost connections to discharge any effluent.

7. Without prejudice to the above foundational objections to the findings against GFL in the Joint Committee Report, GFL also seeks to raise strong objections to the computation of EDC in the Joint Committee Report, as below:

I. The methodology adopted by the Joint Committee to assess EDC is without any legal backing

That the methodologies adopted in the Joint Committee Reports is arbitrary, perverse, and without any legal backing whatsoever.

Firstly, it is submitted that CPCB/GPCB has no jurisdiction to determine the methodology for levying environmental compensation. The Environment (Protection) Act, 1986 nowhere empowers the CPCB to determine the formula for calculation of environmental compensation. The said powers are in the nature of legislative powers and ought not to have been exercised by the CPCB. A challenge to the power of the CPCB to levy compensation is pending before the Hon'ble Supreme Court.

Secondly, the formula/methodology for levying compensation does not have any legal backing. The formula is neither enshrined in any statute nor in a delegated legislation. It has also not been notified in the official Gazette by the Government. In absence of the same, it is unclear how compensation has been calculated and levied by the Joint Committee.

II. No determination of actual damage to environment undertaken

No proof at all has been produced to show the extent of actual damage caused to the environment by GFL. It is submitted that the quantification of compensation cannot be presumed without any data and the same should be based upon a clear and workable restitution plan which should be contingent upon the type/nature of water body sought to be restituted. It is submitted that without any proof of environmental damage, the imposition of such a hefty environmental compensation is disproportionate and against the principles of levy of compensation. Quantification of
compensation can neither be presumptive nor assumptive. It must be based on actual facts and figures.

III. Relevant factors have not been taken into account

a) The EC formula does not take into account the Environment Management systems adopted by the industry for control of water, air and land pollution. Even if adequate EMS is provided, the industry has to pay same amount of compensation for minor violations of pollution control and Environmental laws at par with the industries which have not provided adequate effluent treatment plants, installed proper air pollution control equipment or adopted appropriate measures for Hazardous waste disposal.

b) Quality of effluent is not part of the formula relied upon by the committee. There cannot be a same criterion for all units where the quality of effluent differs and therefore, contributes differently to the alleged polluted streams.

IV. EC 1 (old) determined by the Joint Committee in its' Report of November 2021 is without any application of mind

a. Formula is without any legal backing

a) It is stated that the Environmental Compensation determined by the Joint Committee in its November 2021 Report is erroneous, arbitrary, unreasonable and devoid of any merit in law and fact. It may be noted that EC 1 (New) considers EC1 (Old). The relevant excerpt of the Joint Committee Report determining the Environmental Compensation to be paid by GFL is reproduced below for ease of reference:

S. No.	Name of Industry	Scale of Operation (as per GPCB records)	No. of days of violation	EC_1 (Rs. in crores)	Quantum of HW observed (MT)	EC_2 (Rs. In crores)	Total EC (Rs. In crores)
15	M/s Gujarat Fluorochemicals Ltd., Plot no. 12-A, GIDC Dahej, Tal. Vagra, Bharuch	1.5	1730	5.19	0	0	5.19

b) The formula adopted in the Joint Committee Report for determining the above-stated Environmental Compensation is reproduced below for ease of reference:

"

$$EC1 = PI \times N \times R \times S \times LF$$

Where:
PI= Pollution Index of industrial sector, as the concerned industries falls in the Red Category, its Pollution Index is 80

N= Number of days for which the violation took place is considered from the first date of NOD/direction with respect to wastewater management issued by GPCB to the industry since 01.04.2016 till 29.11.2021 (Date of Hearing of the matter before Hon'ble NGT). In case GPCB not issued any directions during last five years, the N is considered from the date of visit. The joint team has considered continual violation of the industry with respect to wastewater management because of the fact that the final disposal quality of the wastewater found non-complying the discharge conditions based on the last five years data.

R= A factor in Rupees (Rs.) for EC is Rs. 250/day

S= Factor for scale of operation is 1.5 for large scale, 1.0 for medium scale and 0.5 for small or micro scale.

LF= Location Factor is 1 as the population of the area is less than 1 million.

These values have been applied to the formula for EC1 determination for the industries and GIDC where non-compliance observed."

c) It appears that the formula has been adopted from the "*Report of the CPCB In-house Committee on Methodology for Assessing Environmental Compensation and Action Plan to Utilize the Fund*" filed by the CPCB and accepted by NGT, Principal Bench in Paryavaran Suraksha Samiti v. Union of India & Ors, O.A. No. 593/2017 ("**CPCB Report**"). However, it is submitted that the methodology has not been notified in the Official Gazette by way of a statute. In absence of the same, it is respectfully submitted that the formula ought not to be applied. Moreover, the Joint Committee has neither provided any rationale for the adoption of the above-stated formula nor provided any reason while determining values to the factors mentioned in the formula namely, 'N', 'PI' and 'R'. It is submitted that determination of compensation cannot be arbitrary and the same must be founded upon intelligible considerations and criteria.

d) In addition, it may be noted that the categorization of industries as Red, Orange, Green and White was undertaken by CPCB for the purpose of consent management and monitoring by SPCBs. It was not for the purpose of finance or bank loans or levying Environment compensation on the industries. Therefore, the formula is *prima-facie* improper.

b. Erroneous assumptions while calculating period of violation for levy of Environmental Compensation

a) Without prejudice to the submissions above, it is submitted that the Joint Committee has made various erroneous assumptions while determining the Environmental Compensation to be paid by GFL and has applied the said formula in a desultory and frivolous manner to levy compensation on GFL and other industries in the Joint Committee Report. The Joint Committee has not provided any data in the Joint Committee Report to show that GFL had breached conditions relating to waste-water discharge and management for a continuous period of 1730 days basis which Environmental Compensation has been levied. This assumption of a continuous violation for a period of 1730 days is *ex-facie* erroneous and based on surmises and conjectures.

b) While the formula applied in the Joint Committee Report remains the same as the one formulated in the CPCB Report, the value/meaning ascribed to 'N' i.e. 'Number of Days for which violation took place' is different in both the reports. The CPCB Report dealing with "*Methodology for Assessing Environmental Compensation*" considered 'N' as:

"N, number of days for which violation took place is the period between the day of violation observed/due date of direction's compliance and the day of compliance verified by CPCB/SPCB/PCC."

c) In this regard, GFL understands from Pg. 1907 of the Joint Committee Report that notices dated 06.03.2017, 20.02.2019 and 30.01.2019 issued by GPCB to GFL, were taken into consideration by the Joint Committee while calculating the period of violation for determining Environmental Compensation to be paid by GFL.

i. Assumption regarding continuous violation

a) It is submitted that the Joint Committee has without any rationale or basis in law or fact considered the period of days of violation to be starting from the date of NOC/direction with respect to waste-water management issued by GPCB to GFL in the past 5 years (01.04.2016 till 29.11.2021) i.e., from 06.03.2017. GFL states that the Joint Committee has wrongly assumed the period of violation for each industry to be continuous from the first date of issuance of a notice/direction relating to waste-water management in the last 5 years erroneously on the basis of Section 15(3) of the National Green Tribunal Act, 2010 which only provides for the period of limitation for institution of proceedings. The assumption that the violation continued from the date of issuance of first notice/direction by GPCB to GFL is fallacious and causes grave prejudice and damage to GFL. The Joint Committee has committed serious errors by failing to take note of and in effect challenging the various compliances done by GFL and noted by GPCB along with conditional re-start orders issued to GFL by the GPCB.

b) Moreover, it is pertinent to highlight that between the period of May 2017 and March 2022, GPCB has continuously undertaken sample analysis tests of GFL's wastewater. In all the analysis reports, the COD and BOD of the wastewater has been within the prescribed norms as per the CC&A. This fact has been completely overlooked by the Joint Committee while determining the compensation amount. The test reports are dated 21.05.2017, 30.06.2017, 16.10.2017, 20.01.2018, 05.03.2018, 08.05.2018, 11.12.2018, 31.03.2019, 28.06.2019, 20.07.2019, 25.11.2019, 17.12.2019, 23.01.2020, 07.10.2020, 01.07.2021, 06.10.2021, 28.12.2021, and 05.03.2022. Copies of the test reports are annexed hereto and marked as **Annexure – 17.**

ii. Considers notices which do not relate to violation of waste-water discharge conditions

a) It is stated that the Joint Committee Report fails to take into consideration that the notices issued to GFL for the period between 01.04.2016 till 29.11.2021 do not relate to the same violations of effluent discharge conditions into the Common Effluent Treatment Plant of GIDC as alleged in the Joint Committee Report. In fact, some notices do not pertain to wastewater at all.

b) For instance, the Direction dated 30.01.2019 varies in substance from the issues raised by the Joint Committee in its Report. Pursuant to the said Direction, GFL submitted its reply along with an action plan.

c) The Direction dated 20.02.2019 does not mention any of the alleged violations mentioned in the Joint Committee Report and nowhere alleges that GFL has discharged beyond the prescribed parameters. Pursuant to the said direction, GFL undertook remedial measures and submitted an application for revocation of the closure direction. After being satisfied of the measures taken by GFL, the GPCB issued the Revocation Order dated 27.02.2019 for resumption of plant operations. Copy of the Direction dated 20.02.2019 are annexed hereto and marked as **Annexure – 18.** Copy of the revocation Order dated 27.02.2019 is annexed hereto and marked as **Annexure-19.**

It is evident from the above that the Joint Committee has calculated the environment compensation arbitrarily and without any application of mind. It has not even taken into account its own revocation order which categorically demonstrates that GFL was not in continuous violation of the discharge conditions.

V. *Calculation of EC1 (New) is arbitrary, erroneous and illogical*

a) *Firstly*, Pg. 2062 of the Joint Committee Report of May 2022 erroneously notes that *"It is observed from the recent monitoring results from December 2021 to April 2022 that the condition in terms of flow and non-compliance is still continuous as the samples collected from the final pumping station still have a varied degree of non-compliance as detailed in above sections of the report."* It is submitted that GFL is not in non-compliance of the conditions. This is evident from the monitoring and analysis results dated 28.12.2021 and 05.03.2022 which show that GFL has been within the norms laid down for wastewater discharge.

In fact, it is pertinent to highlight that in April 2022, GFL operationalized a pipeline (onshore and offshore) for disposal of treated wastewater for 5 MLD capacity originating from GFL's Effluent Treatment Plant (**"ETP"**) and starting from the Guard Pond in GFL's premises into the deep sea. The total length of the pipeline is 12 kms. Therefore, GFL is no longer discharging wastewater to the Final Pumping Station therefore, there is no question of it contributing to the non-compliant results collected from the Final Pumping Station. GFL is in receipt of the CRZ clearance, Gujarat Maritime Board (NOC), GIDC ROU Final Order, SEZ Clearance, Consolidated Consent and Authorization of Deep-Sea pipeline. Copy of the map and google imagery of the pipeline and the flow of wastewater is annexed hereto and marked as **Annexure-20**.

b) *Secondly*, Pg. 2063 of the Joint Committee Report provides for the methodology for calculating EC1 (New). Step 1 includes calculation of total treatment cost saved (avoided cost) by the industries due to excess organic load. In steps 2 and 3, EC 1 (new) calculated in step 1 is distributed pumping station wise based on the degree of violation. Step 4 involves further distributing the EC 1 (new) for each station among the respective non-complying industries in the area. This is done by calculation of deterrent factor for each industry and multiplying the same with station-wise EC.

It is submitted that the formula to first calculate total EC 1 (New) as avoided cost of treatment and then distributing it among different industries is flawed and erroneous. This formula does not consider the industries as separate entities with varied degrees of non-compliance. It puts all industries at the same level and merely calculates the ratio of failed samples. It fails to take into account the degree of failure of the samples by different industries along with the quality of wastewater discharge in the ratio of wastewater discharge into the pumping station. This is the fundamental flaw in the formula which fails to consider the differences between the wastewater discharge and alleged non-

compliances between different industries and therefore, the formula ought to be revised.

c) The errors in every step of the calculation of EC 1 (New) in the Joint Committee Report of May 2022 is detailed below:

i. **Step 1** estimates EOL (Excess Organic Load) as difference between CA (Average organic concentration in terms of COD) of final pumping station minus 250. This calculation presumes that organic concentration in terms of COD at pumping station is contributed by all. It is submitted that this is patently false. The quality of discharge depending upon type of process of the unit is a very important factor which the Committee fails to take into account. Moreover, deduction of 250 is based on presumption that 250 is allowable COD as per discharge standard. This is a faulty presumption as discharge standard for industrial undertaking for primary discharge is 2000 to 3000. Thus, value of EC1 (New) changes substantially. In fact, it becomes zero for our unit.

ii. **Steps 2 and 3** also has faulty presumptions in as much as maximum concentration in last five years is taken. It should be average for equitable distribution of total load on individual pumping station. Moreover, distributing EC 1 (New) pumping station wise is arbitrary and unfair inasmuch as some industries in grossly polluting pumping stations may not be discharging grossly polluted wastewater. Rather than distributing the EC pumping station wise, the individual non-compliance of industries must be considered.

iii. **Step 4** involves calculation of deterrent factor by calculating ratio of wastewater discharge and ratio of failed samples. Calculation of ratio of failed samples does not take into account the degree of violation of the norms. For instance, industries which are discharging wastewater with grossly high parameters of TSS, COD, BOD etc are at par with industries which discharge wastewater with minor variations in TSS, COD and BOD. The calculation of 'ratio of failed samples' puts both these industries in the same category which is arbitrary, perverse and ex-facie erroneous. Similarly, the ratio of wastewater discharge does not consider the quality of wastewater discharge by individual industries.

d) *Thirdly*, in GFL's case, the EC with the given formula has also been calculated wrongly:

i. Annexure -A records that the volume of wastewater discharged from the GFL Plant for the period of January 2017 to November 2021 is 5484518.389. However, the quantity of wastewater discharged from the

GFL plant for the period of January 2017 to November 2021 is 5054863, as per the monthly patrak uploaded on the GPCB server.

ii. Annexure-A records that 4 out of 26 samples collected during the 5-year period of January 2017 to November 2021 were failed samples. However, as per the GPCB record uploaded on the server, 4 samples of effluent discharge out of 32 samples were found with variation in results, on account of TSS/COD.

In view thereof, it is submitted that the calculation of EC is riddled with errors and inconsistencies and ought to be recalculated.

A copy of monthly patrak uploaded on the GPCB server is annexed herewith as Annexure-21.

A copy of the GPCB record exhibiting the number of samples collected and the variations therein is annexed herewith as **Annexure-22.**

8. That in view of the aforesaid, it is submitted that no EDC ought to be applicable upon GFL. GFL is fully compliant with the norms as prescribed in the CCA as explained above. In any event, the formula for calculation of EDC is arbitrary, perverse, irrational and without any legal foundation. It is submitted that the formula ought to be revised and EDC be recalculated for the industries.

9. Kindly consider the above objections and provide us with an opportunity of hearing as well.

Looking forward to a positive response.

Thanking you,

For, **Gujarat Fluorochemicals Limited.**

29/1/2022

Authorized Signatory
Dr. Shavad S. Pathan.

Gujarat Fluorochemicals Ltd. DAHEJ

CC: 1. Regional Officer, Gujarat pollution Control Board, GIDC Phase-II, Narmada Nagar, Bharuch-392015
2. Central Pollution Control Board, Parivesh Bhawan, Aatmajyoti Ashram Rd, Opp. VMC Ward Office No.10, Subhan Pura, Vadodara, Gujarat -390023

The following documents are attached as under:

Annexure 1	:	Report of Third party NABL accredited laboratory
Annexure 2	:	Report of GFL's laboratory
Annexure 3	:	A Copy of the screenshot of the CPCB server

Annexure 4	:	A Copy of the result showing in A.R comparative sheet downloaded from GPCB XGN portal
Annexure 5	:	A Copy of a sample test result of high chloride.
Annexure 6	:	A Copy of the Standard Operating Procedure for determination of COD prepared by GFL
Annexure 7	:	A Copy of the Joint analysis letter dated 25.11.2021
Annexure 8	:	A Copy of the reply dated 28.03.2022
Annexure 9	:	A Copy of the GPCB & NABL approved laboratory test results
Annexure 10	:	A Copy of the ETP Flow Diagram
Annexure 11	:	A copy of the Adequacy certificate
Annexure 12	:	A Photo of flow meter installed
Annexure 13	:	A Copy of storage area photograph
Annexure 14	:	Copies of manifest of waste disposal at GPCB approved landfill site/recycler/coprocessor
Annexure 15	:	Copies of photographs of ESP, Water spray nozzles, Online monitoring of stack dust
Annexure 16	:	Copies of photographs of housekeeping practices of GFL
Annexure 17	:	Copies of Test reports of GPCB
Annexure 18	:	A copy of the Direction dated 20.02.2019
Annexure 19	:	A Copy of the revocation Order dated 27.02.2019
Annexure 20	:	A Copy of the map and google imagery of the pipeline and the flow of wastewater
Annexure 21	:	A copy of monthly patrak uploaded on the GPCB server
Annexure 22	:	A copy of the GPCB record exhibiting the number of samples collected and the variations therein

5884

Annexure :- 1

UniStar
Environment and Research Labs Pvt. Ltd.

White House,
Near G.I.D.C. Office, Char Rasta,
Vapi-396 195, Gujarat, India.
Phone : +91 260 2433966 / 2425610
Email : response@uerl.in Website : www.uerl.in

MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA-1986 (12.01.2020 to17.03.2023) | QCI-NABET Accredited EIA Consultant Organization | GPCB Recognized Environmental Auditor (Schedule-II) | ISO 9001:2015 Certified Company | ISO 45001:2018 Certified Company

TEST REPORT

Report No.	URC /21/10/L-0364		
Name & Address of Customer	M/s. Gujarat Fluorochemicals Limited Plot No.12/A, GIDC Dahej, Bharuch.	Date Of Report	02/11/2021
		Customer's Ref.	--
Sample Details	Waste Water Sample (GPCB Counter)	Location	---
Sample Qty.	5 Lit.	Appearance	Colourless
Sampling Date	27/10/2021	Sample Received Date	28/10/2021
Test Started Date	28/10/2021	Test Completion Date	01/11/2021
Sampled By	Party.	Sampling Method	--
UERL Lab ID. No.	21/10/L-0364		

TEST RESULTS:

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment			
Sr.	Parameters	Test Method Permissible	Permissible	Unit of	Results
		PHYSIO-CHEMICAL PARAMETERS			
1.	pH @ 25 ° C	(APHA 23rd Ed.,2017,4500-H+B)	6.0 – 9.0	--	6.73
2.	Total Suspended Solids	IS 3025(Part 17)1984,Amd.1	100	mg/L	142
3.	Total Dissolved Solids	IS 3025(PART 16) 1984	--	mg/L	32160
		GENERAL CHEMICAL PARAMETERS			
1.	Oil & Grease	IS 3025(Part39)1991, Amd. 2	10	mg/L	BDL(MDL:2.0)
2.	Fluoride	(APHA 23rd Ed.,2017,4500 F,D)	15	mg/L	9.4
3.	Chloride as Cl^-	IS 3025(PART 32) 1988	--	mg/L	20543.6
4.	Sulphate as SO_4^{-2}	IS 3025(Part 24)1986	--	mg/L	676
5.	Sulphide	(APHA 23rd Ed.,2017,4500 S^{-2} F)	5	mg/L	1.5
6.	TKN	(APHA 23rd Ed.,2017,4500 NORG, B,)	50	mg/L	11.2
7.	Ammonical Nitrogen	IS 3025(Part 34)1988,	50	mg/L	8.3
8.	Free Ammonia	IS 3025(Part 34)1988,	5	mg/L	BDL(MDL:0.2)
9.	Copper	IS 3025(Part 42)1992amd.01,	3	mg/L	0.074
10.	Zinc	IS 3025(Part 49)1994	15	mg/L	0.103
11.	BOD (3 days at 27 °C)	IS 3025(Part 44)1993Amd.01	100	mg/L	46
12.	COD	IS 3025(Part 58)2006	250	mg/L	161.7
13.	Arsenic	APHA 23rd Ed.,2017,3114-C	0.2	mg/L	BDL(MDL:0.01)
14.	Mercury	(APHA 23rd Ed.,2017,3112-B)	0.01	mg/L	BDL(MDL:0.001)
15.	Lead	IS 3025(Part 47)1994Amd.02	1	mg/L	BDL(MDL:0.01)
16.	Cadmium	IS 3025(Part 41)1992,	2	mg/L	0.067
17.	Hexavalent Chromium	APHA 23rd Ed.,2017,3500CrB	0.1	mg/L	BDL(MDL:0.05)
18.	Total Chromium	IS 3025(Part 52)2003,	2	mg/L	BDL(MDL:0.05)
19.	Nickel	IS 3025(Part 54)2003,	5	mg/L	0.071
20.	Cyanide	IS 3025(Part27)1986	0.2	mg/L	BDL(MDL:0.05)
21.	Phenolic Compound	IS 3025(Part 43)1992, Amd.2	5	mg/L	BDL(MDL:0.1)
22.	Manganese	APHA 23rd Ed.,2017,3500 Mn B	2	mg/L	BDL(MDL:0.1)
23.	Iron	IS 3025(Part 53)2003,	3	mg/L	0.266
Remarks: BDL= Below Detection Limit, MDL = Minimum Detection Limit,					
Opinion & Interpretation (If required):					

******* End of Report *******

Checked By
N. C. P.
(Nilesh C. Patelp
(Sr. Chemist)

Authorized By
(N.B.T.)
(Nitin B. Tandel)
(Technical Manager)

UERL/CHM/F-2/05

Note: This report is subject to terms and conditions mentioned overleaf.

Annexure :-2

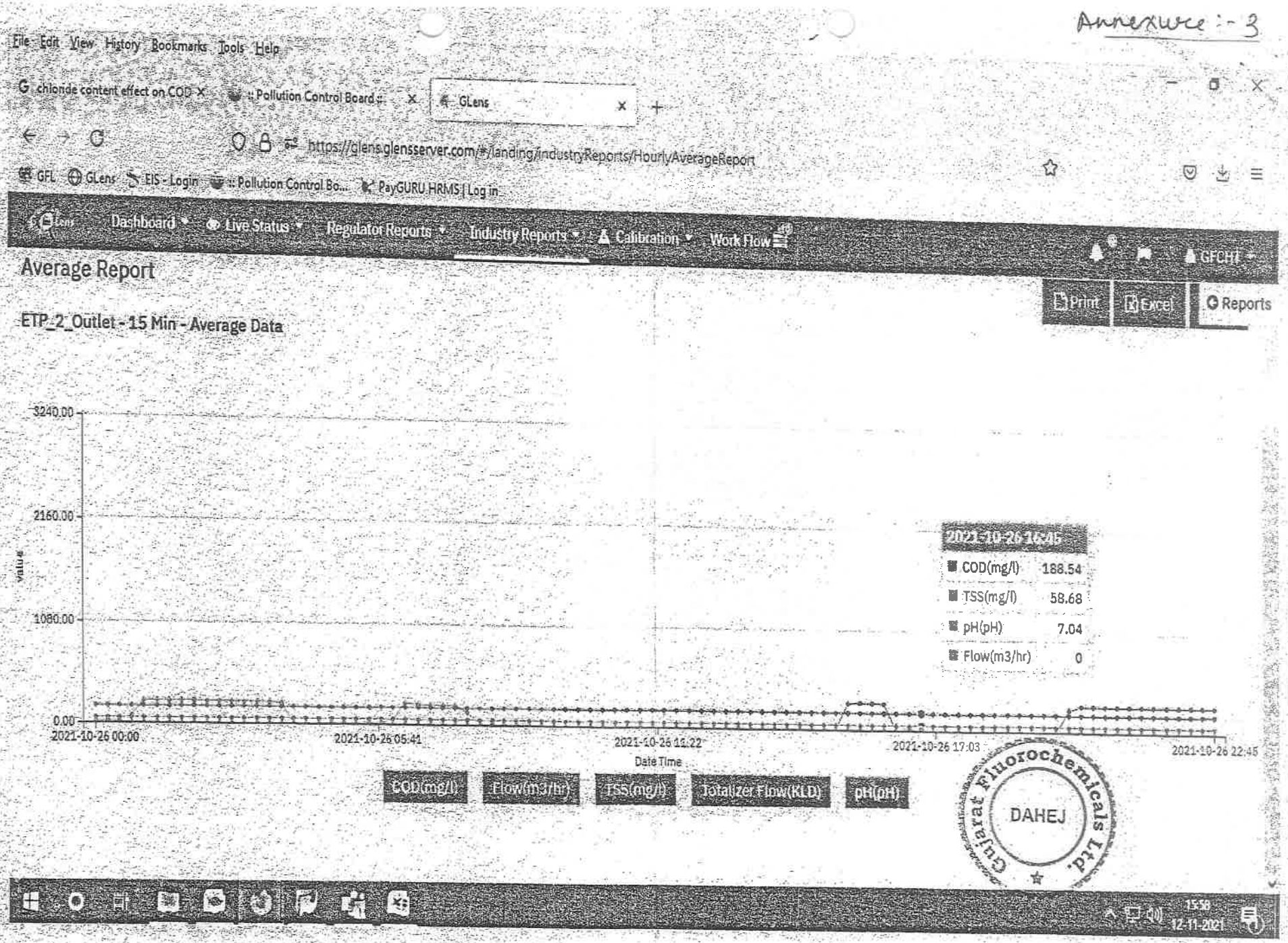
GUJARAT FLUOROCHEMICALS LIMITED, DAHEJ

Annexure -F

Result dated 26.10.2021, analysed at ETP LAB as under,

Sr. No.	Parameters	Unit
1	pH	6.70
2	COD	198 ppm
3	TSS	96 ppm

Annexure :- 3



Annexure - III

5886

Annexure : 4

:: Pollution Control Board :: — Mozilla Firefox

https://gpcbxgn.gujarat.gov.in/ACT/Reports/view_cross_tab.aspx?ACT=/mvQz1fWAD4=&gpcb_id=ocsP0PI3dGU=&MTH=aUtGjoydRv8=

90%

5136 - Gujarat Fluorochemicals Limited / L. From Date: 01/12/2017 - To Date: 12/11/2021

Print ALL

Param ALL >0 All Cases GO Print Excel

☐ ALL ☐ ACT ☐ ALK ☐ BOD ☐ CAL ☐ CHL ☐ COD ☐ COL ☐ FLU ☐ NHG ☐ NTR ☐ O&G ☐ pH ☐ PHE ☐ SS
☐ SUL ☐ SUP ☐ TDS ☐ TKN ☐ TMP

Sample ID & Dt	Sample At	Type	BOD	CAL	CHL	COD	COL	FLU	NHG	NTR	O&G	pH	PHE	SS	SUL	SUP	TDS	TKN	TMP
Permissible Values			100			250		15	50		20	9	5	100	5				45
315987-26/10/2021	From Final Outlet of Unit into GIDC drain. ~	OTH	122		22350	620	30	13.1	8.96	4.96		6.68	0.29	78	2.24	802		11.2	
315991-26/10/2021	From Equalisation Tank of stream-1 ~	OTH	461		121	1998	70	10.8	2.24	1.61		6.21	0.28	62	1.44	32		7.84	
315995-26/10/2021	From Equalisation Tank of stream-3 ~	OTH	944		15810	3735	20	>40	5.6	52.55		<1	0.63	38	<1.00	293		11.2	
316014-26/10/2021	From Collection tank of Stream-6 ~	OTH	22		232	91	40	4	3.92	11.66		7.01	0.26	126	<1.00	84		8.96	
312867-17/09/2021	## Final Outlet of the ETP ~ From Final outlet of ETP	AIA	47	2525.04	19400	214	30	8.2	BDL			7.01	BDL	88		1208	36226		
305192-01/06/2021	## Final Outlet of the ETP ~	VIG	39	28	18180	196	15	1.41	0.84			6.94	0.36	60		958	33430		
288860-16/09/2020	## Final Outlet of the ETP ~ From Final outlet of ETP	OTH	60	5098	18185	239	2.5	7.8	7.84			7.50	0.13	86		1636	30620		
285283-28/07/2020	## Final Outlet of the ETP ~	ROU	129	9619.2	22215	413	05	11.5	5.38			7.19	0.04	74		1587	41045		
285284-28/07/2020	From Borewell of Shri Ranjit Gohil, Deputy Sarpanch, Ambheta Village ~	ROU	17		3960	54	7.5	1.10	BDL	4.88	BDL	7.81		16		1506	7740		28
273574-04/01/2020	## Final Outlet of the ETP ~	APP	54	7896.0	15997	241	2.5	11.30	5.21			7.69	BDL	66		789	29616		
271060-29/11/2019	## Final Outlet of the ETP ~ From treated waste water collection tank	APP	51	1463	11159	241	70	7.25	1.57			6.99	0.42	152		784	21322		
270218-14/11/2019	## Final Outlet of the ETP ~ From treated waste water collection tank	REV	50	6350.70	17083	230	2.5	10.25	7.39			6.89	BDL	62		549	81444		
262285-05/07/2019	## Final Outlet of the ETP ~ From treated waste water holding guard pond	ROU	45		17164	233	10	6.95	8.01			7.16		186		763	31018		28
260797-15/06/2019	From storm water drain nr MMT area. (within premises) ~	APP	9		1960	56	5.0		3.19			8.45		16		462	3852		28
260798-15/06/2019	## Final Outlet of the ETP ~	APP	40		26856	210	5.0		8.96			8.24		40		793	55570		28
255928-30/03/2019	## Final Outlet of the ETP ~	HOR			35499	234			30.74			8.56		64			62264		
255854-29/03/2019	From final discharge point of unit at FPS (GL) ~	REV			25206	157			23.97			7.09		54			48640		
251215-15/01/2019	ww sample is collected from storm water drain opposite side of deepak phenolics (outside the GFL)	COM	140		89036	Not analysed (high chloride in	200	1675	72.80			<1.0		606		310	173784		
251216-15/01/2019	ww sample is collected from drain out material from reactor 3R-140E of CaCl2 plant ~	COM	345		86100	Not analysed (high chloride in	140	2975	5.60			<1.0		604		318	115520		
248500-09/12/2018	From final discharge point at collection sump of final pumping station, Ambheta, Dahej. ~ (P2)	OTH				NOT ANALYSED (Chloride interfe			5.6			6.69		162			69328		
248501-09/12/2018	From final outlet of ETP within premises (P7) ~	OTH				NOT ANALYSED (Chloride interfe			5.6			6.63		146			69146		
238972-23/07/2018	From Final outlet of the ETP ~	APP	151		37958	570	50	16.0	5.04		0.8	6.78	BDL	68		862	60914		28
231582-10/04/2018	## Final Outlet of the ETP ~ ...	APP	59		18889	233	10	6.45	5.6		0.4	7.30		86		607	36612		28
227593-09/02/2018	From treated waste water Guard pond ~	ROU	47		28872	167	15	12.4	15.68		0.4	7.47		508		702	36450		28
224558-02/01/2018	## Final Outlet of the ETP ~	APP	70		37974	242	10	9.0	5.6		0.8	7.12		74		1187	53946		29

Fluorochemicals

15:52
12-11-2021

5887

Annexure - IV

5888

Annexure :- 5

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:248501 - Analysis Completion: 11/12/2018

Organic Chemicals manufacturing / LAB Inward : 36516

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 36516 **Date: 11/12/2018**

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej–392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : OTH-Others/Higher Authority)
4. Sample Collected By : R.R.Vyas, R.O Head
5. Quantity of Sample Received : 2 lit
6. Code No. of the Sample : 248501
7. Date & Time of Collection & Inwarding : 09/12/2018 , (1930 to 1930) & 10/12/2018
8. Date of Start & Completion of Analysis : 10/12/2018 & 11/12/2018
9. Sampling Point : From final outlet of ETP within premises (P7) ~
10. Flow Details (Remarks) : —-
    Mode of Disposal : individual drainage pipeline to Final Pumping station at
    Ultimate Receiving Body : Sea
13. Temperature on Collection : 28 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for : Barcode & Color & Appearance :Slight turbid
    : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD) : 5 ,Cap No & Weight : —

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	6.63
2	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Metho	10 – 200000 mg/L	69146
3	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Metho	2 – 10000 mg/L	146
4	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	5.6
5	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2	5.0- 50000 mg/l	LYSED (Chlor

Laboratory Remarks : freezed, COD Not analyzed due to high chloride interference
By:210-vig_210 Dt.: 11/12/2018

K. I. Karelia,SSO

Note :
1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

5889

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:248500 - Analysis Completion:11/12/2018

Organic Chemicals manufacturing / LAB Inward : 36511

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 36511 **Date: 11/12/2018**

1. Name of the Customer	: Gujarat Fluorochemicals Limited - 15136
2. Address	: 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample	: REP-Representative/Grab, (Insp Type : OTH-Others/Higher Authority)
4. Sample Collected By	: R.R.Vyas, R.O Head
5. Quantity of Sample Received	: 2 lit
6. Code No. of the Sample	: 248500
7. Date & Time of Collection & Inwarding	: 09/12/2018 , (1645 to 1645) & 10/12/2018
8. Date of Start & Completion of Analysis	: 10/12/2018 & 11/12/2018
9. Sampling Point	: From final discharge point at collection sump of final pumping station,
10. Flow Details (Remarks)	Ambheta, Dahej. ~ (P2)
Mode of Disposal	: ---
Ultimate Receiving Body	: individual drainage pipeline to Final Pumping station at
13. Temperature on Collection	: Sea
14. Carboys Nos for	: 29 & pH Range on pH Strip :7-8 on pH strip
	: Barcode & Color & Appearance :Slight turbid
15. Water Consumption & W.W.G (KLPD)	: Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	6.69
2	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Metho	10 – 200000 mg/L	69328
3	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Metho	2 – 10000 mg/L	162
4	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	5.6
5	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2	5.0- 50000 mg/l	LYSED (Chlor

Laboratory Remarks : freezed. Not Analyzed due to high chloride interference By:210-vig_210
Dt.: 11/12/2018

K. I. Karelia,SSO

Note :
1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

5890

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:251215 - Analysis Completion:24/01/2019

Organic Chemicals manufacturing / LAB Inward : 37040

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 37040 Date: 25/01/2019

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : COM-On Complaint)
4. Sample Collected By : Bhumika A. Bhuva, AEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 251215
7. Date & Time of Collection & Inwarding : 15/01/2019 , (1400 to 1400) & 16/01/2019
8. Date of Start & Completion of Analysis : 16/01/2019 & 24/01/2019
9. Sampling Point : ww sample is collected from storm water drain opposite side of deepak phenolics (outside the GFL)
10. Flow Details (Remarks)
    Mode of Disposal : —
    Ultimate Receiving Body : Storm water drainage line
13. Temperature on Collection : Sea
14. Carboys Nos for : 29 & pH Range on pH Strip :2 pH on pH strip
    : barcode & Color & Appearance :Yellowish
15. Water Consumption & W.W.G (KLPD) : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	<1.0
2	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	200
3	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	173784
4	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	606
5	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	72.80
6	Acidity as Caco3	mg/l	Titration Method. (2310 B APHA Standard Methods 2	1 – 1000 mg/l	26800.0
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	89036
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	310
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	lysed (high ch
10	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	1675
11	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	140

Laboratory Remarks : Freezed By:210-vig_210 Dt.: 25/01/2019

K. I. Karelia,SSO

Note :
1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

5891

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:251216 - Analysis Completion:24/01/2019

Organic Chemicals manufacturing / LAB Inward : 37039

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 37039 Date: 25/01/2019

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : COM-On Complaint)
4. Sample Collected By : Bhumika A. Bhuva, AEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 251216
7. Date & Time of Collection & Inwarding : 15/01/2019 , (1415 to 1415) & 16/01/2019
8. Date of Start & Completion of Analysis : 16/01/2019 & 24/01/2019
9. Sampling Point : ww sample is collected from drain out material from reactor 3R-140E of CaCl2 plant ~
10. Flow Details (Remarks)
    Mode of Disposal : ---
    Ultimate Receiving Body : Collected in pit from which partially going to storm water drainage line
13. Temperature on Collection : Sea
14. Carboys Nos for : 30 & pH Range on pH Strip :2 pH on pH strip
    : barcode & Color & Appearance :greyish yellow
15. Water Consumption & W.W.G (KLPD) : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	<1.0
2	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	140
3	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	115520
4	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	604
5	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	5.60
6	Acidity as Caco3	mg/l	Titration Method. (2310 B APHA Standard Methods 2	1 – 1000 mg/l	88200.0
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	86100
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	318
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	lysed (high ch
10	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	2975
11	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	345

Laboratory Remarks : Freezed By:210-vig_210 Dt.: 25/01/2019

K. I. Karelia,SSO

Note :
1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

Annexure :- 6

GEL	STANDARD OPERATING PROCEDURE		
Doc. No.: ETP/SOP/10	Revision No.: 02	Effective Date: 05.05.2017	Page 1 of 5
TITLE: Test Methods for measurement of Chemical Oxygen Demand (COD)			

SCOPE & APPLICATION:

This SOP describes methods for

A) Determination the chemical oxygen demand (COD) in Wastewaters, and Industrial Water by open reflux method.
B) Determination of Chlorides
C) Removal of chlorides prior to COD determination if higher than 2000ppm

A) DETERMINATION OF CHEMICAL OXYGEN DEMAND(COD)

Below test method is recommended for the water samples having chloride content <2000 ppm. In case Chloride content is higher, remove the chloride with mercuric sulphate as per the procedure C until it is <2000 ppm .

1.0 TEST METHOD STANDARD:

IS 3025(Part 58) 2006
APHA 22nd Ed.2012, 5220-B, 5-17
US EPA Method 410.3:1978
ASTM D 1252 – 06

2.0 RESPONSIBILITY:

Chemist

3.0 PRINCIPLE:

Most types of organic matter are oxidized by boiling mixture of potassium dichromate and sulphuric acid to form carbon dioxide and water. A sample is refluxed in strongly acid solution with a known excess of Potassium Dichromate ($K_2Cr_2O_7$). After digestion, the remaining unreduced Potassium Dichromate is titrated with ferrous ammonium Sulphate to determine the amount of Potassium Dichromate consumed and the oxidizable matter is calculate in term of oxygen equivalent.

4.0 APPARATUS, EQUIPMENT AND CHEMICALS & REAGENTS:

4.1 APPARATUS.

4.1.1 Reflux Apparatus
4.1.2 Blender
4.1.3 Pipette, Class- A and wide bore
4.1.4 Burette
4.1.5 Volumetric Flask
4.1.6 Weighing Balance
4.1.7 Reflux Condenser
4.1.8 Reflux Flask

4.2 **REAGENT.**

4.2.1 Standard Potassium Dichromate Solution (0.25 N):

Dissolve 12.259 g Potassium dichromate primary standard grade, previously dried at 103 °C for 2 hr. in distilled water and dilute 1000 ml.

4.2.2 Sulfuric acid reagent:

Dissolve 5.5 gm Silver sulphate in 1 Kg Sulfuric acid. Keep overnight for dissolution. Shake well after dissolution.

4.2.3 Ferroin Indicator solution:

Dissolve 1.485gm, 1, 10-phenanthroline monohydrate and 695 mg $FeSO_4 7H_2O$ in distilled Water and dilute to 100 ml.

4.2.4 Standard Ferrous Ammonium Sulfate (FAS) (0. 1N):

Dissolve 39.214 g Fe $(NH4)_2(SO4)_2.6H_2O$ in distilled water. Add 20 ml Conc H_2SO_4 Cool and dilute to 1000 ml.

Standardization of FAS Solution:

Weigh approximately 0.1 gm preheated Potassium Dichromate at 105 ° C for 24 hours. Dissolve in small amount of water, chill it and add 30 ml of conc. H_2SO_4.Titrate it against 0.1N FAS using Ferroin as an indicator. Colour change sharply green blue to wine red.

$$\text{Normality of FAS} = \frac{\text{Weight of } K_2Cr_2O_7 \times 1000}{TR \times 49.03}$$

TR is titration reading in ml.

4.2.5 Mercuric sulfate $HgSO_4$

4.2.6 Standard Potassium hydrogen phthalate (KHP):

Dissolve 425 mg KHP dissolve in 1 Lit. This solution has theoretical COD of 500 ppm.

5.0 ENVIRONEMENTAL CONDITIONS:

Ambient Temperature

6.0 SAMPLE PREPARATION:

Homogenize all samples containing suspended solids before analysis. Make preliminary dilution for waste containing a high COD to reduce the error inherent in measuring small sample volumes.

7.0 PROCEDURE:

7.1 Take a COD reflux flask. Add 20 ml or an Aliquot sample diluted to 20 ml with distilled water.

7.2 Add 0.4g mercuric sulphate to remove chloride interference.

7.3 Now add 30 ml of Sulphuric acid reagent.

7.4 Mix well and then add 10 ml of 0.25 N Potassium dichromate solutions. Mix well if the color turns green; take fresh sample with smaller aliquot.

7.5 Add 3-4 glass beads in each reaction vessel.

7.6 Insert the Reaction vessels in the holes of the Block, which has attained 150°C. Put air condensers on reaction vessels. Reflux the content for 2 hours. Cool the contents and transfer them in 200 ml conical flasks.

7.7 Take all the contents by washing the tubes with 80 ml distilled water. Cool and titrate the excess potassium dichromate with standard Ferrous Ammonium sulphate using 4 to 5 drops of Ferroin Indicator. Near the end of the titration color changes sharply from blue green to reddish brown (wine red) that persists for one minute or longer.

7.8 Reflux a reagent blank simultaneously with the sample under identical conditions.

7.9 CALCULATION:

$$\text{COD (mg/L)} = \frac{(B - A) \times \text{Normality of FAS} \times 8000}{\text{ml of sample taken}}$$

B= Blank T.R
A= Sample T.R

8.0 SAFETY MEASURES:

Safety: Use furning hood chamber
Use safety appliances
For handling chemical & reagent always refer MSDS.
Take special care for handling Sulphuric acid.

Quality: The most common interference is Chloride ion, which reacts with Silver to precipitate Silver chloride, to overcome the presence of chloride ion add Mercuric Sulphate to form complex before refluxing.
Potassium dichromate must be dried at 105± 2 °c for 24 hrs before use.

B) PROCEDURE FOR CHLORIDE MEASUREMENT:

REAGENTS:

1. **Standard Silver Nitrate AgNO3 (0.1 N solution)**
   - Take about 100 ml of distilled water in a cleaned and dried 1000 ml volumetric flask.
   - Add about 17 gm of Silver Nitrate with continues stirring.
   - Add more about 700 ml of distilled water, mix.
   - Make up the volume 1000 ml with water. Mix solution thoroughly.
   - Keep the solution for at least one hour and then carry out the standardization

2. **Standardization**
   - Weigh 50 mg NaCl, previously dried at 110 °C for 2 hours, to a 150 mL conical flask
   - Dissolve in 5 mL of DI water
   - Add 2.5 mL of Acetic Acid, 25 mL methanol, and about 0.25 mL of Eosin indicator.
   - Titrate with the AgNO3 solution and calculate Normality of solution

   N = Weight of NaCl (mg) / AgNO3 (mL) * 58.44

3. **Preparation of 1% Potassium Chromate Indicator Solution:**
   - Dissolve 5 g K2CrO4 in about 5 mL distilled water.
   - Add a few drops of silver nitrate until a definite red precipitate forms.
   - Let stand 12 hours,
   - Filter and dilute to 100 mL with DI water

PROCEDURE:

1. Take 100 mL sample in a beaker and adjust to pH 7.0 to 10.0 with 0.1 N NaOH or 0.1 N H2SO4.
2. Take 2 gm sample from above into the conical flask and add 50 mL DI water
3. Add few drops of 1% Potassium Chromate Solution

4. Titrate with 0.1 N Silver Nitrate solution till end point (Yellow to Brick Red)
5. Note down Titration reading as TR and calculate the results

CALCULATION:

$$\text{Chloride ppm} = \frac{TR \times N \text{ of } AgNO_3 \times 35.5 \times 1000}{\text{Wt. of Sample}}$$

C)PROCEDURE FOR CHLORIDE REMOVAL: (This process is not required if Cl content is less than 2000 ppm)

1. Take 50 mL samples in a 100 mL glass beaker
2. Check the chloride content of the sample
3. Calculate the amount of Mercuric sulphate as per formula (HgSO4 in gram = Chloride in ppm/2000).
4. Add above quantity of HgSO4 in beaker
5. Add 5ml Conc H2SO4 and mix the content gently with a glass rod until the product becomes homogeneous.
6. Filter the material by using Whatman filter paper
7. Check chloride of supernatant. If Chloride is >2000ppm, repeat the above process.
8. If Chloride < 2000 ppm, proceed for COD analysis.

PRECAUTIONS:

- Standardize all the reagents on daily basis especially Ferrous Ammonium Sulphate (FAS)
- Add (Sulfuric Acid + Silver Sulphate) solution very slowly for chloride correction to prevent heating and loss of organic compounds.
- Weigh the Mercuric sulphate accurately.
- Sample should be analyzed within 7 hours of sampling otherwise preserve the sample by adding 0.1 N sulphuric acid to a pH of ≤2.
- Run a standard sample of Potassium hydrogen phthalate (KHP) having COD of 500 ppm on daily basis to validate the procedure. (Dissolve 0.425 gm of KHP, previously dried at 120 °C for 2 hrs, in 1 Liter DI water. This solution has theoretical COD of 500 ppm.)

Prepared by	Approved by	Issued by

5897

Annexure :- 7

-01C-

GFL™
GUJARAT FLUOROCHEMICALS
CIN : L24304GJ2018PLC105479

Gujarat Fluorochemicals Limited
earlier known as Inox Fluorochemicals Limited

12/A, GIDC Dahej Industrial Estate, Taluka Vagra, Distt. Bharuch-392130. Gujarat, India

Tel: +91-2641-618031 (Admin) / 618041-50 (Purchase) / 618086-87 (Security) | www.gfl.co.in

Ref. GFL/GPCB-ID 15136/2020-21/41

November 15, 2021

To,
Regional Officer
Gujarat pollution Control Board
GIDC Phase-II, Narmada Nagar,
Bharuch-392015

Reference: 1. Your Visit and Sample collected on 26.10.2021
2. Sample analysis Report of GPCB dated 10.11.2021

15-11-2021
Post Received
Gujarat Pollution Control Board
BHARUCH

Kind Attn: Shri FM Modi, Regional Officer, Bharuch

Subject: Request for re-sampling/Joint Analysis of treated effluent.

Dear Sir,

This has reference to the above subject matter regarding the analysis results.

The COD and BOD value are quite higher as compared to our own laboratory, online CPCB server as well as NABL accredited laboratory due to perhaps higher chloride @ 22350mg/l. In past also GPCB has not analyzed COD because of higher chloride in sample Ref. Sample ID.& dated 251215-15.01.2019, 251216-15.01.2019, 248500-09.12.2018 & 248501-09.12.2018.

Please find enclose herewith result showing in A.R comparative sheet downloaded from GPCB XGN portal in which for 04 occasions COD was not analyzed due to higher chloride which is self explanatory.

Comparison of sample analysis results, ETP Outlet is as under:

Sample Date	GFL Lab		NABL accredited Lab		Online CPCB Server	GPCB Lab	
	COD	BOD	COD	BOD	COD	COD	BOD
26.10.2021	198	48.6	161.7	46	188.54	620	122

In view of the above result is not convincing to us, we humbly request for re-sampling/joint of treated effluent of our unit.

Thanking you,
For, **Gujarat Fluorochemicals Limited**

(Authorized Signature)

Gujarat Fluorochemicals Ltd. DAHEJ

CC: The Member Secretary, Gujarat Pollution Control Board, Gandhinagar-382010

Encl.: 1. A.R Comparative sheet downloaded from GPCB XGN Portal as **Annexure-I**
2. NABL accredited lab analysis report as **Annexure-II**
3. Online CPCB server screen snap as **Annexure-III**
4. GPCB sample analysis report as **Annexure-IV**

16/11/21

Gujarat Pollution Control Board
Head Office
Sector No.-10-A,
Gandhinagar-382010

5898

O/C

GUJARAT FLUOROCHEMICALS
VALUE THROUGH GREEN CHEMISTRY
CIN : L24304GJ2018PLC105479

Gujarat Fluorochemicals Limited
earlier known as Inox Fluorochemicals Limited

12/A, GIDC Dahej Industrial Estate, Taluka Vagra, Distt. Bharuch-392130, Gujarat, India | Tel: +91-2641-618031 (Admin) / 618041-50 (Purchase) / 618086-87 (Security) | www.gfl.co.in

Ref. GFL/GPCB-ID 15136/2020-21/43

November 25, 2021

To,
The Regional Directorate (West),
Parivesh Bhawan,
Nr. Ward Office No.10,
Subhanpura,
Vadodara-390023(Gujarat)

Regional Directorate (West) • CPCB, M.O. E.F.&CC, Govt. of India • Vadodara

24/11/21

Reference: 1. Your Visit and Sample collected on 26.10.2021
2. Sample analysis Report of GPCB dated 10.11.2021

Kind Attn: Shri Prasoon Gargava, The Regional Director.

Subject: Request for re-sampling/Joint Analysis of treated effluent.

Dear Sir,

This has reference to the above subject matter regarding the analysis results.

The COD and BOD value are quite higher as compared to our own laboratory, online CPCB server as well as NABL accredited laboratory due to perhaps higher chloride @ 22350mg/l. In past also GPCB has not analyzed COD because of higher chloride in sample Ref. Sample ID.& dated 251215-15.01.2019, 251216-15.01.2019, 248500-09.12.2018 & 248501-09.12.2018.

Please find enclose herewith result showing in A.R comparative sheet downloaded from GPCB XGN portal in which for 04 occasions COD was not analyzed due to higher chloride which is self-explanatory.

Comparison of sample analysis results, ETP Outlet is as under:

Sample Date	GFL Lab		NABL accredited Lab		Online CPCB Server	GPCB Lab	
	COD	BOD	COD	BOD	COD	COD	BOD
26.10.2021	198	48.6	161.7	46	188.54	620	122

In view of the above result is not convincing to us, we humbly request for re-sampling/joint of treated effluent of our unit.

Thanking you,
For, **Gujarat Fluorochemicals Limited**

Gujarat Fluorochemicals Ltd. DAHEJ

(Authorized Signature)

CC: 1. The Member Secretary, Gujarat Pollution Control Board, Gandhinagar-382010.
2. The Regional Officer, Gujarat pollution Control Board, Bharuch-392015

Encl.: 1. A.R Comparative sheet downloaded from GPCB XGN Portal as **Annexure-I**
2. NABL accredited lab analysis report as **Annexure-II**
3. Online CPCB server screen snap as **Annexure-III**
4. GPCB sample analysis report as **Annexure-IV**

:: Pollution Control Board :: — Mozilla Firefox

https://gpcbxgn.gujarat.gov.in/ACT/Reports/view_cross_tab.aspx?ACT=/mvQz1fWAD4=&gpcb_id=ocsP0Pi3dGU=&MTH=aUtGjcydRv6=

90%

5136 - Gujarat Fluorochemicals Limited / L From Date: 01/12/2017 - To Date: 12/11/2021

Zone: ALL Parameter: ALL >0 All Cases GO Print Excel

☐ ALL ☐ ACE ☐ ALK ☐ BOD ☐ CAL ☐ CHL ☐ COD ☐ COL ☐ FLU ☐ NH3 ☐ NTR ☐ O&G ☐ pH ☐ PHE ☐ SS ☐ SUL ☐ SUP ☐ TDS ☐ TKN ☐ TMP

Samp ID & Dt	Samp_pt	Type	BOD	CAL	CHL	COD	COL	FLU	NH3	NTR	O&G	pH	PHE	SS	SUL	SUP	TDS	TKN	TMP
Permissible Values			100			250		15	50		20	9	5	100	5				45
315987-26/10/2021	From Final Outlet of Unit into GIDC drain. ~	OTH	122		22350	620	30	13.1	8.96	4.96		6.68	0.29	78	2.24	802		11.2	
315991-26/10/2021	From Equalisation Tank of stream-1 ~	OTH	461		121	1998	70	10.8	2.24	1.61		6.21	0.28	62	1.44	32		7.84	
315995-26/10/2021	From Equalisation Tank of stream-3 ~	OTH	944		15810	3736	20	>40	5.6	52.55		<1	0.63	38	<1.00	293		11.2	
316014-26/10/2021	From Collection tank of Stream-6 ~	OTH	22		232	91	40	4	3.92	11.66		7.01	0.26	126	<1.00	84		8.96	
312867-17/09/2021	## Final Outlet of the ETP ~ From Final outlet of ETP	AIA	47	2525.04	19400	214	30	3.2	BDL			7.01	BDL	88		1208	36226		
305192-01/06/2021	## Final Outlet of the ETP ~	VIG	39	28	18180	196	15	1.41	0.84			6.94	0.36	60		958	33430		
288860-16/09/2020	## Final Outlet of the ETP ~ From Final outlet of ETP	OTH	60	5098	18185	239	2.5	7.8	7.84			7.50	0.13	86		1636	30620		
285283-28/07/2020	## Final Outlet of the ETP ~ ------	ROU	129	9619.2	22215	413	05	11.5	5.38			7.19	0.04	74		1587	41046		
285284-28/07/2020	From Borewell of Shri Ranjit Gohil, Deputy Sarpanch, Ambheta Village ~	ROU	17		3960	54	7.5	1.10	BDL	4.88	BDL	7.81		16		1506	7740		28
273574-04/01/2020	## Final Outlet of the ETP ~ --	APP	54	7896.0	15997	241	2.5	11.30	5.21			7.69	BDL	66		789	29616		
271060-29/11/2019	## Final Outlet of the ETP ~ From treated waste water collection tank	APP	51	1463	11159	241	70	7.25	1.57			6.99	0.42	152		784	21822		
270218-14/11/2019	## Final Outlet of the ETP ~ From treated waste water collection tank	REV	50	6350.70	17083	230	2.5	10.25	7.39			6.89	BDL	62		549	31444		
262285-05/07/2019	## Final Outlet of the ETP ~ From treated waste water holding guard pond	ROU	45		17164	233	10	6.95	8.01			7.16		186		763	31018		28
260797-15/06/2019	From storm water drain nr MMT area. (within premises) ~	APP	9		1960	56	5.0		3.19			8.45		16		462	3852		28
260798-15/06/2019	## Final Outlet of the ETP ~ --	APP	40		26856	210	5.0		8.96			8.24		40		798	55570		28
255928-30/03/2019	## Final Outlet of the ETP ~ ---------	HOR			35499	234			30.74			8.56		64			52264		
255854-29/03/2019	From final discharge point of unit at FPS (GL) ~	REV			25206	157			23.97			7.09		54			48640		
251215-15/01/2019	ww sample is collected from storm water drain opposite side of deepak phenolics (outside the GFL)	COM	140		89036	Not analysed (high chloride in	200	1675	72.80			<1.0		606		310	173784		
251216-15/01/2019	ww sample is collected from drain out material from reactor 3R-140E of CaCl2 plant ~	COM	345		86100	Not analysed (high chloride in	140	2975	5.60			<1.0		604		318	115520		
248500-09/12/2018	From final discharge point at collection sump of final pumping station, Ambheta, Dahej. ~ (P2)	OTH				NOT ANALYSED (Chloride interfe			5.6			6.69		162			69328		
248501-09/12/2018	From final outlet of ETP within premises (P7) ~	OTH				NOT ANALYSED (Chloride interfe			5.6			6.63		146			69146		
238972-23/07/2018	From Final outlet of the ETP ~ ----	APP	151		37958	570	60	16.0	5.04		0.8	6.78	BDL	68		862	60914		28
231582-10/04/2018	## Final Outlet of the ETP ~ --	APP	59		18889	233	10	6.45	5.6		0.4	7.30		86		607	36612		28
227593-09/02/2018	From treated waste water Guard pond ~ ---	ROU	47		28872	167	15	12.4	15.68		0.4	7.47		508		702	36450		28
224558-02/01/2018	## Final Outlet of the ETP ~	APP	70		37974	242	10	9.0	5.6		0.8	7.12		74		1187	53946		29

Fluorochemical

15:52 12-11-2021

5899

Annexure-II

5900

Annexure-II

UniStar
Environment and Research Labs Pvt. Ltd.

White House,
Near G.I.D.C. Office, Char Rasta,
Vapi-396 195, Gujarat, India.
Phone : +91 260 2433966 / 2425610
Email : response@uerl.in Website : www.uerl.in

MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA-1986 (12.01.2020 to17.03.2023) | QCI-NABET Accredited EIA Consultant Organization | GPCB Recognized Environmental Auditor (Schedule-II) | ISO 9001:2015 Certified Company | ISO 45001:2018 Certified Company

TEST REPORT

Report No.	URC /21/10/L-0364		
Name & Address of Customer	M/s. Gujarat Fluorochemicals Limited Plot No.12/A, GIDC Dahej, Bharuch.	Date Of Report	02/11/2021
		Customer's Ref.	--
Sample Details	Waste Water Sample (GPCB Counter)	Location	---
Sample Qty.	5 Lit.	Appearance	Colourless
Sampling Date	27/10/2021	Sample Received Date	28/10/2021
Test Started Date	28/10/2021	Test Completion Date	01/11/2021
Sampled By	Party.	Sampling Method	--
UERL Lab ID. No.	21/10/L-0364		

TEST RESULTS:

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment			
Sr.	Parameters	Test Method Permissible	Permissible	Unit of	Results
		PHYSIO-CHEMICAL PARAMETERS			
1.	pH @ 25 ° C	(APHA 23rd Ed.,2017,4500-H+B)	6.0 – 9.0	–	6.73
2.	Total Suspended Solids	IS 3025(Part 17)1984,Amd.1	100	mg/L	142
3.	Total Dissolved Solids	IS 3025(PART 16) 1984	–	mg/L	32160
		GENERAL CHEMICAL PARAMETERS			
1.	Oil & Grease	IS 3025(Part39)1991, Amd. 2	10	mg/L	BDL(MDL:2.0)
2.	Fluoride	(APHA 23rd Ed.,2017,4500 F,D)	15	mg/L	9.4
3.	Chloride as Cl^-	IS 3025(PART 32) 1988	–	mg/L	20543.6
4.	Sulphate as SO_4^{-2}	IS 3025(Part 24)1986	–	mg/L	676
5.	Sulphide	(APHA 23rd Ed.,2017,4500 S^{-2} F)	5	mg/L	1.5
6.	TKN	(APHA 23rd Ed.,2017,4500 NORG, B,)	50	mg/L	11.2
7.	Ammonical Nitrogen	IS 3025(Part 34)1988,	50	mg/L	8.3
8.	Free Ammonia	IS 3025(Part 34)1988,	5	mg/L	BDL(MDL:0.2)
9.	Copper	IS 3025(Part 42)1992amd.01,	3	mg/L	0.074
10.	Zinc	IS 3025(Part 49)1994	15	mg/L	0.103
11.	BOD (3 days at 27 °C)	IS 3025(Part 44)1993Amd.01	100	mg/L	46
12.	COD	IS 3025(Part 58)2006	250	mg/L	161.7
13.	Arsenic	APHA 23rd Ed.,2017,3114-C	0.2	mg/L	BDL(MDL:0.01)
14.	Mercury	(APHA 23rd Ed.,2017,3112-B)	0.01	mg/L	BDL(MDL:0.001)
15.	Lead	IS 3025(Part 47)1994Amd.02	1	mg/L	BDL(MDL:0.01)
16.	Cadmium	IS 3025(Part 41)1992,	2	mg/L	0.067
17.	Hexavalent Chromium	APHA 23rd Ed.,2017,3500CrB	0.1	mg/L	BDL(MDL:0.05)
18.	Total Chromium	IS 3025(Part 52)2003,	2	mg/L	BDL(MDL:0.05)
19.	Nickel	IS 3025(Part 54)2003,	5	mg/L	0.071
20.	Cyanide	IS 3025(Part27)1986	0.2	mg/L	BDL(MDL:0.05)
21.	Phenolic Compound	IS 3025(Part 43)1992, Amd.2	5	mg/L	BDL(MDL:0.1)
22.	Manganese	APHA 23rd Ed.,2017,3500 Mn B	2	mg/L	BDL(MDL:0.1)
23.	Iron	IS 3025(Part 53)2003,	3	mg/L	0.266
Remarks: BDL= Below Detection Limit, MDL = Minimum Detection Limit,					
Opinion & Interpretation (If required):					

******* End of Report *******

Checked By
(Nilesh C. Patelp)
(Sr. Chemist)

Gujarat Fluorochemicals DAHEJ

Authorized By
(N.B.T.)
(Nitin B. Tandel)
(Technical Manager)

UniStar
Environment and Research Labs Pvt. Ltd.

White House,
Near G.I.D.C. Office, Char Rasta,
Vapi-396 195, Gujarat, India.
Phone : +91 260 2433966 / 2425610
Email : response@uerl.in Website : www.uerl.in

MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA-1986 (12.01.2020 to17.03.2023) | QCI-NABET Accredited EIA Consultant Organization | GPCB Recognized Environmental Auditor (Schedule-II) | ISO 9001:2015 Certified Company | ISO 45001:2018 Certified Company

TEST REPORT

Report No.	URC /21/10/L-0364		
Name & Address of Customer	M/s. Gujarat Fluorochemicals Limited Plot No.12/A, GIDC Dahej, Bharuch	Date Of Report	02/11/2021
		Customer's Ref.	–
Sample Details	Waste Water Sample (GPCB Counter)	Location	—
Sample Qty.	5 Lit.	Appearance	Colourless
Sampling Date	27/10/2021	Sample Received Date	28/10/2021
Test Started Date	28/10/2021	Test Completion Date	01/11/2021
Sampled By	Party.	Sampling Method	–
UERL Lab ID. No.	21/10/L-0364		

TEST RESULTS:

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment			
Sr. No.	Parameters	Test Method Permissible	Permissible Limits (GPCB)	Unit of Measurement	Results
PHYSIO-CHEMICAL PARAMETERS					
1.	Temperature	IS 3025(Part 9)1984	Shall Not Exceed More Than 5 0C above Ambient Water Temperature	°C	27
2.	Colour	IS 3025(Part 4)	–	Pt. Co. Scale	40
GENERAL CHEMICAL PARAMETERS					
3.	Nitrate	(APHA 23rd Ed.,2017,4500 NO3-B)	50	mg/L	5.8
4.	Total Residual Chlorine	IS 3025(Part 26)1986,	1	mg/L	BDL(MDL:0.1)
5.	Selenium	IS 3025(Part 56)2003	0.05	mg/L	BDL(MDL:0.1)
6.	Vanadium	APHA 23rd Ed.,2017,3500 - V	0.2	mg/L	BDL(MDL:0.1)
7.	Bio Assay test (%)	IS:6582-1971	90 % survival of fish after 96 hrs. in 100% Effluent	%	90 % survival of fish after 96 hrs.

Remarks: BDL= Below Detection Limit, MDL = Minimum Detection Limit,

******* End of Report *******

Checked By
N. C. P.
Nilesh C. Patel
(Sr. Chemist)

Gujarat Fluorochemicals Ltd. DAHEJ

Authorized By
(N.B.T.)
(Nitin B. Tandel)
(Technical Manager)

Annexure - III

File Edit View History Bookmarks Tools Help

chloride content effect on COD x | :: Pollution Control Board :: | GLens | +

https://glens.glensserver.com/#/landing/industryReports/HourlyAverageReport

GFL | GLens | ES - Login | :: Pollution Control Bo... | PayGURU HRMS | Log in

Dashboard | Live Status | Regulator Reports | Industry Reports | Calibration | Work Flow | GFCHT

Reports

Print | Excel

Average Report

ETP_2_Outlet - 15 Min - Average Data

COD(mg/l) 188.54
TSS(mg/l) 58.68
pH(pH) 7.04
Flow(m3/hr) 0

Gujarat Fluorochemicals Ltd. DAHEJ

15:38 12-11-2021

5903

Annexure-IV

WATER / WASTE WATER SAMPLE

Sample ID:315987 Analysis Completion:10/11/2021

Organic Chemicals manufacturing / LAB Inward : 45796

Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

est Report No. : 45796 Date: 10/11/2021

. Name of the Customer	: Gujarat Fluorochemicals Limited - 15136
. Address	: 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
. Nature of Sample	: REP-Representative/Grab, (Insp Type : OTH-Others/Higher Authority)
. Sample Collected By	: MR. RAJENDRASINH RAJABHAU GAEK
. Quantity of Sample Received	: 2.5
. Code No. of the Sample	: 315987
. Date & Time of Collection & Inwarding	: 26/10/2021 , (1640 to 1640) & 29/10/2021
Date of Start & Completion of Analysis	: 29/10/2021 & 10/11/2021
Sampling Point	: From Final Outlet of Unit into GIDC drain. ~
ew Details (Remarks)	: —
. M of Disposal	: Through GIDC drainage network
. Ultimate Receiving Body	: Sea
. Temperature on Collection	: 30 & pH Range on pH Strip :@ 7-8 on pH Strip
. Carboys Nos for	: barcode & Color & Appearance :colorless
	: Ind :13306.720 , Dom :52.500 & Ind :4406.000 , Dom :45.000
. Water Consumption & W.W.G (KLPD)	: 13 ,Cap No & Weight :

Parameter	Unit	Test Method	Range of Testing	Result
pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	6.68
Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd. edi. 2012	2 - to 99 Hazen & 1-50	30
Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	78
Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	8.96
Total Kjeldahl Nitrogen	mg/l	Titrimetric method followed by preliminary distillation	1 – 5000 mg/l	11.2
Nitrate	mg/l	Cadmium reduction method As per Spectrophotomet	0.005 – 100 mg/l	4.96
Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard	1 - 50000 mg/l	22350
Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	802
Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2	5.0- 50000 mg/l	620
Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	0.29
Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	13.1
Sulphide	mg/l	APHA (23rd Edi.)4500-s2-F –iodometric Method	1-500.0 mg/l	2.24
B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	122

oratory Remarks : Approved By:399-lab_399 Dt.: 10/11/2021

Gujarat Fluorochemicals Ltd. DAHEJ

R.C.VASAVA,S.O

1. The results refer only to the tested samples and applicable parameters. Endorsement of products is neither inferred nor implied.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. This report is not to be reproduced wholly or in part or used in any advertising media without the permission of the Board in writing.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

5904

Annexure-8 (1/1)

CIN : L24304GJ2018PLC105479
Tel: +91-2641-618031 | www.gfl.co.in
Gujarat Fluorochemicals Limited (earlier known as Inox Fluorochemicals Limited) | Plot No D-2/CH/173 & 222, Village - Jolva, GIDC Industrial Estate, Dahej II, Dahej, Distt. Bharuch-392130, Gujarat, India.

Ref. GFL/GPCB-ID 15136/2021-22/59

March 28, 2022

30/03/2022
Gujarat Pollution Control Board
Head Office
Sector No.-10-A,
Gandhinagar-382010

Member Secretary,
Gujarat Pollution Control Board,
Paryavaran Bhavan,
Sector-10/A
Gandhinagar-382010

Kind Attention : Mr. Irfan Kagzi (Unit Head- Bharuch)

Dear Sir :

Reference : DIRECTION UNDER SECTION 33-A OF THE WATER (PREVENTION AND CONTROL OF POLLUTION) ACT-1974 issued vide letter no.: GPCB/BRCH-B/CCA-1080(21) ID: 15136/624731, Date: 05/03/2022

This has reference to the notice of direction issued to our unit by the Board. We are submitting herewith compliance details of the same as under:

I. Compliance of non-conformance observed during visit dated:26/10/2021.

Sr. No.	Observations	Compliances Status
1	The final treated wastewater discharged into the GIDC drain exceeded GPCB CCA standards as below:	We have segregated all waste water sources based on type and quality parameters, accordingly designed the ETP for treating six streams with specific treatment for each of them.

Parameters (mg/l)	Final Outlet to GIDC drain	GPCB Discharge Standards as per CCA
BOD (3 days at 27°C)	122	100
COD	**620**	250

Your visit dated on 26th Oct,2021 and sample was collected at final outlet to GIDC drain. The sample was analyzed in NABL accredited third party laboratory & GFL 's inhouse laboratory and results of COD & BOD are respectively 161.7 ppm,46 ppm & 198 ppm ,48.6 pp. Also, Online CPCB server had 188.54 ppm COD. The result submitted by GPCB is 620 ppm COD & 122 ppm BOD. This probably occurred due to the high chloride content in the sample and this high chloride content affect the COD values in sample and this is also acknowledged by GPCB in last few years. Please

29/3/22
Post Received
Gujarat Pollution Control Board
BHARUCH

DAHEJ

Regd. Office: Survey No. 16/3, 26, 27, Village Ranjitnagar, Taluka Ghoghamba, Distt. Panchmahal - 389380, Gujarat, India.
Tel: +91-2678-248152/153/107 | Fax: +91-2678-248153
Vadodara Office: ABS Towers, 2nd floor, Old Padra road, Vadodara-390007, Gujarat, India |Tel: +91-265-6198111/2330057 | Fax: +91-265-2310312
Corporate Office: INOX Towers, Plot No. 17, Sector-16A, Noida-201301, Uttar Pradesh, India | Tel: +91-120-6149600 | Fax: +91-120-6149610

		find enclosed herewith result showing in A.R comparative sheet downloaded from GPCB XGN portal in which for 04 occasions COD was not analyzed due to higher chloride which is self-explanatory. Sample ID & dated 251215-15.01.2019,251216-15.01.2019,248500-09.12.2018 & 248501-09.12.2018 due to high chloride and it may also be noted during samples collected at various time March,2019 to December, 2021. Based on that We have submitted request letter for re-sampling/Joint Analysis of treated effluent letter along with A.R Comparative sheet downloaded from GPCB XGN Portal, NABL accredited lab analysis report, Online CPCB server screen snap as Annexure -I, We are well within the permissible limits as per CCA. It would not be out of place to mention that the BOD and COD are within the permissible limits as per the result issued by GPCB dated: 22nd feb,2022. We are following this standard method for COD measurement. Please refer to Annexure-II – "APHA Method for COD" for 5220 B. Open Reflux Method which is common procedure for COD measurement and removal of chloride interference in sample please refer APHA method for COD -5220 A introduction. We have detailed Process flow diagram as per SOP. Please refer to Annexure -III.
2	Unit has not provided flowmeters at wastewater inlet streams at ETPs.	We have installed Flow meters at all wastewater inlet streams at ETPs and same to be recorded in ETP log book.

3	The fly ash from captive power plant and Calcium Chloride were found stored haphazardly in the industry near CPP.	We have provided sufficient covered storage area to store Calcium Chloride and fly ash under Non-Hazardous storage area. Photograph attached:

		 We are exploring buyers for calcium chloride till that we are being disposed calcium chloride at regular interval at GPCB approved landfill site. During monsoon season landfill site had been closed so that time we stored calcium chloride under non-hazardous storage area.
4	Poor handling of coal dust, fly ash and Calcium Chloride was observed in the premises.	We are using following systems / installations to improve handling of coal dust, fly ash and other wastes inside the premises and implement good housekeeping practices. ESP (Electro-static Precipitator) to control SPM in Stack.

Gujarat Fluorochemicals Ltd. DAHEJ

Online monitoring system for Stack dust monitoring.

Water Spray Nozzles are available at Coal unloading / Grizzly Hopper area (Dust Suppression)

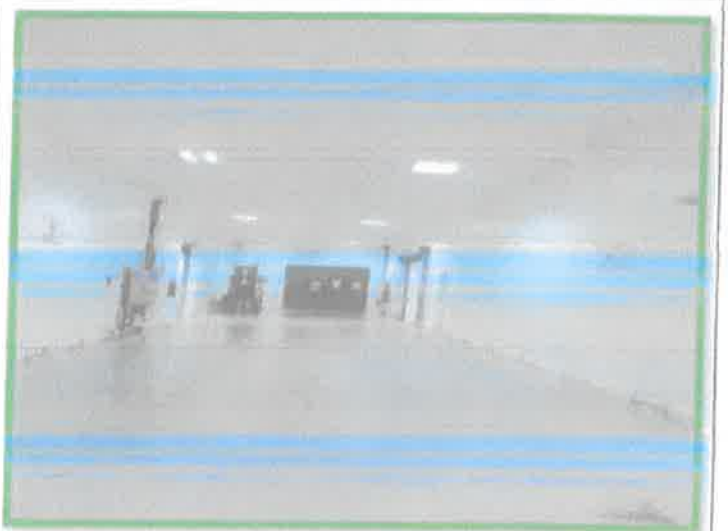
Water Spray Nozzles at Belt conveyors to control coal Dust

Gujarat Fluoro Chemicals Ltd. DAHEJ

		Ash conditioner with water spray arrangement in surrounding at Ash unloading area. Calcium Chloride is being stored in a covered non-hazardous waste storage area and is being disposed off on a regular basis.
5	Housekeeping is observed Poor.	It is ongoing practices. Please see attached photographs.

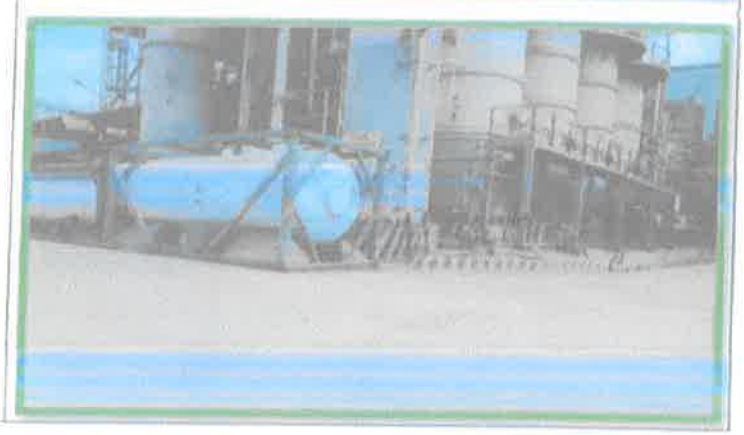
Gujarat Fluorochemicals Ltd. DAHEJ

5909



DAHEJ

5910

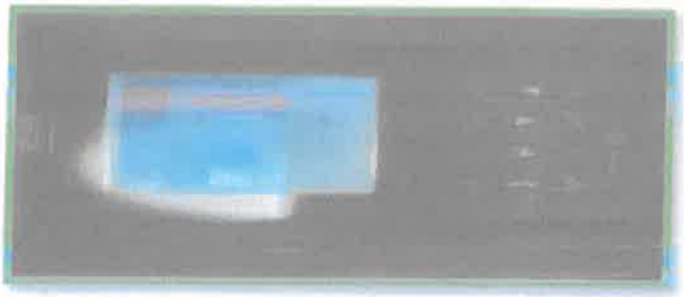


Gujarat Fluoro Ltd. DAHEJ

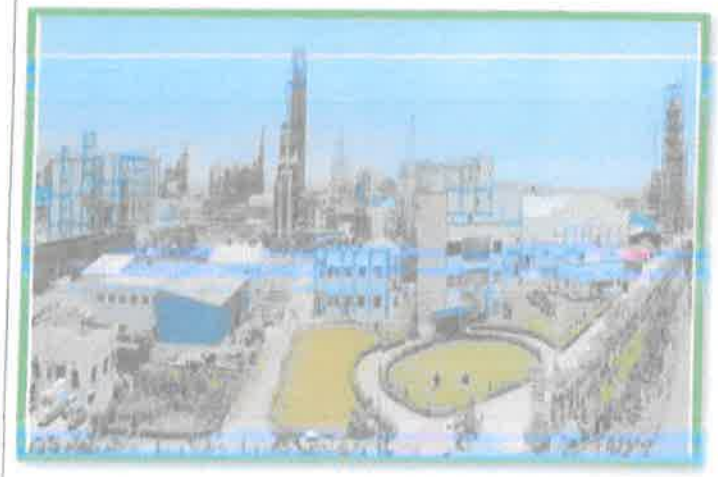
II. Compliance of the points as mentioned in Notice of Direction.

Sr. No.	Observations	Compliances Status
1	Unit shall carry out proper effluent stream segregation and treat each stream based on its quality/characteristics.	We have segregated all waste water sources based on type, quality and parameters. Accordingly, six various streams have been established for specific treatment of the stream. We operate our ETPs based on the stream as per the SOP defined for the stated stream. ETP flow diagram enclosed as **Annexure III**
2	Unit shall upgrade ETP and operate it effectively & efficiently in such a way that treated effluent always confirms discharge norms prescribed in the CCA.	We are operating the ETP diligently and effectively on a regular basis and have in fact upgraded our ETP operation process so as to meet the requirement. The discharge norms of our effluent are in compliance with the norms as mentioned in the CCA, please refer to **Annexure III.**
3	Unit shall provide separate flow meters and energy meters for ETP, RO and color coding of all pipeline networks of wastewater within the premises of Industries with flow directions and nomenclatures.	Unit has separate flow meters and energy meters for ETP & RO. Photographs of Flow meters & Energy meters are attached same records of last 15 days enclosed as **Annexure -IV.** Photographs of energy meter for ETP.

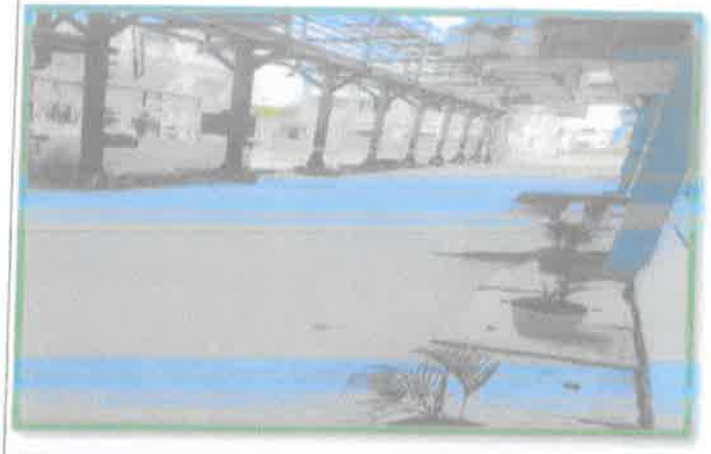
Gujarat Fluorochemicals Ltd. DAHEJ

		   Photos of color coding of all pipeline networks of wastewater within the premises of Industries with flow directions and nomenclatures **attached** as:
4	Unit shall practice only single treated industrial effluent discharge point.	We are practicing a single point of discharge only and discharging our effluent to deep sea through GIDC pipeline.

Gujarat Fluorochemicals Ltd. DAHEJ

5	Unit shall handle, store and dispose various types of hazardous waste as per the Hazardous & Other Waste (Management and Handling) Rules, 2016.	We are handling, storing and disposing various hazardous wastes as per Hazardous & Other Waste (Management and Handling) Rules, 2016. Please refer to **Annexure-V** for the manifests of waste disposal at GPCB approved landfill site/recycler/Coprocessor.
6	Unit shall provide adequate in-house HW storage facility with roof, covered from all sides, impervious flooring and leachate management system.	We have already provided adequate in-house hazardous waste storage facility covered on all sides, impervious flooring and leachate management system. The leachate whatsoever is generated is being sent to our ETP for treatment. Photograph of hazardous waste storage area attached:
7	Unit shall adopt good housekeeping practices.	Unit is being maintained good housekeeping within our premises and will continue to do the same. Please see the attached photographs. 

Gujarat Fluorochemicals Ltd. DAHEJ



8	Unit shall take adequate measures to prevent leakage, spillage while handling toxic, volatile and hazardous chemicals/wastes.	The company have taken following steps for prevent leakage, spillage management: 1) All the Process is Controlled by latest DCS with redundant Power supply back up to prevent loss of Containment due to High Pressure, Temperature, flow etc. with Alarms system. 2) All Equipment designed by ASME / API relevant / latest standard. 3)Early Detection system like Chlorine Detectors, LEL Detector installed where the HTM leakage would have tremendous impact. 4)All pumps & pipelines are maintained as per preventive schedule and inspected periodically and whenever required. 5)Flanges has been provided with Flange Guard of Compatible Material. 6)Breather valves, Flame arrestors & vent 7)Condensers have been provided for solvent storage tanks. 8)Fugitive emissions in the work area are being monitored. 9) Distillation reactors columns are connected with condenser the vent condensers are supplied with as per suitable utilities to minimize vapour loss. 10)All solvent handling pumps have been provided double mechanical seal. 11)All condensers with sufficient Heat Transfer Assessment. 12)All majority of chemicals are transferred through closed loop systems. Controlling measures such as vent condensers, scrubbing mechanism are installed in manufacturing processes.
9	Unit shall explore possibilities to utilize or sell Calcium Chloride produced to actual end users by making MOU and through GPS mounted vehicles instead of disposing it in CHWTSDF.	We are exploring the possibility of selling the produced Calcium Chloride to an actual user so as to avoid its being disposed off to the CHWTSDF system / site.

10	Unit shall immediately take corrective measures for above non-compliances and submit compliance report/ time bound action plan for it.	This response itself may please be taken to be a part of this particular requirements since we have taken suitable corrective measures.
11	Unit shall comply) all conditions mentioned in CCA judiciously.	We comply with all the conditions as mentioned in our CCA. Please refer to Annexure-VI.
12	Unit shall pay Environment Damage Compensation (EDC) as and when communicated by the Board.	In view of explanation provided by us at sr.no 1 to 11, and compliance of all EC and CTO conditions, the EDC imposed on us may kindly be reviewed.

As a responsible Corporate Body, we assure full compliance on the stated observations and norms enumerated by Gujarat Pollution Control Board.

For Gujarat Fluorochemicals Limited

AUTHORIZED SIGNATORY

Gujarat Fluorochemicals Ltd. DAHEJ

CC:

1] The Regional Officer, Gujarat pollution Control Board, GIDC Phase-II, Narmada Nagar, Bharuch-392015.

2] Central Pollution Control Board, Parivesh Bhawan, Aatmajyoti Ashram Rd, Opp. VMC Ward Office No.10, Subhan Pura, Vadodara, Gujarat -390023

Encl.:

i) Request letter for re-sampling/Joint Analysis of treated Effluent along with A.R Comparative sheet downloaded from GPCB XGN Portal as Annexure -I
ii) APHA test method for COD measurement attached as Annexure-II
iii) ETP flow diagram attached as Annexure-III.
iv) Energy meter & Flow meter records attached as Annexure -IV
v) Hazardous waste disposal manifest attached as per Annexure-V
vi) CCA compliance report attached as Annexure -VI

5917

Annexure:-1 O/C

GUJARAT FLUOROCHEMICALS
VALUE THROUGH GREEN CHEMISTRY
CIN : L24304GJ2018PLC105479

Gujarat Fluorochemicals Limited
earlier known as Inox Fluorochemicals Limited

12/A, GIDC Dahej Industrial Estate, Taluka Vagra, Distt. Bharuch-392130, Gujarat, India | Tel: +91-2641-618031 (Admin) / 618041-50 (Purchase) / 618086-87 (Security) | www.gfl.co.in

Ref. GFL/GPCB-ID 15136/2020-21/43

November 25, 2021

To,
The Regional Directorate (West),
Parivesh Bhawan,
Nr. Ward Office No.10,
Subhanpura,
Vadodara-390023(Gujarat)

Regional Directorate (West) • CPCB, M.O. E.F.&CC, Govt. of India • Vadodara

24/11/21

erence: 1. Your Visit and Sample collected on 26.10.2021
2. Sample analysis Report of GPCB dated 10.11.2021

Kind Attn: Shri Prasoon Gargava, The Regional Director.

Subject: Request for re-sampling/Joint Analysis of treated effluent.

Dear Sir,

This has reference to the above subject matter regarding the analysis results.

The COD and BOD value are quite higher as compared to our own laboratory, online CPCB server as well as NABL accredited laboratory due to perhaps higher chloride @ 22350mg/l. In past also GPCB has not analyzed COD because of higher chloride in sample Ref. Sample ID.& dated 251215-15.01.2019, 251216-15.01.2019, 248500-09.12.2018 & 248501-09.12.2018.

Please find enclose herewith result showing in A.R comparative sheet downloaded from GPCB XGN portal in which for 04 occasions COD was not analyzed due to higher chloride which is self-explanatory.

parison of sample analysis results, ETP Outlet is as under:

Sample Date	GFL Lab		NABL accredited Lab		Online CPCB Server	GPCB Lab	
	COD	BOD	COD	BOD	COD	COD	BOD
26.10.2021	198	48.6	161.7	46	188.54	620	122

In view of the above result is not convincing to us, we humbly request for re-sampling/joint of treated effluent of our unit.

Thanking you,
For, Gujarat Fluorochemicals Limited

(Authorized Signature)

Gujarat Fluorochemicals Ltd. DAHEJ

CC: 1. The Member Secretary, Gujarat Pollution Control Board, Gandhinagar-382010.
2. The Regional Officer, Gujarat pollution Control Board, Bharuch-392015

Encl.: 1. A.R Comparative sheet downloaded from GPCB XGN Portal as Annexure-I
2. NABL accredited lab analysis report as Annexure-II
3. Online CPCB server screen snap as Annexure-III
4. GPCB sample analysis reports as Annexure-IV

Pollution Control Board :: — Mozilla Firefox

https://gpcbsgn.gujarat.gov.in/ACT/Reports/View_cross_tab.aspx?ACT=/mvQ1fWAD4=8qpcb_dsrosPPB3dGU=8MTH=aUGpvdRv8=

15136 - Gujarat Fluorochemicals Limited (L) From Date: 01/12/2017 To Date: 12/11/2021

Print All

All | ALK | BOD | CAL | COD | COL | Flu | Mag | Nitrate | OAG | pH | PHE | Sil | Sulphate | TDS | Temperature

Print | Excel

Sample ID	Code	Type	BOD	CAL	CHE	COD	COL	FLU	NIT	OIL	pH	PHE	SS	SIL	SUL	TDS	Temperature
Permissible Values			100			250		15	50	20	9	5	100	5			45
315987-26/10/2021	From Final Outlet of Unit into GIDC drain -	CTH	122		22850	620		30	13.1	8.96	4.96	6.68	0.29	78	2.24	802	11.2
315991-26/10/2021	From Equalisation Tank of stream-1 -	CTH	461		121	1998		70	10.8	2.24	1.61	6.21	0.28	62	1.44	32	7.84
315995-26/10/2021	From Equalisation Tank of stream-3 -	CTH	944		15810	3735		20	>40	8.6	52.85	<1	0.63	38	<1.00	293	11.2
316014-26/10/2021	From Collection tank of Stream-6 -	CTH	22		232	91		40	4	3.92	11.66	7.01	0.26	126	<1.00	84	8.96
312867-17/09/2021	## Final Outlet of the ETP - From Final outlet of ETP	ALK	47	2526.04	19400	214		30	3.2	BDL		7.01	BDL	88		1208	36226
305192-01/06/2021	## Final Outlet of the ETP -	VIG	39	28	18180	196		15	1.41	0.84		6.94	0.36	60		958	33430
288860-16/09/2020	## Final Outlet of the ETP - From Final outlet of ETP	CTH	60	5098	18185	239		2.5	7.8	7.84		7.50	0.13	86		1636	30620
285283-28/07/2020	## Final Outlet of the ETP -	ROU	129	9619.2	22215	413		05	11.5	5.38		7.19	0.04	74		1587	41046
285284-28/07/2020	From Borewell of Shri Ranjit Gohil, Deputy Sarpanch, Ambheta Village -	ROU	17		3960	54		7.5	1.10	BDL	4.88	BDL	7.81	16		1506	7740
273574-04/01/2020	## Final Outlet of the ETP -	APP	54	7896.0	15997	241		2.5	11.30	5.21		7.69	BDL	66		789	29616
271060-29/11/2019	## Final Outlet of the ETP - From treated waste water collection tank	APP	51	1468	11159	241		70	7.25	1.57		6.99	0.42	152		784	21322
270218-14/11/2019	## Final Outlet of the ETP - From treated waste water collection tank	REV	50	6350.70	17083	230		2.5	10.25	7.09		6.89	BDL	62		549	31444
262285-06/07/2019	From storm water drain at MMT area. [within premises] -	ROU	45		17164	233		10	6.95	8.01		7.16		186		763	31018
260797-15/06/2019	## Final Outlet of the ETP -	APP	9		1960	56		5.0		3.19		8.45		16		462	3852
260798-15/06/2019	## Final Outlet of the ETP -	APP	40		26856	210		5.0		8.96		8.24		40		793	55570
255928-30/03/2019	From final discharge point of unit at FPB (G) -	HOR			35499	234				30.74		8.56		64			62264
255854-29/03/2019	ww sample is collected from storm water drain opposite side of deepak phenolics (outside the GPL)	REV			25206	157				23.97		7.09		54			48640
251215-15/01/2019	ww sample is collected from drain out material from reactor 3R 140E of CaCl2 plant -	COM	140		89036	Not analysed (high Chloride in		200	1675	72.80		<1.0		606		310	173784
251216-15/01/2019	From final discharge point at collection sump of final pumping station, Ambheta, Dahej. - [P2]	COM	345		86100	Not analysed (high chloride in		140	2975	5.60		<1.0		504		318	115520
248500-09/12/2018	From final outlet of ETP within premises [P7] -	CTH				NOT ANALYSED (Chloride interfe				5.6		6.69		162			69328
248501-09/12/2018	From Final outlet of the ETP -	CTH				NOT ANALYSED (Chloride interfe				5.6		6.63		146			69146
238972-23/07/2018	## Final Outlet of the ETP -	APP	151		37958	570		60	16.0	5.04		0.8	6.78	BDL	68	862	60914
231582-10/04/2018	From treated waste water Guard pond -	APP	59		18889	233		10	6.45	5.6		0.4	7.30		86	607	36612
227593-09/02/2018	## Final Outlet of the ETP -	ROU	47		28872	167		15	12.4	15.68		0.4	7.47		508	702	36450
224558-02/01/2018		APP	70		37974	242		10	9.0	5.6		0.8	7.12		74	1187	53946

Fluorochemicals Ltd. DAHEJ

12:42 12-11-2021

5919

Annexure-II

UniStar
Environment and Research Labs Pvt. Ltd.

White House,
Near G.I.D.C. Office, Char Rasta,
Vapi-396 195, Gujarat, India.
Phone : +91 260 2433966 / 2425610
Email : response@uerl.in Website : www.uerl.in

MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA-1986 (12.01.2020 to17.03.2023) | QCI-NABET Accredited EIA Consultant Organization | GPCB Recognized Environmental Auditor (Schedule-II) | ISO 9001:2015 Certified Company | ISO 45001:2018 Certified Company

TEST REPORT

Report No.	URC /21/10/L-0364		
Name & Address of Customer	M/s. Gujarat Fluorochemicals Limited Plot No.12/A, GIDC Dahej, Bharuch.	Date Of Report	02/11/2021
		Customer's Ref.	–
Sample Details	Waste Water Sample (GPCB Counter)	Location	–
Sample Qty.	5 Lit.	Appearance	Colourless
Sampling Date	27/10/2021	Sample Received Date	28/10/2021
Test Started Date	28/10/2021	Test Completion Date	01/11/2021
Sampled By	Party.	Sampling Method	–
UERL Lab ID. No.	21/10/L-0364		

TEST RESULTS:

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment			
Sr.	Parameters	Test Method Permissible	Permissible	Unit of	Results
		PHYSIO-CHEMICAL PARAMETERS			
1.	pH @ 25 ° C	(APHA 23rd Ed.,2017,4500-H+B)	6.0 – 9.0	–	6.73
2.	Total Suspended Solids	IS 3025(Part 17)1984,Amd.1	100	mg/L	142
3.	Total Dissolved Solids	IS 3025(PART 16) 1984	–	mg/L	32160
		GENERAL CHEMICAL PARAMETERS			
1.	Oil & Grease	IS 3025(Part39)1991, Amd. 2	10	mg/L	BDL(MDL:2.0)
2.	Fluoride	(APHA 23rd Ed.,2017,4500 F,D)	15	mg/L	9.4
3.	Chloride as Cl-	IS 3025(PART 32) 1988	–	mg/L	20543.6
4.	Sulphate as SO_4^{-2}	IS 3025(Part 24)1986	–	mg/L	676
5.	Sulphide	(APHA 23rd Ed.,2017,4500 S^{-2} F)	5	mg/L	1.5
6.	TKN	(APHA 23rd Ed.,2017,4500 NORG, B,)	50	mg/L	11.2
7.	Ammonical Nitrogen	IS 3025(Part 34)1988,	50	mg/L	8.3
8.	Free Ammonia	IS 3025(Part 34)1988,	5	mg/L	BDL(MDL:0.2)
9.	Copper	IS 3025(Part 42)1992amd.01,	3	mg/L	0.074
10.	Zinc	IS 3025(Part 49)1994	15	mg/L	0.103
11.	BOD (3 days at 27 °C)	IS 3025(Part 44)1993Amd.01	100	mg/L	46
12.	COD	IS 3025(Part 58)2006	250	mg/L	161.7
13.	Arsenic	APHA 23rd Ed.,2017,3114-C	0.2	mg/L	BDL(MDL:0.01)
14.	Mercury	(APHA 23rd Ed.,2017,3112-B)	0.01	mg/L	BDL(MDL:0.001)
15.	Lead	IS 3025(Part 47)1994Amd.02	1	mg/L	BDL(MDL:0.01)
16.	Cadmium	IS 3025(Part 41)1992,	2	mg/L	0.067
17.	Hexavalent Chromium	APHA 23rd Ed.,2017,3500CrB	0.1	mg/L	BDL(MDL:0.05)
18.	Total Chromium	IS 3025(Part 52)2003,	2	mg/L	BDL(MDL:0.05)
19.	Nickel	IS 3025(Part 54)2003,	5	mg/L	0.071
20.	Cyanide	IS 3025(Part27)1986,	0.2	mg/L	BDL(MDL:0.05)
21.	Phenolic Compound	IS 3025(Part 43)1992, Amd.2	5	mg/L	BDL(MDL:0.1)
22.	Manganese	APHA 23rd Ed.,2017,3500 Mn B	2	mg/L	BDL(MDL:0.1)
23.	Iron	IS 3025(Part 53)2003,	3	mg/L	0.266

Remarks: BDL= Below Detection Limit, MDL = Minimum Detection Limit,

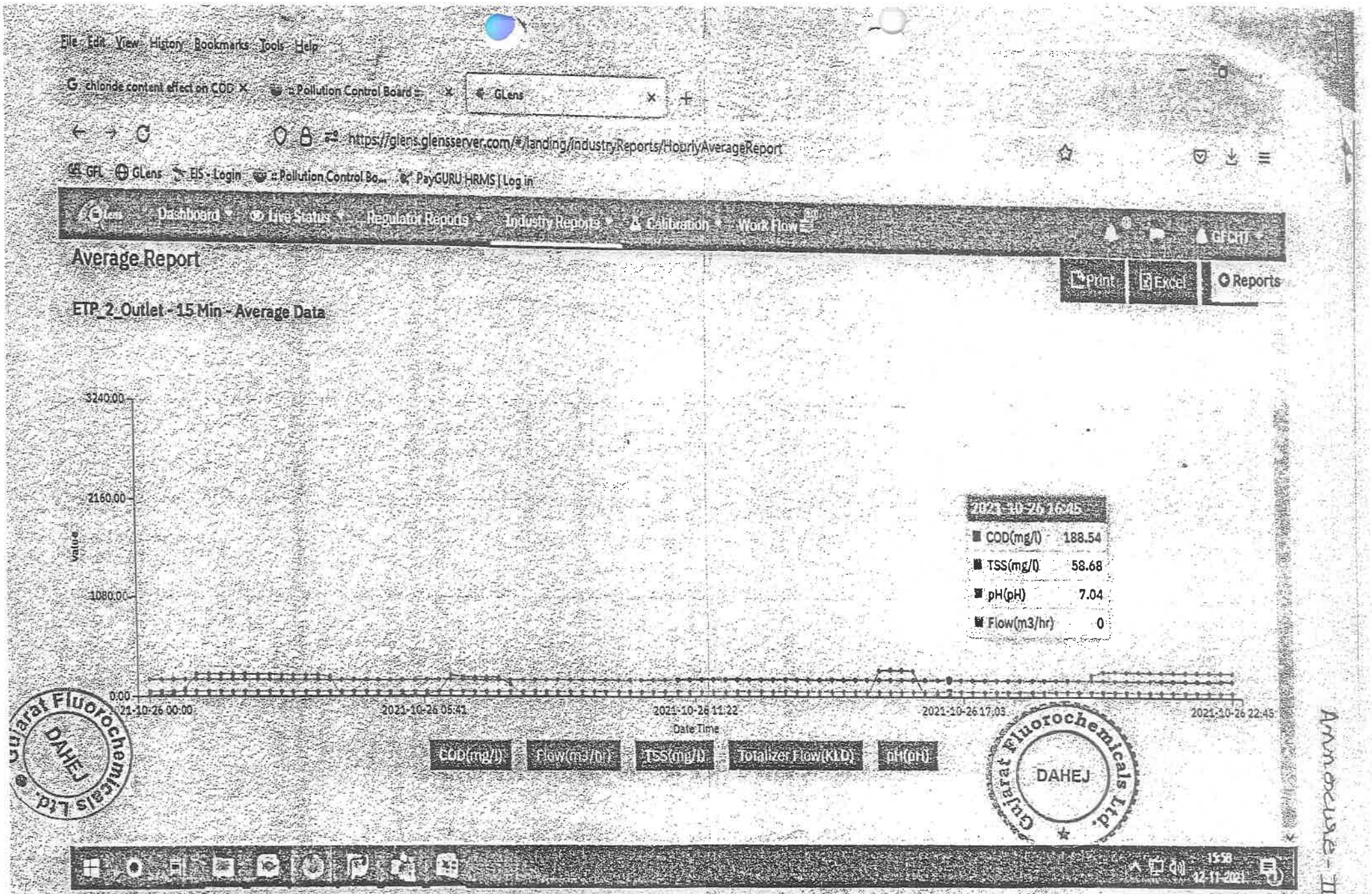
Opinion & Interpretation (If required):

******* End of Report *******

Checked By
(Nilesh C. Patel)

Gujarat Fluorochemicals DAHEJ

Authorized By
(Nitin B. Tandel)



5920

Annexure - III

5921

Annexure-IV

WATER / WASTE WATER SAMPLE

Sample ID:315987 Analysis Completion:10/11/2021

Organic Chemicals manufacturing / LAB Inward : 45796

Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 45796 Date: 10/11/2021

. Name of the Customer	: Gujarat Fluorochemicals Limited - 15136
. Address	: 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej-392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
Nature of Sample	: REP-Representative/Grab, (Insp Type : OTH-Others/Higher Authority)
Sample Collected By	: MR. RAJENDRASINH RAJABHAU GAEK
Quantity of Sample Received	: 2.5
Code No. of the Sample	: 315987
Date & Time of Collection & Inwarding	: 26/10/2021 , (1640 to 1640) & 29/10/2021
Date of Start & Completion of Analysis	: 29/10/2021 & 10/11/2021
ling Point	: From Final Outlet of Unit into GIDC drain. ~
Details (Remarks)	: —
Mode of Disposal	: Through GIDC drainage network
Ultimate Receiving Body	: Sea
Temperature on Collection	: 30 & pH Range on pH Strip :@ 7-8 on pH Strip
Carboys Nos for	: barcode & Color & Appearance :colorless
	: Ind :13306.720 , Dom :52.500 & Ind :4406.000 , Dom :45.000
Water Consumption & W.W.G (KLPD)	: 13 ,Cap No & Weight :

Parametes	Unit	Test Method	Range of Testing	Result
H	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	6.68
olour	PtCo.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	30
uspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Metho	2 – 10000 mg/L	78
mmonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 – 2000 mg/l	6.96
otal Kjeldahl Nitrogen	mg/l	Titrimetric method followed by preliminary distillation	1 – 5000 mg/l	11.2
trate	mg/l	Cadmium reduction method As per Spectrophotomet	0.005 – 100 mg/l	4.96
	mg/l	Argentometric method. (4500 Cl? B APHA Standard	1 – 50000 mg/l	22350
	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	802
emical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2	5.0- 50000 mg/l	620
enolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	0.29
oride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/lit	13.2
phide	mg/l	APHA (23rd Edi.)4500-s2-F –iodometric Method	1-500.0 mg/l	224
.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	124

tory Remarks : Approved By:399 lab_399 Dt.: 10/11/2021

Gujarat Fluorochemicals Ltd. DAHEJ

R.C.VASAVA,S.O.

The results refer only to the tested samples and applicable parameters. Endorsement of products is neither inferred nor implied.
Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
This report, is not to be reproduced wholly or in part or used in any advertising media without the permission of the Board in writing.
The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents.
Physicochemical and microbiological parameters: Std.Methods for Water and Waste Water 23rd Edition by APHA

Gujarat Fluorochemicals Limited [Login: 15/03/2022 03:25:03 PM]

:: Pollution Control Board ::

Annexure-II

Gujarat Pollution Control Board

MPW!!! PCB Id Logout Menu

Sample	Bill No	Bill Dt	Pay ID	Tot Amt	R.O	Lab	Insp ID	Insp Dt	Coll Dt	Catg	Type	#Para	#Result	View	To	RES
324588	16668	23/02/22	111294	9160	BHA	BHA	640047	22/02/2022	22/02/22	PRE	REP	A-2	2	View		N.A
324585	16668	23/02/22	111294	9160	BHA	BHA	640047	22/02/2022	22/02/22	PRE	REP	A-1	1	View		N.A
324582	16668	23/02/22	111294	9160	BHA	BHA	640047	22/02/2022	22/02/22		REP	W-13	13	View	OTH	N.A
319283	16579	10/12/21	109379	3360	BHA	BHA	630527	09/12/2021	09/12/21		REP	W-13	13	View	OTH	N.A
316014	16533	29/10/21	108554	12540	BHA	BHA	625457	26/10/2021	26/10/21		REP	W-13	13	View	OTH	N.A
315995	16533	29/10/21	108554	12540	BHA	BHA	625457	26/10/2021	26/10/21		REP	W-13	13	View	OTH	N.A
315991	16533	29/10/21	108554	12540	BHA	BHA	625457	26/10/2021	26/10/21		REP	W-13	13	View	OTH	N.A
315987	16533	29/10/21	108554	12540	BHA	BHA	625457	26/10/2021	26/10/21		REP	W-13	13	View	OTH	N.A
312867	16463	18/09/21	107604	2810	BHA	BHA	620458	17/09/2021	17/09/21		REP	W-12	12	View	OTH	N.A
305192	16341	04/06/21	104971	2810	BHA	GAN	607192	01/06/2021	01/06/21		REP	W-12	12	View	SEW	N.A
303140	16301	16/04/21	104602	4000	BHA	BHA	603696	14/04/2021	14/04/21	L+O	REP	H-11	11	View		N.A
288860	16090	18/09/20	99845	2810	BHA	BHA	577992	16/09/2020	16/09/20		REP	W-12	12	View	OTH	N.A

)To see UNDECLARED samples Click on [PENDING RESULT],
i) If VIEW is disabled->Clear the LAB Bill First.

Pending Result | Print

ParaCd	Para Nm	Unit	Test Method	Test Range	Result	Limit
2	pH (std)	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As on digital pH meter.	6.97	
3	Colour (std)	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-500 hazen	05	
11	Suspended Solids (std)	mg/l	Gravimetric method. (2540 D APHA Standard Methods 22nd edi.)2012	2 – 10000 mg/L	62	
13	Ammonical Nitrogen (std)	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standard Methods 22nd edi.)-2012	1 - 2000 mg/l.	12.32	
14	Total Kjeldahl Nitrogen	mg/l	Titrimetric method followed by preliminary distillation step. (4500-Norg – B APHA Standard Methods 22nd edi.)-2012	1 – 5000 mg/l	15.68	
16	Nitrate	mg/l	Cadmium reduction method As per Spectrophotometric method. (4500-NO2 E APHA Standard Methods 22nd edi.)-2012	0.005 – 100 mg/l	3.20	
25	Chloride (std)	mg/l	Argentometric method. (4500 Cl? B APHA Standard Methods 22nd edi.)-2012	1 - 50000 mg/l	37575	
26	Sulphate (std)	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	877	
35	Chemical Oxygen Demand (std)	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2012	5.0- 50000 mg/l	190	
37	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extraction (Direct Photometric method) (5530 D APHA Standard Methods 22nd edi.) -2012	0.1 – 50 mg/l	BDL	
39	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods 22nd Edi.)-2012	0.10-40 mg/l	1.16	
40	Sulphide	mg/l	APHA (23rd Edi.)4500-s2-F –Iodometric Method	1-500.0 mg/l	p.nil	
55	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirmed 1999)-2009	05-50000 mg/l	44	

5922

5220 CHEMICAL OXYGEN DEMAND (COD)*

5220 A. Introduction

Chemical oxygen demand (COD) is defined as the amount of a specified oxidant that reacts with the sample under controlled conditions. The quantity of oxidant consumed is expressed in terms of its oxygen equivalence. Because of its unique chemical properties, the dichromate ion ($Cr_2O_7^{2-}$) is the specified oxidant in Methods 5220B, C, and D; it is reduced to the chromic ion (Cr^{3+}) in these tests. Both organic and inorganic components of a sample are subject to oxidation, but in most cases the organic component predominates and is of the greater interest. If it is desired to measure either organic or inorganic COD alone, additional steps not described here must be taken to distinguish one from the other. COD is a defined test; the extent of sample oxidation can be affected by digestion time, reagent strength, and sample COD concentration.

COD often is used as a measurement of pollutants in wastewater and natural waters. Other related analytical values are biochemical oxygen demand (BOD), total organic carbon (TOC), and total oxygen demand (TOD). In many cases it is possible to correlate two or more of these values for a given sample. BOD is a measure of oxygen consumed by microorganisms under specific conditions; TOC is a measure of organic carbon in a sample; TOD is a measure of the amount of oxygen consumed by all elements in a sample when complete (total) oxidation is achieved.

In a COD analysis, hazardous wastes of mercury, hexavalent chromium, sulfuric acid, silver, and acids are generated. Methods 5220C and D reduce these waste problems but may be less accurate and less representative. (See ¶ 2 below.)

1. Selection of Method

The open reflux method (B) is suitable for a wide range of wastes where a large sample size is preferred. The closed reflux methods (C and D) are more economical in the use of metallic salt reagents and generate smaller quantities of hazardous waste, but require homogenization of samples containing suspended solids to obtain reproducible results. Ampules and culture tubes with premeasured reagents are available commercially. Measurements of sample volumes as well as reagent volumes and concentrations are critical. Consequently, obtain specifications as to limits of error for premixed reagents from manufacturer before use.

Determine COD values of >50 mg O_2/L by using procedures 5220B.4*a*, C.4, or D.4. Use procedure 5220B.4*b* to determine, with lesser accuracy, COD values from 5 to 50 mg O_2/L.

2. Interferences and Limitations

Oxidation of most organic compounds is 95 to 100% of the theoretical value. Pyridine and related compounds resist oxidation and volatile organic compounds will react in proportion to their contact with the oxidant. Straight-chain aliphatic compounds are oxidized more effectively in the presence of a silver sulfate catalyst.

The most common interferent is the chloride ion. Chloride reacts with silver ion to precipitate silver chloride, and thus inhibits the catalytic activity of silver. Bromide, iodide, and any other reagent that inactivates the silver ion can interfere similarly. Such interferences are negative in that they tend to restrict the oxidizing action of the dichromate ion itself. However, under the rigorous digestion procedures for COD analyses, chloride, bromide, or iodide can react with dichromate to produce the elemental form of the halogen and the chromic ion. Results then are in error on the high side. The difficulties caused by the presence of the chloride can be overcome largely, though not completely, by complexing with mercuric sulfate ($HgSO_4$) before the refluxing procedure. Although 1 g $HgSO_4$ is specified for 50 mL sample, a lesser amount may be used where sample chloride concentration is known to be less than 2000 mg/L, as long as a 10:1 weight ratio of $HgSO_4$:Cl^- is maintained. Do not use the test for samples containing more than 2000 mg Cl^-/L. Techniques designed to measure COD in saline waters are available.[1,2]

Halide interferences may be removed by precipitation with silver ion and filtration before digestion. This approach may introduce substantial errors due to the occlusion and carrydown of COD matter from heterogenous samples.

Ammonia and its derivatives, in the waste or generated from nitrogen-containing organic matter, are not oxidized. However, elemental chlorine reacts with these compounds. Hence, corrections for chloride interferences are difficult.

Nitrite (NO_2^-) exerts a COD of 1.1 mg O_2/mg NO_2^--N. Because concentrations of NO_2^- in waters rarely exceed 1 or 2 mg NO_2^--N/L, the interference is considered insignificant and usually is ignored. To eliminate a significant interference due to NO_2^-, add 10 mg sulfamic acid for each mg NO_2^--N present in the sample volume used; add the same amount of sulfamic acid to the reflux vessel containing the distilled water blank.

Reduced inorganic species such as ferrous iron, sulfide, manganous manganese, etc., are oxidized quantitatively under the test conditions. For samples containing significant levels of these species, stoichiometric oxidation can be assumed from known initial concentration of the interfering species and corrections can be made to the COD value obtained.

The silver, hexavalent chromium, and mercury salts used in the COD determinations create hazardous wastes. The greatest problem is in the use of mercury. If the chloride contribution to COD is negligible, $HgSO_4$ can be omitted. Smaller sample sizes (see 5220C and D) reduce the waste. Recovery of the waste material may be feasible if allowed by regulatory authority.[3]

3. Sampling and Storage

Preferably collect samples in glass bottles. Test unstable samples without delay. If delay before analysis is unavoidable, preserve sample by acidification to pH ≤ 2 using conc H_2SO_4. Blend (homogenize) all samples containing suspended solids before analysis. If COD is to be related to BOD, TOC, etc., ensure that all tests receive identical pretreatment. Make prelim-

* Approved by Standard Methods Committee, 1997.
Joint Task Group: 20th Edition–Clarence G. Johnson (chair), Donald G. Miller, John T. Pivinski.

inary dilutions for wastes containing a high COD to reduce the error inherent in measuring small sample volumes.

4. References

1. BURNS, E.R. & C. MARSHALL. 1965. Correction for chloride interference in the chemical oxygen demand test. *J. Water Pollut. Control Fed.* 37:1716.
2. BAUMANN, F.J. 1974. Dichromate reflux chemical oxygen demand: A proposed method for chloride correction in highly saline waters. *Anal. Chem.* 46:1336.
3. HOLM, T.R. 1996. Treatment of Spent Chemical Oxygen Demand Solutions for Safe Disposal. Illinois State Water Survey, Champaign.

5220 B. Open Reflux Method

1. General Discussion

a. Principle: Most types of organic matter are oxidized by a boiling mixture of chromic and sulfuric acids. A sample is refluxed in strongly acid solution with a known excess of potassium dichromate ($K_2Cr_2O_7$). After digestion, the remaining unreduced $K_2Cr_2O_7$ is titrated with ferrous ammonium sulfate to determine the amount of $K_2Cr_2O_7$ consumed and the oxidizable matter is calculated in terms of oxygen equivalent. Keep ratios of reagent weights, volumes, and strengths constant when sample volumes other than 50 mL are used. The standard 2-h reflux time may be reduced if it has been shown that a shorter period yields the same results. Some samples with very low COD or with highly heterogeneous solids content may need to be analyzed in replicate to yield the most reliable data. Results are further enhanced by reacting a maximum quantity of dichromate, provided that some residual dichromate remains.

2. Apparatus

a. Reflux apparatus, consisting of 500- or 250-mL erlenmeyer flasks with ground-glass 24/40 neck and 300-mm jacket Liebig, West, or equivalent condenser with 24/40 ground-glass joint, and a hot plate having sufficient power to produce at least 1.4 W/cm^2 of heating surface, or equivalent.

b. Blender.

c. Pipets, Class A and wide-bore.

3. Reagents

a. Standard potassium dichromate solution, 0.04167M: Dissolve 12.259 g $K_2Cr_2O_7$, primary standard grade, previously dried at 150°C for 2 h, in distilled water and dilute to 1000 mL. This reagent undergoes a six-electron reduction reaction; the equivalent concentration is 6 × 0.04167*M* or 0.2500*N*.

b. Sulfuric acid reagent: Add Ag_2SO_4, reagent or technical grade, crystals or powder, to conc H_2SO_4 at the rate of 5.5 g Ag_2SO_4/kg H_2SO_4. Let stand 1 to 2 d to dissolve. Mix.

c. Ferroin indicator solution: Dissolve 1.485 g 1,10-phenanthroline monohydrate and 695 mg $FeSO_4 \cdot 7H_2O$ in distilled water and dilute to 100 mL. This indicator solution may be purchased already prepared.*

d. Standard ferrous ammonium sulfate (FAS) titrant, approximately 0.25*M:* Dissolve 98 g $Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$ in distilled water. Add 20 mL conc H_2SO_4, cool, and dilute to 1000 mL. Standardize this solution daily against standard $K_2Cr_2O_7$ solution as follows:

Dilute 25.00 mL standard $K_2Cr_2O_7$ to about 100 mL. Add 30 mL conc H_2SO_4 and cool. Titrate with FAS titrant using 0.10 to 0.15 mL (2 to 3 drops) ferroin indicator.

$$\text{Molarity of FAS solution} = \frac{\text{Volume 0.04167}M\ K_2Cr_2O_7\text{ solution titrated, mL}}{\text{Volume FAS used in titration, mL}} \times 0.2500$$

e. Mercuric sulfate, $HgSO_4$, crystals or powder.

f. Sulfamic acid: Required only if the interference of nitrites is to be eliminated (see 5220A.2 above).

g. Potassium hydrogen phthalate (KHP) standard, $HOOCC_6H_4COOK$: Lightly crush and then dry KHP to constant weight at 110°C. Dissolve 425 mg in distilled water and dilute to 1000 mL. KHP has a theoretical COD[1] of 1.176 mg O_2/mg and this solution has a theoretical COD of 500 μg O_2/ mL. This solution is stable when refrigerated, but not indefinitely. Be alert to development of visible biological growth. If practical, prepare and transfer solution under sterile conditions. Weekly preparation usually is satisfactory.

4. Procedure

a. Treatment of samples with COD of >50 mg O_2/L: Blend sample if necessary and pipet 50.00 mL into a 500-mL refluxing flask. For samples with a COD of >900 mg O_2/L, use a smaller portion diluted to 50.00 mL. Add 1 g $HgSO_4$, several glass beads, and very slowly add 5.0 mL sulfuric acid reagent, with mixing to dissolve $HgSO_4$. Cool while mixing to avoid possible loss of volatile materials. Add 25.00 mL 0.04167*M* $K_2Cr_2O_7$ solution and mix. Attach flask to condenser and turn on cooling water. Add remaining sulfuric acid reagent (70 mL) through open end of condenser. Continue swirling and mixing while adding sulfuric acid reagent. CAUTION: *Mix reflux mixture thoroughly before applying heat to prevent local heating of flask bottom and a possible blowout of flask contents.*

Cover open end of condenser with a small beaker to prevent foreign material from entering refluxing mixture and reflux for 2 h. Cool and wash down condenser with distilled water. Disconnect reflux condenser and dilute mixture to about twice its volume with

* GFS Chemicals, Inc., Columbus, OH, or equivalent.

distilled water. Cool to room temperature and titrate excess $K_2Cr_2O_7$ with FAS, using 0.10 to 0.15 mL (2 to 3 drops) ferroin indicator. Although the quantity of ferroin indicator is not critical, use the same volume for all titrations. Take as the end point of the titration the first sharp color change from blue-green to reddish brown that persists for 1 min or longer. Duplicate determinations should agree within 5% of their average. Samples with suspended solids or components that are slow to oxidize may require additional determinations. The blue-green may reappear. In the same manner, reflux and titrate a blank containing the reagents and a volume of distilled water equal to that of sample.

b. Alternate procedure for low-COD samples: Follow procedure of ¶ 4*a*, with two exceptions: (*i*) use standard 0.004167*M* $K_2Cr_2O_7$, and (*ii*) titrate with standardized 0.025*M* FAS. Exercise extreme care with this procedure because even a trace of organic matter on the glassware or from the atmosphere may cause gross errors. If a further increase in sensitivity is required, concentrate a larger volume of sample before digesting under reflux as follows: Add all reagents to a sample larger than 50 mL and reduce total volume to 150 mL by boiling in the refluxing flask open to the atmosphere without the condenser attached. Compute amount of $HgSO_4$ to be added (before concentration) on the basis of a weight ratio of 10:1, $HgSO_4$:Cl^-, using the amount of Cl^- present in the original volume of sample. Carry a blank reagent through the same procedure. This technique has the advantage of concentrating the sample without significant losses of easily digested volatile materials. Hard-to-digest volatile materials such as volatile acids are lost, but an improvement is gained over ordinary evaporative concentration methods. Duplicate determinations are not expected to be as precise as in 5220B.4*a*.

c. Determination of standard solution: Evaluate the technique and quality of reagents by conducting the test on a standard potassium hydrogen phthalate solution.

5. Calculation

$$\text{COD as mg } O_2/\text{L} = \frac{(A - B) \times M \times 8000}{\text{mL sample}}$$

where:

A = mL FAS used for blank,
B = mL FAS used for sample,
M = molarity of FAS, and
8000 = milliequivalent weight of oxygen × 1000 mL/L.

6. Precision and Bias

A set of synthetic samples containing potassium hydrogen phthalate and NaCl was tested by 74 laboratories. At a COD of 200 mg O_2/L in the absence of chloride, the standard deviation was ±13 mg/L (coefficient of variation, 6.5%). At COD of 160 mg O_2/L and 100 mg Cl^-/L, the standard deviation was ±14 mg/L (coefficient of variation, 10.8%).

7. Reference

1. Pitwell, L.R. 1983. Standard COD. *Chem. Brit.* 19:907.

8. Bibliography

Moore, W.A., R.C. Kroner & C.C. Ruchhoft. 1949. Dichromate reflux method for determination of oxygen consumed. *Anal. Chem.* 21: 953.

Medalia, A.I. 1951. Test for traces of organic matter in water. *Anal. Chem.* 23:1318.

Moore, W.A., F.J. Ludzack & C.C. Ruchhoft. 1951. Determination of oxygen-consumed values of organic wastes. *Anal. Chem.* 23:1297.

Dobbs, R.A. & R.T. Williams. 1963. Elimination of chloride interference in the chemical oxygen demand test. *Anal. Chem.* 35:1064.

5220 C. Closed Reflux, Titrimetric Method

1. General Discussion

a. Principle: See 5220B.1*a*.

b. Interferences and limitations: See 5220A.2. Volatile organic compounds are more completely oxidized in the closed system because of longer contact with the oxidant. Before each use inspect culture-tube caps for breaks in the TFE liner. Select culture-tube size according to block heater capacity and degree of sensitivity desired. Use the 25- × 150-mm tube for samples with low COD content because a larger volume sample can be treated.

This procedure is applicable to COD values between 40 and 400 mg/L. Obtain higher values by dilution. Alternatively, use higher concentrations of dichromate digestion solution to determine greater COD values. COD values of 100 mg/L or less can be obtained by using a more dilute dichromate digestion solution or a more dilute FAS titrant. Overall accuracy can be improved by using an FAS titrant which is less than the 0.10*M* solution specified below. Higher dichromate concentrations or reduced FAS concentrations probably require titrations to be done in a separate vessel, rather than in the digestion vessel, because of the volumes of titrant required.

2. Apparatus

a. Digestion vessels: Preferably use borosilicate culture tubes, 16- × 100-mm, 20- × 150-mm, or 25- × 150-mm, with TFE-lined screw caps. Alternatively, use borosilicate ampules, 10-mL capacity, 19- to 20-mm diam.

Digestion vessels with premixed reagents and other accessories are available from commercial suppliers. Contact supplier for specifications.*

b. Block heater or similar device to operate at 150 ± 2°C, with holes to accommodate digestion vessels. Use of culture tubes probably requires the caps to be outside the vessel to protect caps from heat. Caution: *Do not use an oven because of*

* Hach Co., Bioscience, Inc., or equivalent.

the possibility of leaking samples generating a corrosive and possibly explosive atmosphere. Also, culture tube caps may not withstand the 150°C temperature in an oven.

c. Microburet.

d. Ampule sealer: Use only a mechanical sealer to insure strong, consistent seals.

3. Reagents

a. Standard potassium dichromate digestion solution, 0.01667M: Add to about 500 mL distilled water 4.903 g $K_2Cr_2O_7$, primary standard grade, previously dried at 150°C for 2 h, 167 mL conc H_2SO_4, and 33.3 g $HgSO_4$. Dissolve, cool to room temperature, and dilute to 1000 mL.

b. Sulfuric acid reagent: See Section 5220B.3*b*.

c. Ferroin indicator solution: See Section 5220B.3*c*. Dilute this reagent by a factor of 5 (1 + 4).

d. Standard ferrous ammonium sulfate titrant (FAS), approximately 0.10*M:* Dissolve 39.2 g $Fe(NH_4)_2(SO_4)_2 \cdot 6H_2O$ in distilled water. Add 20 mL conc H_2SO_4, cool, and dilute to 1000 mL. Standardize solution daily against standard $K_2Cr_2O_7$ digestion solution as follows:

Pipet 5.00 mL digestion solution into a small beaker. Add 10 mL reagent water to substitute for sample. Cool to room temperature. Add 1 to 2 drops diluted ferroin indicator and titrate with FAS titrant.

$$\text{Molarity of FAS solution} = \frac{\text{Volume 0.01667}M\ K_2Cr_2O_7\text{ solution titrated, mL}}{\text{Volume FAS used in titration, mL}} \times 0.1000$$

e. Sulfamic acid: See Section 5220B.3*f*.

f. Potassium hydrogen phthalate standard: See Section 5220B.3*g*.

4. Procedure

Wash culture tubes and caps with 20% H_2SO_4 before first use to prevent contamination. Refer to Table 5220:I for proper sample and reagent volumes. Make volumetric measurements as accurate as practical; use Class A volumetric ware. The most critical volumes are of the sample and digestion solution. Use a microburet for titrations. Measure H_2SO_4 to ±0.1 mL. The use of hand-held pipettors with non-wetting (polyethylene) pipet tips is practical and adequate. Place sample in culture tube or ampule and add digestion solution. Carefully run sulfuric acid reagent down inside of vessel so an acid layer is formed under the sample-digestion solution layer. Tightly cap tubes or seal ampules, and invert each several times to mix completely. CAUTION: *Wear face shield and protect hands from heat produced when contents of vessels are mixed. Mix thoroughly before applying heat to prevent local heating of vessel bottom and possible explosive reaction.*

Place tubes or ampules in block digester preheated to 150°C and reflux for 2 h behind a protective shield. CAUTION: *These sealed vessels may be under pressure from gases generated during digestion. Wear face and hand protection when handling. If sulfuric acid is omitted or reduced in concentration, very high and dangerous pressures will be generated at 150°C.* Cool to room temperature and place vessels in test tube rack. Some mercuric sulfate may precipitate out but this will not affect the analysis. Remove culture tube caps and add small TFE-covered magnetic stirring bar. If ampules are used, transfer contents to a larger container for titrating. Add 0.05 to 0.10 mL (1 to 2 drops) ferroin indicator and stir rapidly on magnetic stirrer while titrating with standardized 0.10*M* FAS. The end point is a sharp color change from blue-green to reddish brown, although the blue-green may reappear within minutes. In the same manner reflux and titrate a blank containing the reagents and a volume of distilled water equal to that of the sample.

TABLE 5220:I. SAMPLE AND REAGENT QUANTITIES FOR VARIOUS DIGESTION VESSELS

Digestion Vessel	Sample mL	Digestion Solution mL	Sulfuric Acid Reagent mL	Total Final Volume mL
Culture tubes:				
16 × 100 mm	2.50	1.50	3.5	7.5
20 × 150 mm	5.00	3.00	7.0	15.0
25 × 150 mm	10.00	6.00	14.0	30.0
Standard 10-mL ampules	2.50	1.50	3.5	7.5

5. Calculation

$$\text{COD as mg } O_2/L = \frac{(A-B) \times M \times 8000}{\text{mL sample}}$$

where:

A = mL FAS used for blank,
B = mL FAS used for sample,
M = molarity of FAS, and
8000 = milliequivalent weight of oxygen × 1000 mL/L.

Preferably analyze samples in duplicate because of small sample size. Samples that are inhomogeneous may require multiple determinations for accurate analysis. Results should agree within ±5% of their average unless the condition of the sample dictates otherwise.

6. Precision and Bias

Sixty synthetic samples containing potassium hydrogen phthalate and NaCl were tested by six laboratories. At an average COD of 195 mg O_2/L in the absence of chloride, the standard deviation was ±11 mg O_2/L (coefficient of variation, 5.6%). At an average COD of 208 mg O_2/L and 100 mg Cl^-/L, the standard deviation was ±10 mg O_2/L (coefficient of variation, 4.8%).

5220 D. Closed Reflux, Colorimetric Method

1. General Discussion

a. Principle: See Section 5220B.1*a*. When a sample is digested, the dichromate ion oxidizes COD material in the sample. This results in the change of chromium from the hexavalent (VI) state to the trivalent (III) state. Both of these chromium species are colored and absorb in the visible region of the spectrum. The dichromate ion ($Cr_2O_7^{2-}$) absorbs strongly in the 400-nm region, where the chromic ion (Cr^{3+}) absorption is much less. The chromic ion absorbs strongly in the 600-nm region, where the dichromate has nearly zero absorption. In 9*M* sulfuric acid solution, the approximate molar extinction coefficients for these chromium species are as follows: Cr^{3+} — 50 L/mole cm at 604 nm; $Cr_2O_7^{2-}$ — 380 L/mole cm at 444 nm; Cr^{3+} — 25 L/mole cm at 426 nm. The Cr^{3+} ion has a minimum in the region of 400 nm. Thus a working absorption maximum is at 420 nm.

For COD values between 100 and 900 mg/L, increase in Cr^{3+} in the 600-nm region is determined. Higher values can be obtained by sample dilution. COD values of 90 mg/L or less can be determined by following the decrease in $Cr_2O_7^{2-}$ at 420 nm. The corresponding generation of Cr^{3+} gives a small absorption increase at 420 nm, but this is compensated for in the calibration procedure.

b. Interferences and limitations: See Section 5220C.1*b*.

For this procedure to be applicable, all visible light-absorbing interferents must be absent or be compensated for. This includes insoluble suspended matter as well as colored components. If either type of interference occurs, the test is not necessarily lost because COD can be determined titrimetrically as in 5220C.

2. Apparatus

a. See Section 5220C.2. Ensure that reaction vessels are of optical quality. Other types of absorption cells with varying path lengths may be used. Use the extinction coefficients of the ions of interest for this approach.

b. Spectrophotometer, for use at 600 nm and/or 420 nm with access opening adapter for ampule or 16-, 20-, or 25-mm tubes. Verify that the instrument operates in the region of 420 nm and 600 nm. Values slightly different from these may be found, depending on the spectral bandpass of the instrument.

3. Reagents

a. Digestion solution, high range: Add to about 500 mL distilled water 10.216 g $K_2Cr_2O_7$, primary standard grade, previously dried at 150°C for 2 h, 167 mL conc H_2SO_4, and 33.3 g $HgSO_4$. Dissolve, cool to room temperature, and dilute to 1000 mL.

b. Digestion solution, low range: Prepare as in 3*a*, but use only 1.022 g potassium dichromate.

c. Sulfuric acid reagent: See Section 5220B.3*b*.

d. Sulfamic acid: See Section 5220B.3*f*.

e. Potassium hydrogen phthalate standard: See Section 5220B.3*g*.

4. Procedure

a. Treatment of samples: Measure suitable volume of sample and reagents into tube or ampule as indicated in Table 5220:I. Prepare, digest, and cool samples, blank, and one or more standards as directed in Section 5220C.4. *Note the safety precautions.* It is critical that the volume of each component be known and that the total volume be the same for each reaction vessel. If volumetric control is difficult, transfer digested sample, dilute to a known volume, and read. Premixed reagents in digestion tubes are available commercially.

b. Measurement of dichromate reduction: Cool sample to room temperature slowly to avoid precipitate formation. Once samples are cooled, vent, if necessary, to relieve any pressure generated during digestion. Mix contents of reaction vessels to combine condensed water and dislodge insoluble matter. Let suspended matter settle and ensure that optical path is clear. Measure absorption of each sample blank and standard at selected wavelength (420 nm or 600 nm). At 600 nm, use an undigested blank as reference solution. Analyze a digested blank to confirm good analytical reagents and to determine the blank COD; subtract blank COD from sample COD. Alternately, use digested blank as the reference solution once it is established that the blank has a low COD.

At 420 nm, use reagent water as a reference solution. Measure all samples, blanks, and standards against this solution. The absorption measurement of an undigested blank containing dichromate, with reagent water replacing sample, will give initial dichromate absorption. Any digested sample, blank, or standard that has a COD value will give lower absorbance because of the decrease in dichromate ion. Analyze a digested blank with reagent water replacing sample to ensure reagent quality and to determine the reagents' contribution to the decrease in absorbance during a given digestion. The difference between absorbances of a given digested sample and the digested blank is a measure of the sample COD. When standards are run, plot differences of digested blank absorbance and digested standard absorbance versus COD values for each standard.

c. Preparation of calibration curve: Prepare at least five standards from potassium hydrogen phthalate solution with COD equivalents to cover each concentration range. Make up to volume with reagent water; use same reagent volumes, tube, or ampule size, and digestion procedure as for samples. Prepare calibration curve for each new lot of tubes or ampules or when standards prepared in ¶ 4*a* differ by ≥5% from calibration curve. Curves should be linear. However, some nonlinearity may occur, depending on instrument used and overall accuracy needed.

5. Calculation

If samples, standards, and blanks are run under same conditions of volume and optical path length, calculate COD as follows:

$$\text{COD as mg } O_2\text{/L} = \frac{\text{mg } O_2 \text{ in final volume} \times 1000}{\text{mL sample}}$$

Preferably analyze samples in duplicate because of small sample size. Samples that are inhomogeneous may require multiple determinations for accurate analysis. These should not differ from their average by more than ±5% for the high-level COD test unless the condition of the sample dictates otherwise.

In the low-level procedure, results below 25 mg/L may tend to be qualitative rather than quantitative.

6. Precision and Bias

Forty-eight synthetic samples containing potassium hydrogen phthalate and NaCl were tested by five laboratories. At an average COD of 193 mg O_2/L in the absence of chloride, the standard deviation was ±17 mg O_2/L (coefficient of variation 8.7%). At an average COD of 212 mg O_2/L and 100 mg Cl^-/L, the standard deviation was ±20 mg O_2/L (coefficient of variation, 9.6%). Additional QA/QC data for both high- and low-level procedures may be found elsewhere.[1]

7. Reference

1. American Society for Testing and Materials. 1995. Standard test methods for chemical oxygen demand (dichromate oxygen demand) of water. D1252-95, ASTM Annual Book of Standards. American Soc. Testing & Materials, Philadelphia, Pa.

8. Bibliography

Jirka, A.M. & M.J. Carter. 1975. Micro semi-automated analysis of surface and wastewaters for chemical oxygen demand. *Anal. Chem.* 47:1397.

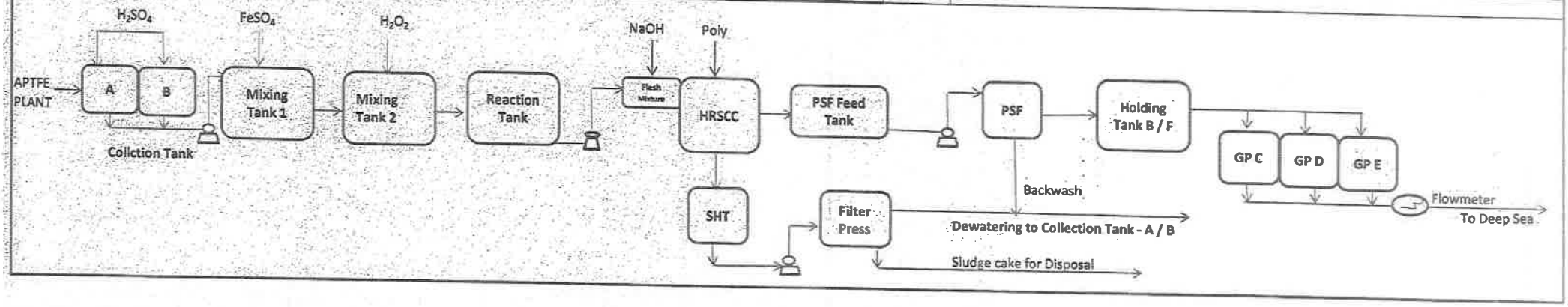
Himebaugh, R.R. & M.J. Smith. 1979. Semi-micro tube method for chemical oxygen demand. *Anal. Chem.* 51:1085.

Annexure :- III

GUJARAT FLUOROCHEMICALS LTD., DAHEJ

STREAM 1 PFD : 100 KLD

Doc. No.		UTILITY/ETP/F/01
Date:		01-04-2022
Revision No.	3.0	Page No. 1 of 1
Date:		



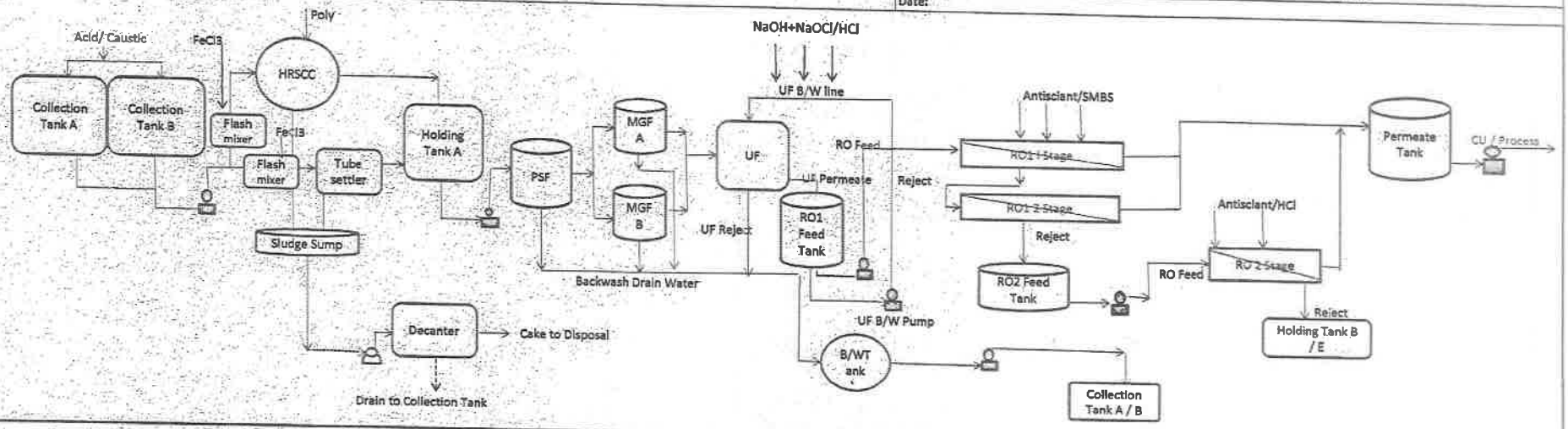
5929

GUJARAT FLUOROCHEMICALS LTD., HEJ

STREAM 2 PFD - 2400 KLD

Doc. No.			UTILITY/ETP/F/01
Date:			01-04-2022
Revision No.	3.0	Page No. 1	1 of 1
Date:			

CMS-1 REFF PLANT
CMS-2 REFF PLANT
POWER PLANT BLOW DOWN
TFE-2 UTILITY
TFE-3 UTILITY
DI DPTFE/DI WATER PLANT
DI PTFE DI PLANT
DI6 PLANT
FKM/PVDF/S&A PLANT
COMMON UTILITY
H2 BOILER PLANT
H2 BOTTLING PLANT
S-PTFE PLANT
FLAKER PLANT COND.
A&H UTILITY
S-PTFE UTILITY

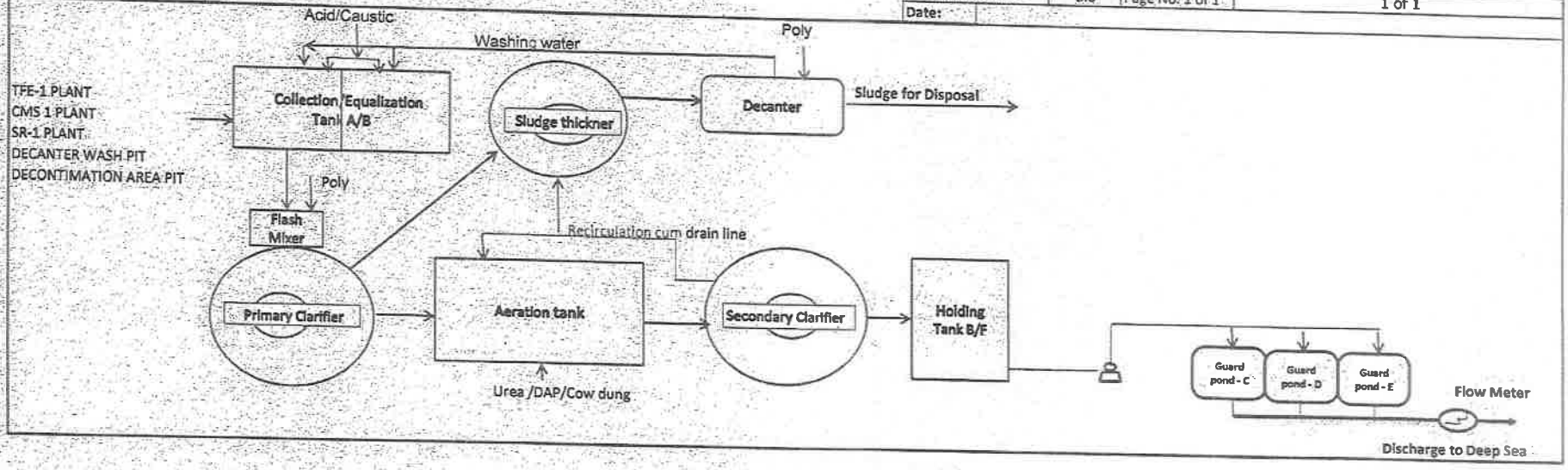


5930

GUJARAT FLUOROCHEMICALS LTD., DAHEJ

STREAM 3 PFD - 350 KLD

Doc. No.			UTILITY/ETP/F/01
Date:			01-04-2022
Revision No.	3.0	Page No. 1 of 1	1 of 1
Date:			

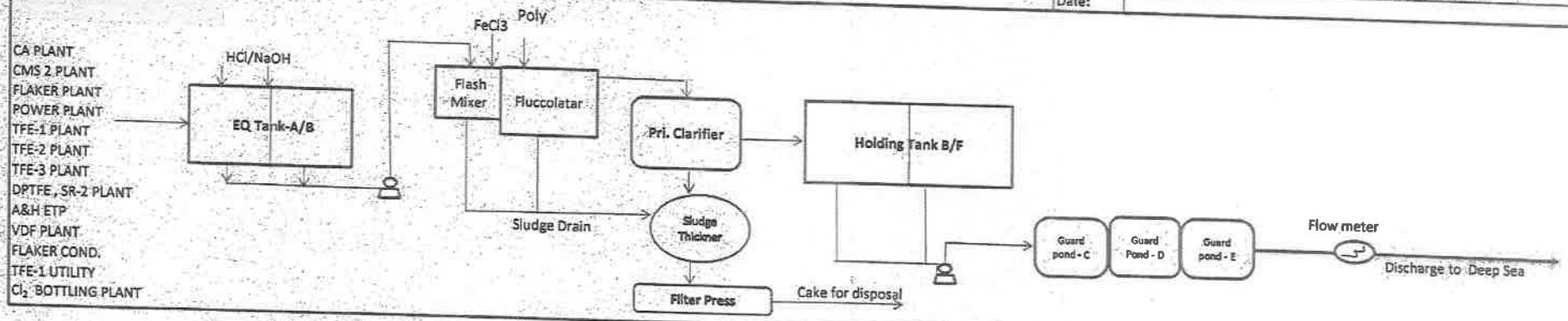


5931

GUJARAT FLUOROCHEMICALS LTD., DAHEJ

Stream 4 PFD - 765 KLD

Doc. No.		UTILITY/ETP/F/01
Date:		01-04-2022
Revision No.	3.0	Page No. 1 of 1
Date:		

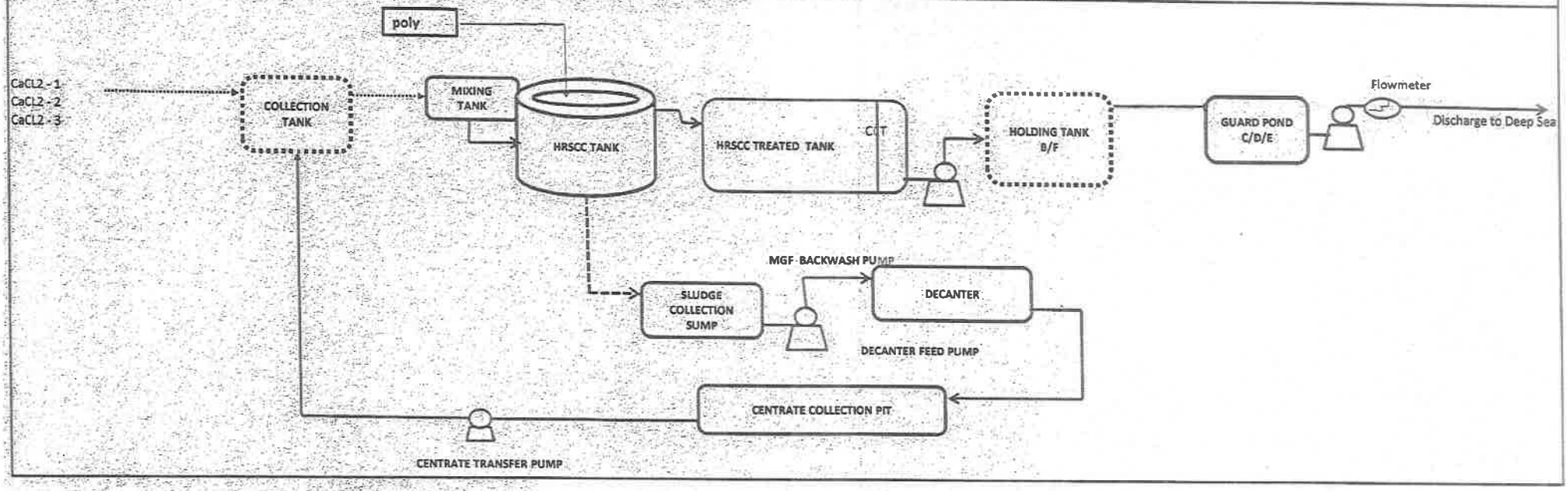


5932

GUJARAT FLUOROCHEMICALS LTD., DAHEJ

STREAM 5 PFD - 985 KLD

Doc. No.			UTILITY/ETP/F/01
Date:			01-04-2022
Revision No.	3.0	Page No. 1 of 1	
Date:			



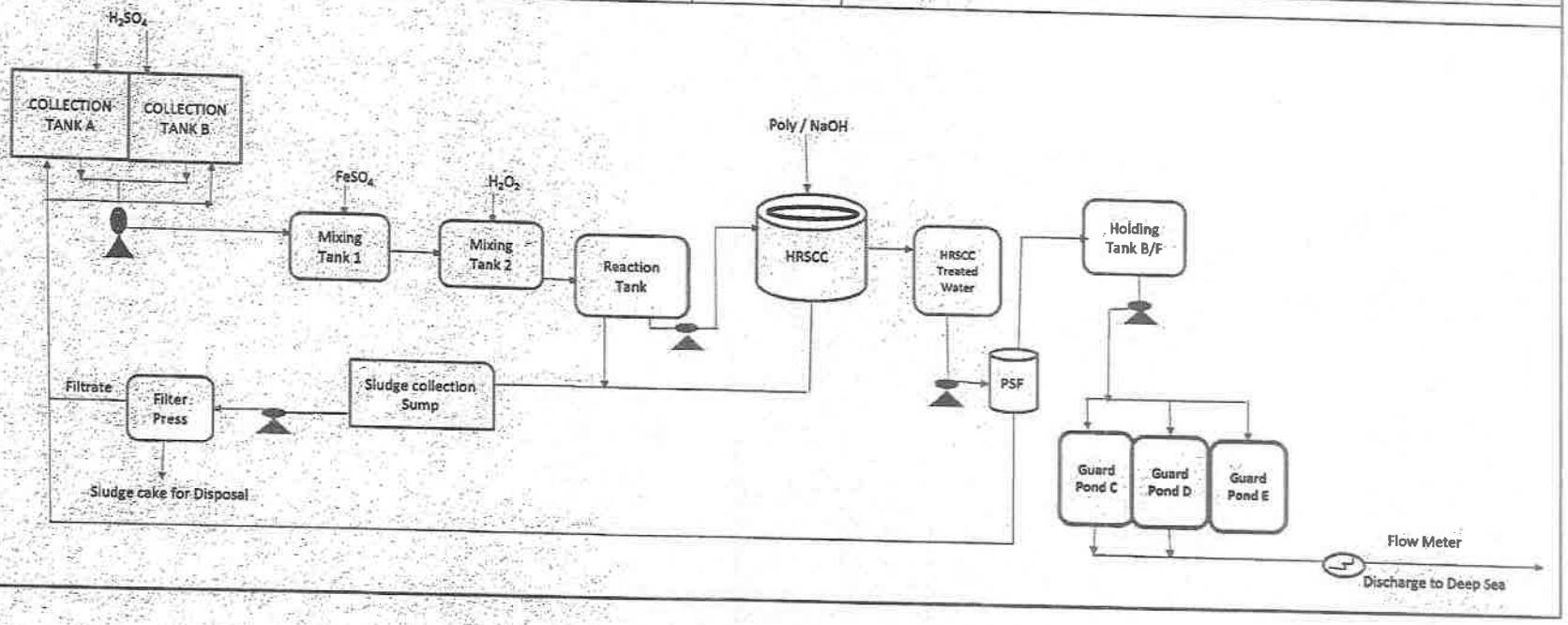
5933

GUJARAT FLUOROCHEMICALS LTD., DAHEJ

Stream 6 PFD - 552 KLD

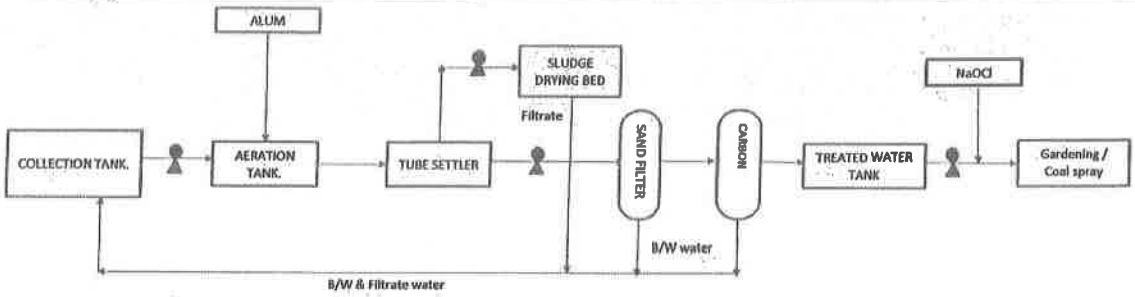
Doc. No.			UTILITY/ETP/F/01
Date:			01-04-2022
Revision No.	3.0	Page No.	1 of 1
Date:			

R 8/9 PLANT
AQUEOUS PLANT
PTFE PLANT PIT C
PFA/FEP/New Polymer PLANT
MICRO POWDER



5934

GUJARAT FLUOROCHEMICALS LTD., DAHEJ			
STP PFD - 200 KLD	Doc. No.		UTILITY/ETPF/01
	Date:		01-04-2022
	Revision No.	3.0	Page No. 1 of 1
	Date:		



Annexure : IV

Annexure-IV Energy meters reading for ETP						
DATE	OLD ETP READING(KWH)	OLD ETP CONSUMPTION(KWH)	NEW ETP-1 READING(MWH)	NEW ETP-1 CONSUMPTION(KWH)	NEW ETP-2 READING(KWH)	NEW ETP-2 CONSUMPTION(KWH)
28-02-2022	88580.165	254.237	260275.78	1177.46	58302.131	657.961
01-03-2022	88834.402	426.924	261453.24	1189.64	58960.092	708.517
02-03-2022	89261.326	500.588	262642.88	1088.76	59668.609	696.886
03-03-2022	89761.914	543.861	263731.64	1147.88	60365.495	670.28
04-03-2022	90305.775	492.194	264879.52	1158.82	61035.775	750.736
05-03-2022	90797.969	403.811	266038.34	1227.72	61786.511	682.187
06-03-2022	91201.78	423.87	267266.06	1157.48	62468.698	680.329
07-03-2022	91625.65	403.742	268423.54	1151.9	63149.027	756.087
08-03-2022	92029.392	508.675	269575.44	1161.42	63905.114	761.396
09-03-2022	92538.067	524.88	270736.86	1216.26	64666.51	834.277
10-03-2022	93062.947	1109.726	271953.12	1202.12	65500.787	677.188
11-03-2022	94172.673	221.822	273155.24	1135.06	66177.975	537.935
12-03-2022	94394.495	312.385	274290.3	1280.86	66715.91	699.882
13-03-2022	94706.88	2258.093	275571.16	1194.56	67415.792	676.074
14-03-2022	96964.973	2122.132	276765.72	1153.42	68091.866	674.584
15-03-2022	99087.105	2146.895	277919.14	1105.78	68766.45	676.074
16-03-2022	101234	510	279024.92	1271.02	69442.524	-68883.445
17-03-2022	101744	4141	280295.94	1208.82	559.079	672
18-03-2022	105885	2289	281504.76	1146.58	1231.079	979.099
19-03-2022	108174	1557	282651.34	1198.04	2210.178	918.9004
20-03-2022	109731	2901	283849.38	1206.11	3129.0784	761.9926
21-03-2022	112632	2885	285055.49	1191.53	3891.071	852.542
22-03-2022	115517	2858	286247.02	1187.34	4743.613	861.407
23-03-2022	118375	2718	287434.36	1300	5605.02	836.865
24-03-2022	121093	2723	288734.36	1202.56	6441.885	818.99
25-03-2022	123816	1983	289936.92	1191.66	7260.875	776.39
26-03-2022	125799	2793	291128.58	1206.6	8037.265	855.658
27-03-2022	128592	972	292335.18	1045.14	8892.923	700.08

5937

Annexure V

Recycling Solutions Private Limited [66336]

Manifest No: 1535986 02/02/2022 **Copy 6**

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Pre- processing
Facility Details	Recycling Solutions Private Limited [66336]		
Contact Details	9328261613 jvm@rs-pl.com	GPS Coordinates	Lat :21.5626 Long:73.0006
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, Taluka :ANK Distict:ANK Pin no:394116		

Waste Details					
Waste Details	I~36~36.1~Any process or distillation residue				
Waste Intended for	Preprocessing	Total Qty	4.620MT	Consistency	Solid

Transporter Details			
Name	SAI WASTE MANAGEMENT CO.	Contact Details	9327417479 Shastri.jyotiprakash@gobolt.co.in
Address	Plot No.208/2 Panoli GIDC,ANKLESHWAR District :Bharuch Taluka :Bharuch		

Vehicle Details					
Vehicle no	GJ16AU8601	GPS Enabled	Yes	Type of Vehicle	Tempo
Driver name	Shiv Pal	Driver Contact No	8200944067		

Waste Transportation Details					
Vehicle Depart.	02/02/2022 11:05AM	Number of Drums	80	Loose Waste	0.000
Remarks	Process waste		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and Stamp of sender: Gujarat Fluorochemicals Ltd. 2/A, GIDC Dahej Industrial State, Tal Vagra Dist Bharuch-392 130

Date: 02/02/2022

Signature: DAHEJ

Transporter's Acknowledgement of Receipt of waste

Stamp:

Date: 02/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp:

Date: 2/2/22

Signature:

5938

Recycling Solutions Private Limited [66336]

Manifest No: 1538562 04/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Pre- processing
Facility Details	Recycling Solutions Private Limited [66336]		
Contact Details	9328261613 jvm@rs-pl.com	GPS Coordinates	Lat :21.5626 Long:73.0006
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, Taluka :ANK Distict:ANK Pin no:394116		

Waste Details					
Waste Details	I~36~36.1~Any process or distillation residue				
Waste Intended for	Preprocessing	Total Qty	9.450MT	Consistency	Solid

Transporter Details			
Name	RSPL	Contact Details	7069028336, marketing@rs.pl.com
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, City :Pan,Bharuch District :Bharuch Taluka :Bharuch		

Vehicle Details					
Vehicle no	GJ26T8617	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	OM PRAKASH	Driver Contact No	9724930165		

Waste Transportation Details					
Vehicle Depart.	04/02/2022 1:30PM	Number of Drums	0	Loose Waste	0.000
Remarks	Spent Resin		No of bags	9	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and Stamp of sender: Gujarat Fluorochemicals Ltd. 12/A, GIDC Dahej Industrial Estate Tal Vagra Dist Bharuch-392 130

Date: 04/02/2022

Signature: DAHEJ

Transporter's Acknowledgement of Receipt of waste

Stamp:

Date: 04/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp:

Date: 4/2/22

Signature:

5939

Recycling Solutions Private Limited [66336]

Manifest No: 1544710 10/02/2022 **Copy 6**

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Pre- processing
Facility Details	Recycling Solutions Private Limited [66336]		
Contact Details	9328261613 jvm@rs-pl.com	GPS Coordinates	Lat :21.5626 Long:73.0006
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, Taluka :ANK Distict:ANK Pin no:394116		

Waste Details					
Waste Details	I~36~36.1~Any process or distillation residue				
Waste Intended for	Preprocessing	Total Qty	4.000MT	Consistency	Solid

Transporter Details			
Name	RSPL	Contact Details	9327417479 sashtri.jyotiprakash@gobolt.co.in
Address	Plot No.223.panoli,panoli gidc District :Bharuch Taluka :Bharuch		

Vehicle Details					
Vehicle no	GJ16Z6330	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	HARIKESH YADAV	Driver Contact No	7388810361		

Waste Transportation Details					
Vehicle Depart.	10/02/2022 11:15AM	Number of Drums	80	Loose Waste	0.000
Remarks	Process waste		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and Stamp of sender: Gujarat Fluorochemicals Ltd, 12/A, GIDC Dahej Industrial Estate, Tal Vagra Distt Bharuch-392 130 **Date:** 10/02/2022 **Signature:** DAHEJ

Transporter's Acknowledgement of Receipt of waste

Stamp: **Date:** 10/02/2022 **Signature:**

Receiver's Certification of Receipt of Hazardous waste

Stamp: **Date:** 10/2/22 **Signature:**

5940

Recycling Solutions Private Limited [66336]

Manifest No: 1540012 | **Copy 6**

05/02/2022

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Pre- processing
Facility Details	Recycling Solutions Private Limited [66336]		
Contact Details	9328261613 jvm@rs-pl.com	GPS Coordinates	Lat :21.5626 Long:73.0006
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, Taluka :ANK Distict:ANK Pin no:394116		

Waste Details					
Waste Details	1~36~36.1~Any process or distillation residue				
Waste Intended for	Preprocessing	Total Qty	6.630MT	Consistency	Solid

Transporter Details			
Name	RSPL	Contact Details	9327417479 sashtri.jyotiprakash@gobolt.co.in
Address	Plot No.223.panoli,panoli gidc District :Bharuch Taluka :Bharuch		

Vehicle Details					
Vehicle no	GJ16Z6330	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	HARIKESH YADAV	Driver Contact No	7388810361		

Waste Transportation Details					
Vehicle Depart.	05/02/2022 4:50PM	Number of Drums	0	Loose Waste	0.000
Remarks	Process waste		No of bags	10	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and stamp of sender: Gujarat Fluorochemicals Ltd. 12/A GIDC Dahej Industrial Estate Taluka Vagra Dist Bharuch 392130

Date: 05/02/2022

Signature

Transporter's Acknowledgement of Receipt of waste

Stamp:

Date: 05/02/2022

Signature: Harikesh Yadav

Receiver's Certification of Receipt of Hazardous waste

Stamp:

Date: 5/2/22

Signature:

5941

Recycling Solutions Private Limited [66336]

Manifest No: 1537137 / 03/02/2022 **Copy 6**

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Pre- processing
Facility Details	Recycling Solutions Private Limited [66336]		
Contact Details	9328261613 jvm@rs-pl.com	GPS Coordinates	Lat :21.5626 Long:73.0006
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, Taluka :ANK Distict:ANK Pin no:394116		

Waste Details					
Waste Details	I~36~36.1~Any process or distillation residue				
Waste Intended for	Preprocessing	Total Qty	7.940MT	Consistency	Solid

Transporter Details			
Name	Murlidhar Services	Contact Details	9328261613 jvm@rs-pl.com
Address	Plot No.208/2,GIDC Estate, ,District :Ankleshwar District :Ankleshwar Taluka :Ankleshwar		

Vehicle Details					
Vehicle no	GJ01DX7304	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	RAJU BHAI	Driver Contact No	8000941622		

Waste Transportation Details					
Vehicle Depart.	03/02/2022 11:05AM	Number of Drums	0	Loose Waste	0.000
Remarks	Process waste		No of bags	10	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and Stamp of sender: Gujarat Fluorochemicals Ltd. Dahej Industrial State Tal Vagra Distt Bharuch-392 130

Date: 03/02/2022 Signature: HEJ

Transporter's Acknowledgement of Receipt of waste

Stamp: Date: 03/02/2022 Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp: Date: 3/2/22 Signature:

5942

Recycling Solutions Private Limited [66336]

Manifest No: 1537735 03/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details

Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	**GPS Coordinates**	Lat :21.4100 Long :72.3500

Receiver's Details

State	Gujarat	**Type of Facility**	Pre- processing
Facility Details	Recycling Solutions Private Limited [66336]		
Contact Details	9328261613 jvm@rs-pl.com	**GPS Coordinates**	Lat :21.5626 Long:73.0006
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, Taluka :ANK Distict:ANK Pin no:394116		

Waste Details

Waste Details	I~36~36.1~Any process or distillation residue				
Waste Intended for	Preprocessing	**Total Qty**	8.570MT	**Consistency**	Solid

Transporter Details

Name	RSPL	**Contact Details**	9328261613 pankaj.sinha@rs-pl.com
Address	Plot No.208/2 GIDC PANOLI.,RSPL-Panoli District :Ankleshwar Taluka :Ankleshwar		

Vehicle Details

Vehicle no	GJ16Z4216	**GPS Enabled**	Yes	**Type of Vehicle**	Truck
Driver name	sallender kumar	**Driver Contact No**	7778950526		

Waste Transportation Details

Vehicle Depart.	03/02/2022 4:05PM	**Number of Drums**	0	**Loose Waste**	0.000
Remarks	Spent Carbon		**No of bags**	10	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and stamp of sender: Gujarat Fluorochemicals Ltd. 12/A GIDC Dahej Industrial Estate Tal Vagra Distt Bharuch-392 130

Date: 03/02/2022

Signature: DAHEJ

Transporter's Acknowledgement of Receipt of waste

Stamp:

Date: 03/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp:

Date: 3/2/22

Signature:

NIC

5943

BEIL Infrastructure Ltd [40137]

Manifest No: 1543809 09/02/2022 **Copy 6**

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC , DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details					
Waste Details	Others-1~S~S1~Insulation waste				
Waste Intended for	LandFill	Total Qty	3.240MT	Consistency	Solid

Transporter Details			
Name	MAA CHAMUNDA EARTH MOVERS	Contact Details	8866029350 aagohil1411@gmail.com
Address	NEAR BARBORI MATA TEMPLE,Dahej District :Bharuch Taluka :Vagra		

Vehicle Details					
Vehicle no	GJ22T0851	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	Mansa ram	Driver Contact No	6386513104		

Waste Transportation Details					
Vehicle Depart.	09/02/2022 1:20PM	Number of Drums	0	Loose Waste	3.240
Remarks	Insulation waste		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and Stamp of sender: Gujarat Fluorochemicals Ltd. Dahej Industrial State Tal Vagra Dist. Bharuch-392 130 Date: 09/02/2022 Signature: GHEJ

Transporter's Acknowledgement of Receipt of waste

Stamp: Maa Chamunda Earth Movers Barbori Mata Temple, Dahej, Vagra, Dist.Bharuch Mob:- 8866029350 / 9978918278 Date: 09/02/2022 Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp: BEIL INFRASTRUCTURE LIMITED DAHEJ Date: 09 FEB 2022 Signature:

5944

BEIL Infrastructure Ltd [40137]

Manifest No: 1536463
02/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details

Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details

State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC , DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details

Waste Details	I~35~35.3~Chemical sludge from waste water treatment				
Waste Intended for	LandFill	Total Qty	9.460MT	Consistency	Solid

Transporter Details

Name	MAA CHAMUNDA EARTH MOVERS	Contact Details	9978910279 aagohil1411@gmail.com
Address	NEAR BARBORI MATA TEMPLE,GIDC District :Bharuch Taluka :Bharuch		

Vehicle Details

Vehicle no	GJ17UU1797	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	Priyaranjan	Driver Contact No	8910556517		

Waste Transportation Details

Vehicle Depart.	02/02/2022 3:00PM	Number of Drums	0	Loose Waste	9.460
Remarks	ETP Sludge		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and Stamp of sender: Gujarat Fluorochemicals Ltd. Dahej Industrial State Tal Vagra Distt Bharuch-392 130

Date: 02/02/2022

Signature:

Gujarat Fluorochemicals Ltd. DAHEJ

Transporter's Acknowledgement of Receipt of waste

Stamp: Maa Chamunda Earth Movers Nr. Barbori Mata Temple, Dahej, Vagra, Dist.Bharuch Mob.: 8866029350 / 9978910279

Date: 02/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp:

RECEIVED 03 FEB 2022

Date:

Signature:

DAHEJ

Print by 15136 @ 02/02/2022 02:40:53 PM 1 (Through XGN)

N I C

5945

BEIL Infrastructure Ltd [40137]

Manifest No: 1538950 04/02/2022 | **Copy 6**

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details

Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details

State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC , DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details

Waste Details	Others-1~S~S1~Insulation waste				
Waste Intended for	LandFill	Total Qty	2.280MT	Consistency	Solid

Transporter Details

Name	MAA CHAMUNDA EARTH MOVERS	Contact Details	8866029350 aagohil1411@gmail.com
Address	NEAR BARBORI MATA TEMPLE,Dahej District :Bharuch Taluka :Vagra		

Vehicle Details

Vehicle no	GJ22T0851	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	Mansa ram	Driver Contact No	6386513104		

Waste Transportation Details

Vehicle Depart	04/02/2022 5:15PM	Number of Drums	0	Loose Waste	2.280
Remarks	Filter Cloth		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and Stamp of sender: Gujarat Fluorochemicals Ltd. Plot No. 12/A, GIDC Industrial State Tal. Vagra Distt. Bharuch-392 130 Mail Code No. - 2611 | **Date:** 04/02/2022 | **Signature:** Gujarat Fluorochemicals Ltd. DAHEJ

Transporter's Acknowledgement of Receipt of waste

Stamp: Mr. Barbori Mata Temple, Dahej, Vagra, Dist.Bharuch Mob.: 8866029350 / 9687906873 | **Date:** 04/02/2022 | **Signature:**

Receiver's Certification of Receipt of Hazardous waste

Stamp: BEIL INFRASTRUCTURE LIMITED DAHEJ | **Date:** RECEIVED 05 FEB 2022 | **Signature:**

5946

BEIL Infrastructure Ltd [40137]

Manifest No: 1541325 07/02/2022 **Copy 6**

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC , DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details					
Waste Details	Others-1~S~S1~Insulation waste				
Waste Intended for	LandFill	Total Qty	2.560MT	Consistency	Solid

Transporter Details			
Name	MAA CHAMUNDA EARTH MOVERS	Contact Details	9978910279 aagohil1411@gmail.com
Address	NEAR BARBORI MATA TEMPLE,GIDC District :Bharuch Taluka :Bharuch		

Vehicle Details					
Vehicle no	GJ17UU1797	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	Priyaranjan	Driver Contact No	8910556517		

Waste Transportation Details					
Vehicle Depart.	07/02/2022 12:40PM	Number of Drums	0	Loose Waste	2.560
Remarks	Insulation waste		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Gujarat Fluorochemicals Ltd, 12/A, GIDC Dahej Pet. Vagra Dist. Bharuch-392 130

Name and stamp of sender/ state Date: 07/02/2022 Signature:

Gujarat Fluorochemicals Ltd. DAHEJ

Maa Chamunda Earth Movers Nr. Barbori Mata Temple, Dahej, Vagra, Dist.Bharuch Mob : 8866[illegible]

Transporter's Acknowledgement of Receipt of waste Date: 07/02/2022 Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp: **Date:** **Signature:**

BEIL INFRASTRUCTURE LIMITED DAHEJ

RECEIVED 07 FEB 2022

5947

BEIL Infrastructure Ltd [40137]

Manifest No: 1544867 10/02/2022 **Copy 6**

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details

Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details

State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC , DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details

Waste Details	Others-1~S~S1~Insulation waste				
Waste Intended for	LandFill	Total Qty	2.120MT	Consistency	Solid

Transporter Details

Name	MAA CHAMUNDA EARTH MOVERS	Contact Details	9978910279 aagohil1411@gmail.com
Address	NEAR BARBORI MATA TEMPLE,GIDC District :Bharuch Taluka :Bharuch		

Vehicle Details

Vehicle no	GJ17UU1797	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	Priyaranjan	Driver Contact No	8910556517		

Waste Transportation Details

Vehicle Depart.	10/02/2022 12:25PM	Number of Drums	0	Loose Waste	2.120
Remarks	Insulation waste		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and stamp of sender: Gujarat Fluorochemicals Ltd. A-12 GIDC Dahej Industrial State Tal Vagra Distt Bharuch 392 130 Date: 10/02/2022 Signature: EJ

Transporter's Acknowledgement of Receipt of waste

Stamp: Maa Chamunda Earth Mover Nr. Barbori Mata Temple, Dahej, Vagra, Dist.Bharuch Mob: 8866029350 / 9978910279 Date: 10/02/2022 Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp: BEIL INFRASTRUCTURE LIMITED DAHEJ Date: 10 FEB 2022 Signature:

5948

BEIL Infrastructure Ltd [40137]

Manifest No: 1544899
10/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details

Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details

State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC , DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details

Waste Details	Others-1~S~S1~Insulation waste				
Waste Intended for	LandFill	Total Qty	1.740MT	Consistency	Solid

Transporter Details

Name	Maa Chamunda Earth Movers	Contact Details	9978910279 aagohil1411@gmail.com
Address	Nr. Babari Mata Temple,Dahej District :Bharuch Taluka :Vagra		

Vehicle Details

Vehicle no	GJ16W1270	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	CHUNU SINGH	Driver Contact No	8406057356		

Waste Transportation Details

Vehicle Depart.	10/02/2022 12:45PM	Number of Drums	0	Loose Waste	1.740
Remarks	Insulation waste		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and Stamp of sender: Gujarat Fluorochemicals Ltd 12/A & 12 Dahej Industrial State Tal Vagra Distt Bharuch-392 130

Date: 10/02/2022

Signature:

Transporter's Acknowledgement of Receipt of waste

Stamp: M/s. Maa Chamunda Earth Movers At. Nr. Babari Mata Temple Dahej, Vagra, Dist.Bharuch

Date: 10/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

1.740 MT

Stamp:

Date: 10 FEB 2022

Signature:

BEIL INFRASTRUCTURE LIMITED DAHEJ

Print by 15136 @ 10/02/2022 12:28:25 PM 1 (Through XGN)

NIC

Annexure : VI

COMPLIANCE REPORT WITH RESPECT TO CONSOLIDATED CONSENT AND AUTHORIZATION (DAHEJ-A)

NAME OF UNIT : **GUJARAT FLUOROCHEMICALS LIMITED**
LOCATION : **12/A, GIDC INDUSTRIAL ESTATE, TALUKA: VAGRA, DIST.BHARUCH-392130, GUJARAT, INDIA**

CC&A NO : **GPCB/BRCH-B/-CCA-1080(11)/ID-15136/521670 DATED 09.07.2020**

The unit has been granted Consolidated Consent and Authorization vide no. AWH-85503 dated 25-04-2017, and amended vide letter no.: GPCB/BRCH-B/-CCA-1080(11)/ID-15136/414088 dated 03/06/2017 and further amended dated 04.07.2017, 27.06.2018, and 13.09.2019.

Conditions under CCA:

Conditions	Status of Compliance
Condition No.1 The list of proposed products to be manufactured shall be as follows.	**The same has been amended vide order no. GPCB/BRCH-B/CCA-1080(11)/ID-15136/564217, dated 09.07.2020.**

Sr. No.	Name of Products	Total after Product Mix Change (MT/Month)
1	Hepta Fluoro Propane (HFPP)	0
2	Telomer Iodine	0
3	Telomer Alcohol	0
4	Hexa Fluoro Propylene Oxide (HFPO)	0
5	Anhydrous Potassium Fluoride (APF)	0
6	Tetra Fluoroethylene Tetramer (TFE Tetramer)	0
7	Difluoro Methane Sulfonyl Chloride (DFMSC)	0
8	1,3- Difluoro Benzene (1,3 DFB)	0

9	Tetra Fluoro Benzyl Alcohol (TFBA)	0
10	1,1,3 Trichloro 2,3,3-Trifluoropropane (CFO1213ya) (P-200)	0
11	Ethyl Tetra Fluoro Ethyl Ether (ETFEE)	400
12	Carbon Dioxide-Food grade gas	2267
13	Carbon Dioxide-Dry Ice	533
14	Pentafluoroethane (HFC -125)	417
15	Chloroform	10090
16	Methylene Dichloride (MDC)	10090
17	Sulphuric Acid (70%- 88%)	713
18	Hydrochloric Acid (31 % +/- 1%)	37992
19	Carbon Tetrachloride (CTC) @	1440
20	Caustic Soda (Dry Basis)	15500
21	Chlorine Dry Basis	13167
22	Hydrogen	464
23	Hydrochloric Acid (31% ± 1 %)	357
24	Sodium hypochlorite (10% chlorine)	132
25	Calcium Chloride	4750
26	Tetra Fluoro Ethylene (TFE)	300
27	Dilute HF (20 %)	1000

28	High Boiler of Chloromethane	200
29	HexaFluoro Propylene (HFP)	300
30	Tetrafluoro Dimethyl Amine (TFE DMA)	90
31	DichloroFluoromethane (HCFC-21/R-21)	230
32	Dichloropentafluoro Propane (HCFC-225)	415
	Methyl Tetra Fluoro Ethyl Ether (MTFEE)	83
34	Br Ethyle Difluoroacetate (Br EDFA)	25
35	Tri fluoromethane	21
36	1,1,3Trichlorotetrafluoropropane (HCFC 224ca)	25
37	Polytetra Fluoro Ethylene (PTFE) *	2000
38	Gypsum	12768
39	Fluoro Elastomers (FKM) *	300
	PerfluoroAlkoxy (PFA) *	200
	Polyvenylidene Fluoride (PVDF) *	250
42	Fluorinated Ethylene Propylene (FEP) *	250
43	Intermediate Vinylidene Fluoride (VDF)	84
44	Hydrofluosilicic Acid (20%)	200
45	2, 6- Dichloro-4-Trifluoro Methyl Aniline (DCTFMA)	65
46	TFMA	20
47	Iodurate	1
48	Tetra Fluoro Beta Sulfone	25

49	Tetra Fluoro Ethyl Ether (Propyl, butyl, TF Propyl)	80
50	Di Chloro Tetra Fluoroethoxy aniline	10
51	I-SAN	20
52	PCTFE	4
53	C_4 to C_{34} Surfactant (Non-fluorinated)	10
54	R&D Products	10
Total		**117298**
55	Gas Based COGEN	54.5 MW
56	Coal Base COGEN	
57	Gas Base CCGT	37 MW
	Total	**91.5 MW**

CONDITION NO 2:SPECIAL CONDITION

a. Total Production shall not exceed 117298 MT/Month in any case.	Unit is being complied with said condition.
b. Unit shall sell out their hazardous waste to authorized end-users who is having authorization with valid CCA and rule 9 permissions on receive this waste. Unit shall make MoU with such authorized end –users and submit MoU at time of application of CCA.	Yes, unit is following.
c. All the efforts shall be made to send hazardous waste to cement industry for Co-processing first & there after it shall be disposed through other option.	**Complied.** Unit is sending their hazardous waste to cement industry for Co-processing first.
d. Unit shall follow spent solvent management guideline framed by board and shall make MoU with outside distillation units, if any. Also submit the prescribed forms as per guideline.	**Noted & Agreed.**
e. There shall not be increase in pollution load due to proposed change in product mix.	**Complied.** Unit is not increasing in any way pollution load due to proposed change in product mix.

f. There shall not be any change in plant building, Equipments & machineries to manufacture the proposed new products after change in product mix.		Yes, Unit is not doing any change in plant building, Equipments & machineries to manufacture the proposed new products after change in product mix.
g. In the case of submission of the false or misleading data, this CTE amendment will be forfeited immediately.		**Agreed with said condition.**
h. Hydrochloric acid (12% ± 1%) shall be removed from product list as unit is using it to manufacturing CaCl2 in house.		**Complied.** Unit has been removed Hydrochloric acid (12% + 1%) from product list.
i. Unit shall install scrubber with coal based utilities for desulphurization.		**Agreed with said condition.**
CONDITION NO.3:CONDITION UNDER THE WATER ACT:		
Condition No.3.1 The condition No. 4.1 for Water consumption under Water Act of the CCA Order No AWH: 85503 Issued wide latter no. GPCB/BRCH-B/CCA-1080(11)/ID-15136/414088, dated 03/06/2019 and further amended dated 04/07/2017, 27/06/2018, and 13/09/2019 is amended and shall now be read as under. a. Domestic: 52.5KL/Day (Existing 52.5 KLD+ Proposed Nil) b. Industrial: 13254.22 KL/Day(Existing 13274 KLD+ Proposed (-19.78)KLD) Total: 13306.72KL/Day (Existing 13326.5 KLD+ Proposed (-19.78) KLD)		**Complied.** Unit is not using excess water quantity as mentioned in CCA.
..dition No.3.2 The condition No.4.2 for Wastewater generation under Water Act of the CCA order No: AWH-85503, issued vide letter no. GPCB/BRCH-B/CCA-1080(11)/ID-15136/414088, dated 03/06/2019 and further amended dated 04/07/2017, 27/06/2018, and 13/09/2019 is amended and shall now be read as under. a. Domestic: 45KL/Day (Existing 45 KLD+ Proposed Nil) b. Industrial: 4411.67KL/Day (Existing 4419KLD+Proposed (-7.33)KLD) Total: 4456.67KL/Day (Existing 4464KLD+ Proposed (-7.33)KLD)		**Complied.** Unit is not generating excess wastewater quantity as mentioned in CCA.
Condition No.3.3 The condition No.4.4 for wastewater generation under Water Act of the CCA order No: AWH-85503, issued vide letter no. GPCB/BRCH-B/CCA-1080(11)/ID-15136/414088, dated 03/06/2019 and further		**Complied.** Industrial effluent along with domestic wastewater is sent to ETP for primary, Secondary and tertiary

amended dated 04/07/2017, 27/06/2018, and 13/09/2019 is amended and shall now be read as under. Is amended and shall now be read as under. "@4411.67KL/Day of industrial effluent along with domestic wastewater (sewage) 45KL/Day shall be sent to ETP for primary, Secondary and tertiary treatment. After treatment the 1600KL/Day of RO Permeate shall be used for cooling tower, 45KLD of treated sewage for gardening and plantation. 20KLD of treated wastewater for coal dust suppression. Total 3231.67KL/Day treated wastewater shall be discharged into deep sea through GIDC drainage line."	treatment and after treatment RO permeate is using for Cooling tower, treated sewage water for gardening and plantation. Total treated waste water is discharging into deep sea through GIDC drainage line.

CONDITION NO.4 CONDITION UNDER THE AIR ACT:

Condition No.3.4

The addition No.5.1 Fuel consumption under Air Act of the CCA order No: AWH-85503 issued vide letter no. GPCB/BRCH-B/CCA-1080(11)/ID-15136/414088, dated 03/06/2019 and further amended dated 04/07/2017, 27/06/2018, and 13/09/2019 is amended and shall now be read as under. Is amended and shall now be read as under.

Sr.No	Name of fuel	Quantity Total
1	Imported Coal (MT/Day)	1322.94
2	Natural Gas (SCM/Day)	50000
3	LDO (KL/Day)	10

Complied.
Unit is following the norms as per CCA.

Condition No.4.2

The concentration of the following parameters in the ambient air within the premises of the industry shall not exceed the limits specified hereunder.

Sr. No	Parameters	Permissible Limit (microgram/m³)	
		Annual	24 Hours Average
1	Particulate Matter(PM_{10})	60	100
2	Particulate Matter($PM_{2.5}$)	40	60
3	Oxides of Sulphur(SO_X)	50	80
4	Oxides of Nitrogen (NO_X)	40	80

- **Annual arithmetic mean of minimum 104 measures in a year at a particular site taken twice a week 24**

Complied.

Unit has continue emission monitoring system to monitor SPM, SOx & NOx and same record is being maintained and submitted time to time at GPCB.

hourly at uniform intervals. • **24 hourly or 08 hours monitored values, as application, shall be complies with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.**		
Condition No.4.6 Unit shall operate industrial plant/air pollution control equipment very efficiently and continuous so that the gaseous emission always conforms of the standard specified in condition as above.		**Complied.** Unit is being operated industrial plant/air pollution control equipment very efficiently and continuous so that the gaseous emission always conforms of the standard specified in condition as above.
ndition No.4.7 Unit shall take adequate measure for control of Noise levels from its own sources within the premises so as to maintain ambient air quality standard is respect of noise to less than 75 db(a) during Daytime and 70dB(A) during night time. Daytime is reckoned in between 6 am and 10 pm and nighttime is reckoned 10 pm and 6 am.		**Complied.** Unit is being monitored Noise levels from its own sources within the premises so as to maintain ambient air quality standard by MOEF & CC (GOI) recognized environment laboratory.
Condition Np.4.8 All efforts shall be made to control VOC emission and odor problem, if any.		**Complied.** Unit is being monitored VOC emission and maintain the record same.
Condition No.4.9 Total control of odor nuisance from the plant premises, shall be ac ved & maintained by the unit continuously.		**Complied.** Unit is being monitored workplace by MOEF & CC (GOI) recognized environment laboratory and maintain the record same.
.ditionNo.4.10 Unit shall install continuous/online monitoring system in the stack and shall transmit online data so generated simultaneously to GPCB and CPCB as well for the parameters such as PM, SO_2, NO_X, NU_3, HCl, other specific parameters etc., if applicable as per CPCB guideline.		**Complied** Unit has installed Online Continuous Emission Monitoring system & connected to CPCB server.
CONDITION NO.5: CONDITION UNDER HAZARDOUS & OTHER WASTE (MANAGEMNET & TRANSBOUNDARY MOVEMENT) RULES, 2016		
Condition No.5.1 Unit shall comply with provisions of Hazardous & other wastes (Management & Transboundary Movement)Rules-2016		**Complied** Unit is following.
Condition No.5.2 The condition No.6.2 under authorization for Hazardous & other		

wastes of the CCA order No: AWH-85503 issued vide letter no. GPCB, GPCB/BRCH-B/CCA-1080(11)/ID-15136/414088, dated 03/06/2019 and further amended dated 04/07/2017, 27/06/2018, and 13/09/2019 is amended and shall now be read as under. Is amended and shall now be read as under.

Sr. NO	Type of waste	Category and Schedule as per HW Rules	Quantity (MT/Annum)	Disposal Method
1.	Used Oil	5.1	85.4 (KL/Annum)	Collection, Storage, Transportation and Disposal at GPCB approved Registered Refiners/Recycler.
2.	Empty Barrels/ Discarded Carboys/ Drums /Cylinders	33.1	25	Collection, Storage, Transportation and Disposal at GPCB Approved recyclers.
3.	Spent Resins from DM Plant	35.2	25	Collection, Storage, Transportation and Disposal at GPCB approved common TSDF site.
4.	ETP Sludge	35.3	4562	Collection, Storage, Transportation and Disposal at GPCB approved common TSDF site.

Complied.

Unit is being followed as per the said condition.

5.	Sludge from wet scrubber	16.2	2	Collection, Storage, Transportation and Disposal at GPCB Approved common TSDF site.
6.	Spent Catalyst	17.2	29.2	Collection, Storage, Transportation and disposed at GPCB approved common TSDF/ Incineration/Co-processing facility.
7.	Process Waste/ Dist Residue	36.1	2406	Collection, Storage, Transportation and disposed at GPCB approved common TSDF/ Incineration/Co-processing facility.
	PTFE Residue	1.4	189	Collection, Storage, Transportation and disposed at GPCB approved common TSDF/ Incineration/Co-processing facility.
9.	Distillation Residue	20.3	2.4	Collection, Storage, Transportation and disposed at GPCB approved common Incineration/Co-processing facility.
Non Hazardous waste				

10.	Brine sludge	--	10734	Collection, Storage, Transportation and Disposal at SLF.		
11.	Insulation Waste	--	150	Collection, Storage, Transportation and Disposal at GPCB Approved common TSDF site.		
12.	Ash	--	60-65 (MT/Day)	Disposed as per Fly Ash management Rule 2009, Selling Ash to Cement Plants/Brick Making industries/Filling in Low lying area.		
6. All other conditions of CCA order No: AWH-85503, issued vide letter no. GPCB/BRCH-B/CCA-1080(11)/ID-15136/414088, dated 03/06/2017 and further amended dated 04/07/2017,27/06/2018, and 13/09/2019 will remain same.						Agreed with said condition.

5959

Annexure :- 9

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:324582 - Analysis Completion:04/03/2022

Organic Chemicals manufacturing / LAB Inward : 46945

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 46945 **Date: 05/03/2022**

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej–392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By : Shri Niraj Patel , DEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 324582
7. Date & Time of Collection & Inwarding : 22/02/2022 , (1210 to 1215) & 23/02/2022
8. Date of Start & Completion of Analysis : 23/02/2022 & 04/03/2022
9. Sampling Point : ## Final Outlet of the ETP ~ From Final outlet of ETP
10. Flow Details (Remarks) : –
    Mode of Disposal : into sea through GIDC pipeline
    Ultimate Receiving Body : Sea
13. Temperature on Collection : 29 & pH Range on pH Strip :@6-7 on pH strip
14. Carboys Nos for : & Color & Appearance :Colourless
    : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD) : 13 ,Cap No & Weight :

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	6.97
2	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	05
3	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	62
4	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	12.32
5	Total Kjeldahl Nitrogen	mg/l	Titrimetric method followed by preliminary distillation	1 – 5000 mg/l	15.68
6	Nitrate	mg/l	Cadmium reduction method As per Spectrophotometr	0.005 – 100 mg/l	3.20
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	37575
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	877
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	190
10	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	BDL
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	1.16
12	Sulphide	mg/l	APHA (23rd Edi.)4500-s2-F –Iodometric Method	1-500.0 mg/l	p.nil
13	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	44

Laboratory Remarks : Approved By:399-lab_399 Dt.: 05/03/2022

R.C.VASAVA,S.O

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

GUJARAT FLUOROCHEMICALS LIMITED, DAHEJ

Result dated 22.02.2022, analysed at ETP LAB as under,

Sr. No.	Parameters	Unit
1	pH	6.78
2	COD	233 ppm
3	TSS	79 ppm

UniStar
Environment and Research Labs Pvt. Ltd.

White House,
Near G.I.D.C. Office, Char Rasta,
Vapi-396 195, Gujarat, India.
Phone : +91 260 2433966 / 2425610
Email : response@uerl.in Website : www.uerl.in

MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA-1986 (12.01.2020 to17.03.2023) | QCI-NABET Accredited EIA Consultant Organization | GPCB Recognized Environmental Auditor (Schedule-II) | ISO 9001:2015 Certified Company | ISO 45001:2018 Certified Company

TEST REPORT

ULR No.	---	Report No.	URC /22/02/0903
Name & Address of Customer	M/s. Gujarat Fluorochemicals Limited Plot No.12/A, GIDC Dahej, Bharuch	Date of Report	01/03/2022
		Customer's Ref.	--
Sample Details	ETP Outlet Water Sample (GPCB Counter)	Location	--
Sample Qty.	10 Lit.	Appearance	Light Turbid
Sampling Date	22/02/2022	Sample Received Date	23/02/2022
Test Started Date	23/02/2022	Test Completion Date	28/02/2022
Sampled By	Party.	Sampling Method	--
UERL Lab ID. No.	22/02/0903		

TEST RESULTS:

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment			
Sr. No.	Parameters	Test Method Permissible	Permissible Limits (GPCB)	Unit of Measurement	Results
		PHYSIO-CHEMICAL PARAMETERS			
1.	pH @ 25 ° C	(APHA 23rd Ed.,2017,4500-H+B)	6.0 – 9.0	--	6.65
2.	Total Suspended Solids	IS 3025(Part 17)1984,Amd.1	100	mg/L	70
		GENERAL CHEMICAL PARAMETERS			
1.	Oil & Grease	IS 3025(Part39)1991, Amd. 2	10	mg/L	BDL(MDL:2.0)
2.	Fluoride	(APHA 23rd Ed.,2017,4500 F,D)	15	mg/L	4.45
3.	Sulphide	(APHA 23rd Ed.,2017,4500 S^{-2} F)	5	mg/L	BDL(MDL:0.05)
4.	TKN	(APHA 23rd Ed.,2017,4500 NORG, B,)	50	mg/L	20.2
5.	Ammoniacal Nitrogen	IS 3025(Part 34)1988,	50	mg/L	15.1
6.	Copper	IS 3025(Part 42)1992amd.01,	3	mg/L	0.167
7.	Zinc	IS 3025(Part 49)1994	15	mg/L	0.248
8.	BOD (3 days at 27 °C)	IS 3025(Part 44)1993Amd.01	100	mg/L	80
9.	COD	IS 3025(Part 58)2006	250	mg/L	238.1
10.	Arsenic	APHA 23rd Ed.,2017,3114-C	0.2	mg/L	BDL(MDL:0.01)
11.	Mercury	(APHA 23rd Ed.,2017,3112-B)	0.01	mg/L	BDL(MDL:0.001)
12.	Lead	IS 3025(Part 47)1994Amd.02	0.1	mg/L	BDL(MDL:0.01)
13.	Cadmium	IS 3025(Part 41)1992,	0.05	mg/L	0.402
14.	Hexavalent Chromium	APHA 23rd Ed.,2017,3500CrB	0.1	mg/L	BDL(MDL:0.05)
15.	Nickel	IS 3025(Part 54)2003,	3	mg/L	0.995
16.	Cyanide	IS 3025(Part27)1986	0.2	mg/L	BDL(MDL:0.05)
17.	Phenolic Compound	IS 3025(Part 43)1992, Amd.2	5	mg/L	0.2
18.	Manganese	APHA 23rd Ed.,2017,3500 Mn B	2	mg/L	1.078
19.	Iron	IS 3025(Part 53)2003,	3	mg/L	0.286
20.	Nitrate	(APHA 23rd Ed.,2017,4500 NO3-B)	50	mg/L	7.6
21.	Total Residual Chlorine	IS 3025(Part 26)1986,	1	mg/L	01
22.	Chromium-Total	(APHA 23rdEd.,2017,3111-B)	1.0 Max.	mg/L	0.207
23.	Free Ammonia (as NH_3)	(APHA 23rdEd.,2017,4500 NH_3-B&C)	5 Max.	mg/L	BDL(MDL:0.2)
Remarks: BDL= Below Detection Limit, MDL = Minimum Detection Limit,					
Opinion & Interpretation (If required):					

******* End of Report *******

Checked By
(Nilesh C. Patelp
(Sr. Chemist)

Authorized By
(N.B.T.)
(Nitin B. Tandel)
(Technical Manager)

UERL/CHM/F–2/05

Note: This report is subject to terms and conditions mentioned overleaf.

UniStar
Environment and Research Labs Pvt. Ltd.

White House,
Near G.I.D.C. Office, Char Rasta,
Vapi-396 195, Gujarat, India.
Phone : +91 260 2433966 / 2425610
Email : response@uerl.in Website : www.uerl.in

MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA-1986 (12.01.2020 to17.03.2023) | QCI-NABET Accredited EIA Consultant Organization | GPCB Recognized Environmental Auditor (Schedule-II) | ISO 9001:2015 Certified Company | ISO 45001:2018 Certified Company

TEST REPORT

ULR No.	---	Report No.	URC /22/02/0903
Name & Address of Customer	M/s. Gujarat Fluorochemicals Limited Plot No.12/A, GIDC Dahej, Bharuch	Date of Report	01/03/2022
		Customer's Ref.	--
Sample Details	ETP Outlet Water Sample (GPCB Counter)	Location	--
Sample Qty.	10 Lit.	Appearance	Light Turbid
Sampling Date	22/02/2022	Sample Received Date	23/02/2022
Test Started Date	23/02/2022	Test Completion Date	28/02/2022
Sampled By	Party.	Sampling Method	--
UERL Lab ID. No.	22/02/0903		

TEST RESULTS:

DISCIPLINE: Chemical Testing		NAME OF GROUP: Pollution & Environment			
Sr. No.	Parameters	Test Method Permissible	Permissible Limits (GPCB)	Unit of Measurement	Results
PHYSIO-CHEMICAL PARAMETERS					
1.	Temperature	IS 3025(Part 9)1984	Shall Not Exceed 5 °C Above the Receiving Water Temperature	°C	29
GENERAL CHEMICAL PARAMETERS					
1.	Selenium	IS 3025(Part 56)2003	0.05	mg/L	BDL(MDL:0.1)
2.	Vanadium	APHA 23rd Ed.,2017,3500 - V	0.2	mg/L	BDL(MDL:0.1)
3.	Bio Assay test (%)	IS:6582-1971	90 % survival of fish after 96 hrs.	%	90 % survival of fish after 96 hrs.
Remarks: BDL= Below Detection Limit, MDL = Minimum Detection Limit,					

******* End of Report *******

Checked By
N. C. P.
Nilesh C. Patel
(Sr. Chemist)

Authorized By
(M.B.T.)
(Nitin B. Tandel)
(Technical Manager)

UERL/CHM/F-2/05

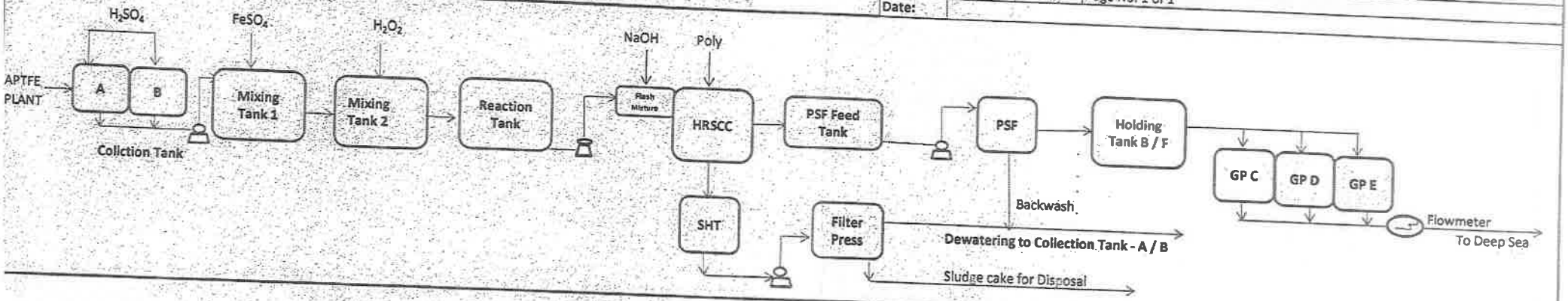
Note: This report is subject to terms and conditions mentioned overleaf.

Annexure :- ~~XI~~
Annexure :- X
(10)

GUJARAT FLUOROCHEMICALS LTD., DAHEJ

STREAM 1 PFD : 100 KLD

Doc. No.		UTILITY/ETP/F/01
Date:		01-04-2022
Revision No.	3.0	Page No. 1 of 1
Date:		



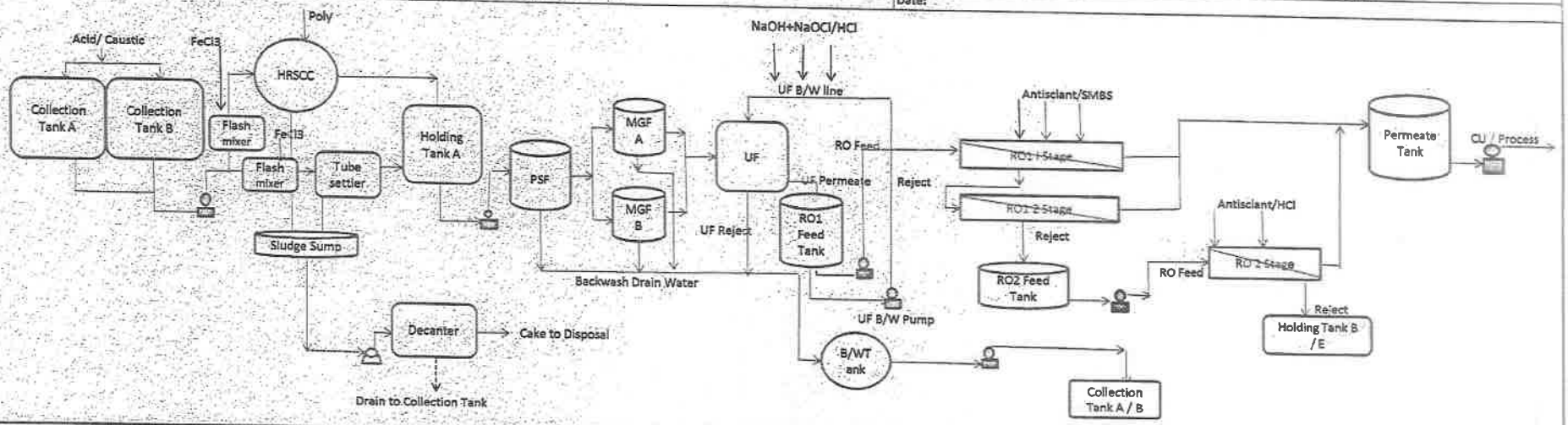
5963

GUJARAT FLUOROCHEMICALS LTD., [illegible]HEJ

STREAM 2 PrD - 2400 KLD

Doc.			UTILITY/ETP/F/01
Date:			01-04-2022
Revision No.	3.0	Page No. 1	1 of 1
Date:			

CMS-1 REFF PLANT
CMS-2 REFF PLANT
POWER PLANT BLOW DOWN
TFE-2 UTILITY
TFE-3 UTILITY
DI DPTFE/DI WATER PLANT
DI PTFE DI PLANT
DI6 PLANT
FKM/PVDF/S&A PLANT
COMMON UTILITY
H2 BOILER PLANT
H2 BOTTLING PLANT
S-PTFE PLANT
FLAKER PLANT COND.
A&H UTILITY
S-PTFE UTILITY

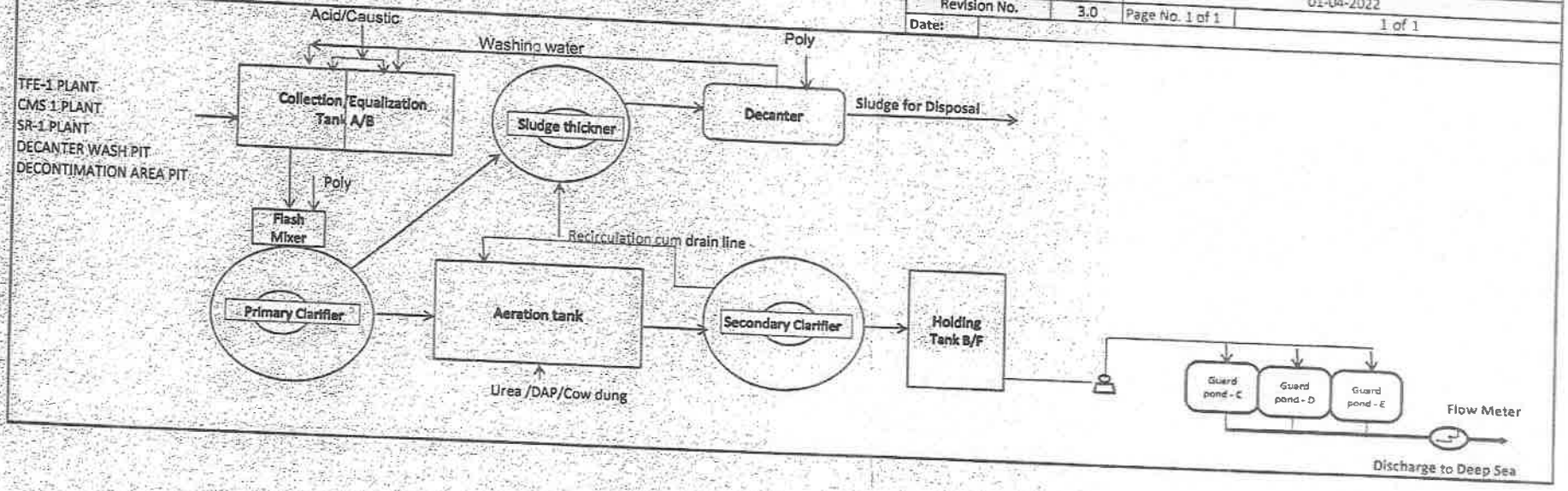


5964

GUJARAT FLUOROCHEMICALS LTD., DAHEJ

STREAM 3 PFD - 350 KLD

Doc. No.			UTILITY/ETP/F/01
Date:			01-04-2022
Revision No.	3.0	Page No. 1 of 1	1 of 1
Date:			

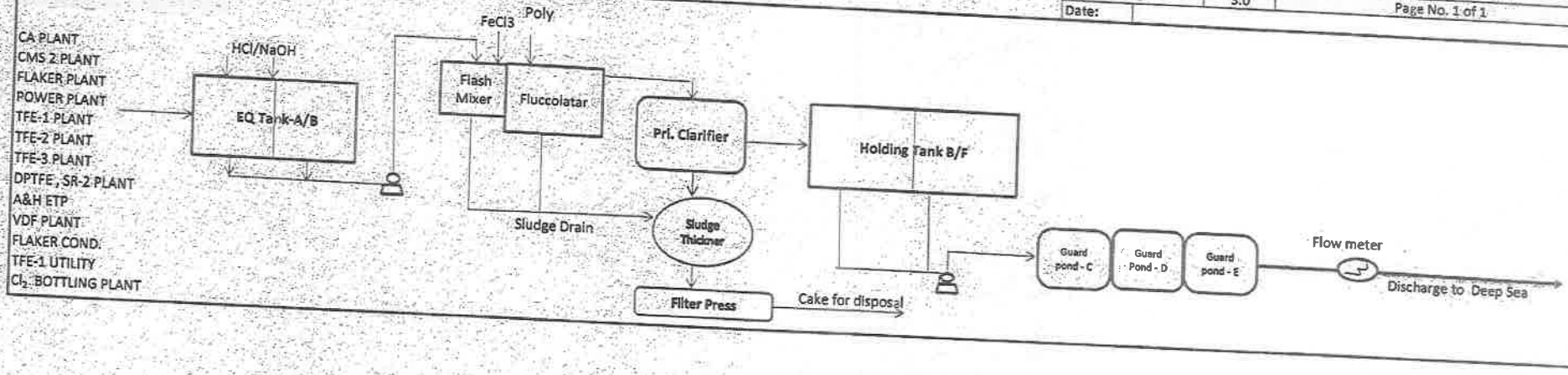


5965

GUJARAT FLUOROCHEMICALS LTD., DAHEJ

Stream 4 PFD - 765 KLD

Doc. No.		UTILITY/ETP/F/01
Date:		01-04-2022
Revision No.	3.0	Page No. 1 of 1
Date:		

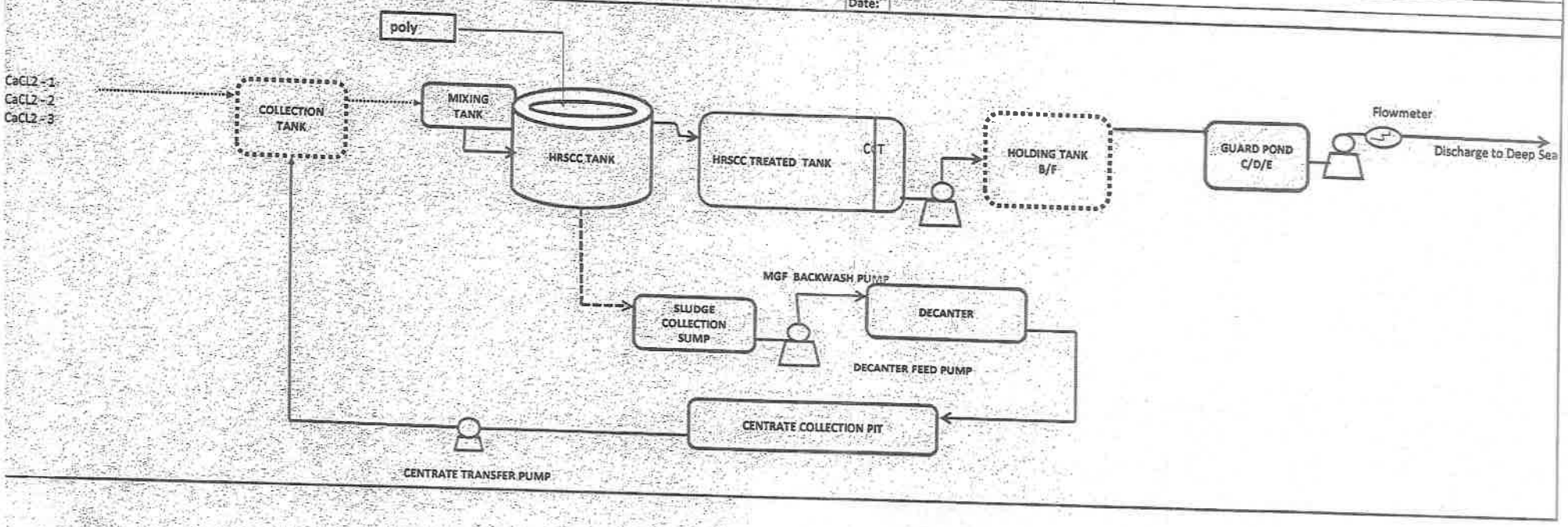


5966

GUJARAT FLUOROCHEMICALS LTD., DAHEJ

STREAM 5 PFD - 985 KLD

Doc. No.			UTILITY/ETP/F/01
Date:			01-04-2022
Revision No.	3.0	Page No. 1 of 1	
Date:			

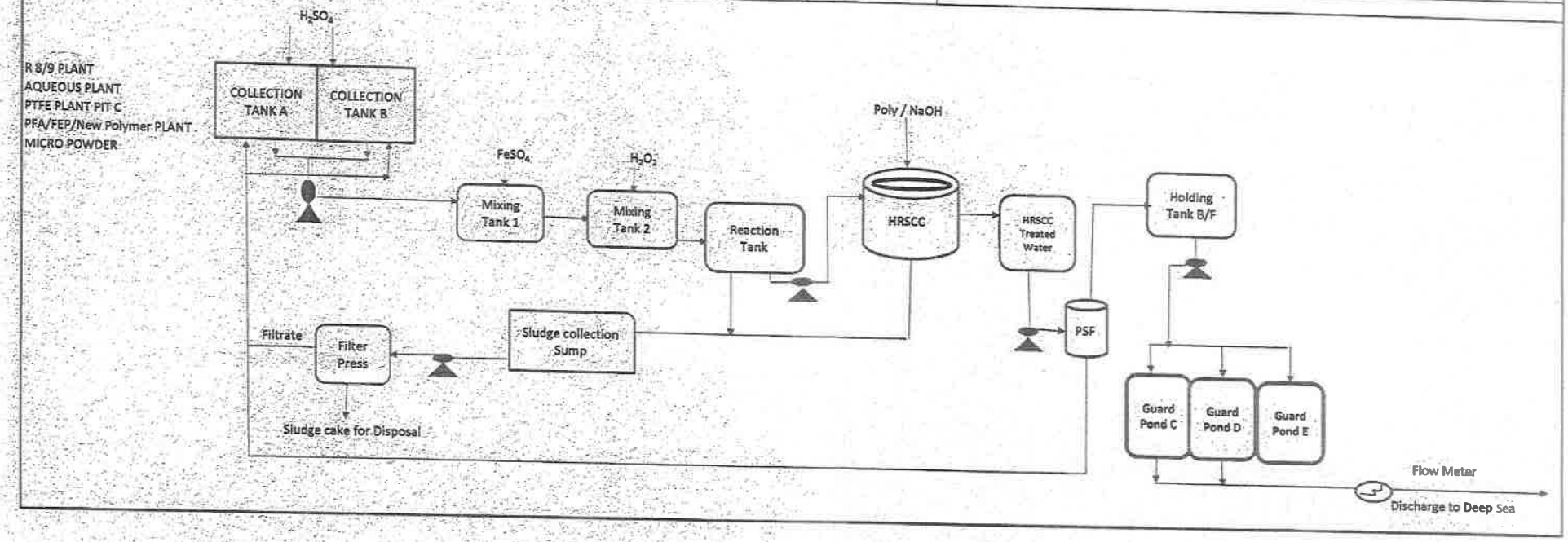


5967

GUJARAT FLUOROCHEMICALS LTD., DAHEJ

Stream 6 PFD - 552 KLD

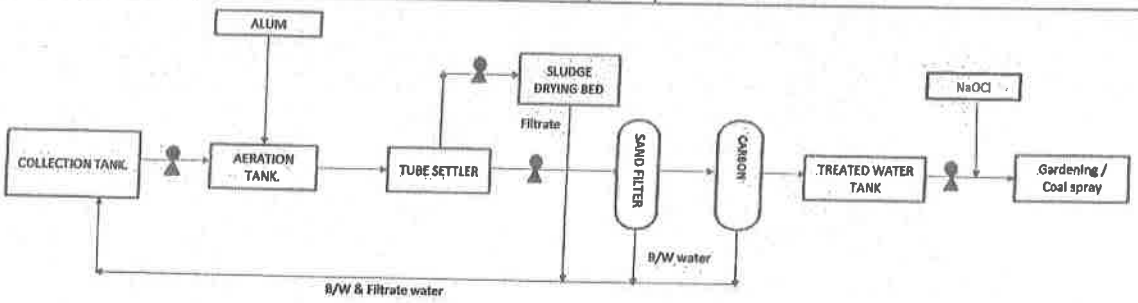
Doc. No.			UTILITY/ETP/F/01
Date:			01-04-2022
Revision No.	3.0	Page No.	1 of 1
Date:			



5968

GUJARAT FLUOROCHEMICALS LTD., DAHEJ

STP PFD - 200 KLD	Doc. No.		UTILITY/ETPF/01
	Date:		01-04-2022
	Revision No.	3.0	Page No. 1 of 1
	Date:		



Annexure - II

THE ADEQUACY CERTIFICATE OF ENVIRONMENT MANAGEMENT SYSTEM

M/s Dharmsinh Desai University, Department of Chemical Engineering is recognized by the GPCB, Gandhinagar under the Environmental Audit Scheme introduced by the Hon'ble High Court Gujarat, vide its Orders dated. 20/12/96 & 13/3/97 and modified vide Order dated. 16/9/99 as an Environmental Auditor for the purpose of the auditing, having carried out Environmental Audit of

a) M/S :Gujarat Fluorochemicals Ltd.

b) Located at :12/A, GIDC Dahej

c) Manufacturing products as under :

Sr. No.	PRODUCT / BY-PRODUCT	Consented Quantity (TPM)
	POLY TETRA FLUORO ETHYLENE PLANT (PTFE)	
1.	POLY TETRA FLUORO ETHYLENE (PTFE)#	2000
2.	CHLOROFORM	10090
3.	METHYLENE DICHLORIDE (MDC)	10090
4.	GYPSUM	12768
5.	SULPHURIC ACID (70% - 88%)	713
6.	HYDROCHLORIC ACID (31 % ± 1 %)	37992
7.	CARBON TETRACHLORIDE (CTC)	1440
	CHLOR ALKALI PLANT (CA PLANT)	
8.	CHLORINE GAS (DRY BASIS)	13167
9.	CAUSTIC SODA (DRY BASIS)	15500
10.	HYDROGEN GAS (DRY BASIS)	464
11.	HYDROCHLORIC ACID (31% ± 1 %)	357
12.	SODIUM HYPO CHLORIDE (10% CHLORINE)	132
	CAPTIVE POWER PLANT	
13.	GAS BASED PLANT CCGT	37 MW
14.	GAS BASED PLANT COGEN	54.5 MW
15.	COAL BASED PLANT COGEN	
	ADDITIONAL PRODUCTS	
16.	CALCIUM CHLORIDE	4750
17.	CARBON DIOXIDE – FOOD GRADE GAS	2267
18.	CARBON DIOXIDE –DRY ICE	533
19.	TETRA FLUOROTHYLENE(TFE)	300
20.	HEXAFLUORO PROPYLENE (HFP)	300
21.	HEXA FLUORO PROPYLENE OXIDE(HFPO)	0
22.	HEPTAFLUOROPROPANE(HFPP)	0
23.	TETRAFLUORO DIMETHYLAMINE (TFE DMA)	90
24.	TELOMER IODINE	0

Having completed the Environmental Audit period on personal monitoring, and audit report, prepared as per the direction of Hon'ble High Court in Environmental Audit Scheme, it is certified that the Environmental Management System (EMS) provided by this industry for the products manufactured and capacity as stated above is adequate and efficient to achieve the quality of effluents (Air + Wastewater + Solid Waste) as specified in Consent/Notifications by GPCB, Gandhinagar for the following quantity of waste generation.

a) Liquid effluent : 3231.67 Kl/Day

b) Solid Waste :

Sr. No.	Waste	Quantity MT/Yr
1	Used Oil	85.4
2	Discarded Container, Nos./Year	25
3	Spent Resin from DM Plant,	25
4	ETP Sludge,	4562
5	Brine Sludge	10734
6	Sludge form wet Scrubber	02
7	Spent Catalyst,	29.2
8	Process Waste/Distillation Residue	2406
9	PTFE Residue	189
10	Insulation Waste	150
11	Ash	60-65 (MT/Day)
12	Distillation Residue	2.4

c) Air Emission (Flue gas stack as well as process stacks) : Refer Annexure - XV

Annexure - II

THE ADEQUACY CERTIFICATE OF ENVIRONMENT MANAGEMENT SYSTEM

M/s Dharmsinh Desai University, Department of Chemical Engineering is recognized by the GPCB, Gandhinagar under the Environmental Audit Scheme introduced by the Hon'ble High Court Gujarat, vide its Orders dated. 20/12/96 & 13/3/97 and modified vide Order dated. 16/9/99 as an Environmental Auditor for the purpose of the auditing, having carried out Environmental Audit of

a) M/S :Gujarat Fluorochemicals Ltd.

b) Located at :12/A, GIDC Dahej

c) Manufacturing products as under :

Sr. No.	PRODUCT / BY-PRODUCT	Consented Quantity (TPM)
	POLY TETRA FLUORO ETHYLENE PLANT (PTFE)	
1.	POLY TETRA FLUORO ETHYLENE (PTFE)#	2000
2.	CHLOROFORM	10090
3.	METHYLENE DICHLORIDE (MDC)	10090
4.	GYPSUM	12768
5.	SULPHURIC ACID (70% - 88%)	713
6.	HYDROCHLORIC ACID (31 % ± 1 %)	37992
7.	CARBON TETRACHLORIDE (CTC)	1440
	CHLOR ALKALI PLANT (CA PLANT)	
8.	CHLORINE GAS (DRY BASIS)	13167
9.	CAUSTIC SODA (DRY BASIS)	15500
10.	HYDROGEN GAS (DRY BASIS)	464
11.	HYDROCHLORIC ACID (31% ± 1 %)	357
12.	SODIUM HYPO CHLORIDE (10% CHLORINE)	132
	CAPTIVE POWER PLANT	
13.	GAS BASED PLANT CCGT	37 MW
14.	GAS BASED PLANT COGEN	54.5 MW
15.	COAL BASED PLANT COGEN	
	ADDITIONAL PRODUCTS	
16.	CALCIUM CHLORIDE	4750
17.	CARBON DIOXIDE - FOOD GRADE GAS	2267
18.	CARBON DIOXIDE -DRY ICE	533
19.	TETRA FLUOROTHYLENE(TFE)	300
20.	HEXAFLUORO PROPYLENE (HFP)	300
21.	HEXA FLUORO PROPYLENE OXIDE(HFPO)	0
22.	HEPTAFLUOROPROPANE(HFPP)	0
23.	TETRAFLUORO DIMETHYLAMINE (TFE DMA)	90
24.	TELOMER IODINE	0

Sr. No.	PRODUCT / BY-PRODUCT	Consented Quantity (TPM)
25.	TELOMER ALCOHOL	0
26.	HIGH BOILER OF CHLOROMETHANE	200
27.	DILUTE HF (20%)	1000
28.	ANHYDROUS POTASSIUM FLUORIDE	0
29.	DICHLOROFLUORO CHLOROMETHANE (HCFC-21)	230
30.	ETHYL TETRA FLUORO ETHYL ETHER (ETFEE)	400
31.	DICHLORO PENTA FLUORO PROPANE (HFC-225)	415
32.	FLUORO ELASTOMERS (FKM)	300
33.	PERFLUORO ALKOXY (PFA)	200
34.	POLYVENYLENE FLUORIDE (PVDF)	250
35.	FLUORINATED ETHYLENE PROPYLENE (FEP)	250
36.	PENTAFLUOROETHANE (HFC 125)	417
37.	METHYL TETRA FLUORO ETHYL ETHER (MTFEE)	83
38.	BR ETHYLEDIFLUOROACETATE (BR EDFA)	25
39.	TETRA FLUOROETHYLENE (TFE TETRAMER)	0
40.	TRI FLUOROMETHANE	21
41.	2,6-DICHLORO-4-TRIFLUORO METHYL ANILINE (DCTFMA)	65
42.	DIFLUORO METHANE SULFONYL CHLORIDE (DFMSC)	0
43.	INTERMEDIATE VINYLIDENE FLUORIDE (VDF)	84
44.	HYDROFLUOSILICIC ACID (20%)	200
45.	1,1,3-TRICHLORO 2,3,3 – TRIFUOROPROPEN(CFO1213YA)(P-200)	0
46.	1,1,3-TERACHLORO TERAFLUOROPROPANOL(HCFC224CA)	25
47.	1,3 DOFLUOROBENZENE(1,3 DFB)	0
48.	TFMA	20
49.	IODURATE	1
50.	TETRA FLUORO BETA SULFONE	25
51.	TETRA FLUORO ETHYL ETHER(PROPYL,BUTYL,TF PROPYL)	80
52.	DI CHLORO TETRA FLUOROETHOXY ANILINE	10
53.	I-SAN	20
54.	PCTFE	4
55.	C4 TO C34 SURFACTANT (NON FLORINATED)	10
56.	R & D PRODUCTS	10
57.	TETRA FLUORO BENZENE ALCOHOL (TFBA)	0

Having completed the Environmental Audit period on personal monitoring, and audit report, prepared as per the direction of Hon'ble High Court in Environmental Audit Scheme, it is certified that the Environmental Management System (EMS) provided by this industry for the products manufactured and capacity as stated above is adequate and efficient to achieve the quality of effluents (Air + Wastewater + Solid Waste) as specified in Consent/Notifications by GPCB, Gandhinagar for the following quantity of waste generation.

a) Liquid effluent : **3231.67 Kl/Day**

b) Solid Waste :

Sr. No.	Waste	Quantity MT/Yr
1	Used Oil	85.4
2	Discarded Container, Nos./Year	25
3	Spent Resin from DM Plant,	25
4	ETP Sludge,	4562
5	Brine Sludge	10734
6	Sludge form wet Scrubber	02
7	Spent Catalyst,	29.2
8	Process Waste/Distillation Residue	2406
9	PTFE Residue	189
10	Insulation Waste	150
11	Ash	60-65 (MT/Day)
12	Distillation Residue	2.4

c) **Air Emission (Flue gas stack as well as process stacks)** : Refer Annexure - XV

This certificate is valid for the audit period only. However, it is subject to automatic cancellation in case of any change in product profile/capacity, quality & quantity of effluents (Air + Water + Solid/Hazardous) and efficiency of EMS equipment.

This certificate forms part of Environmental Audit report.

Date:
Place: **Nadiad**

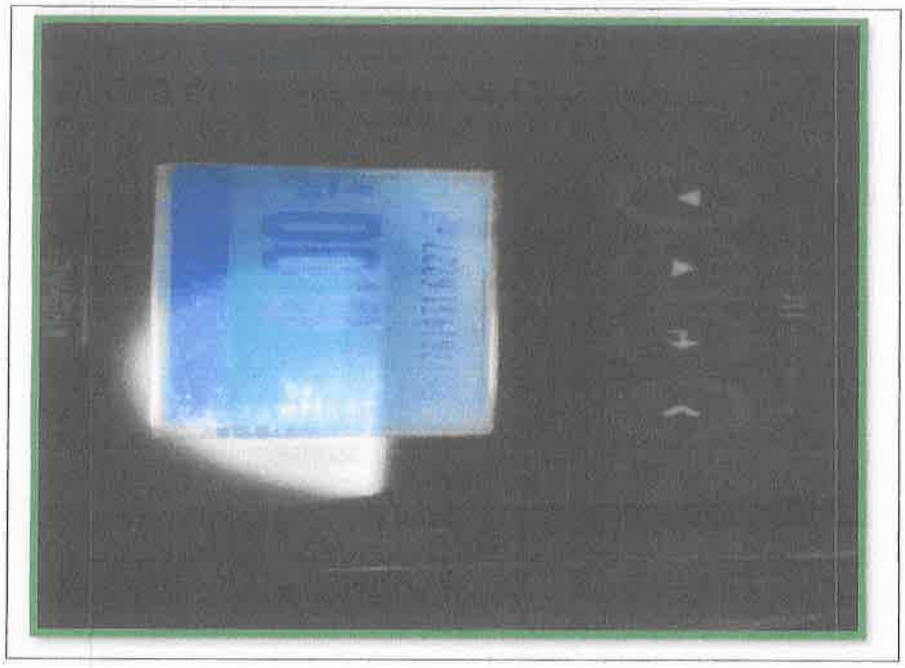
Name & Address of the Auditor:
Dharmsinh Desai University,
College Road,
Nadiad – 387 001.

Signature of the Authorized Person

Coordinator
Environmental Consultancy Cell

Annexure-12

Photo of Flow meter as a reference



Annexure-13

5977

5978

Annexure 4

Recycling Solutions Private Limited [66336]

Manifest No: 1535986 | **Copy 6**

02/02/2022

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Pre- processing
Facility Details	Recycling Solutions Private Limited [66336]		
Contact Details	9328261613 jvm@rs-pl.com	GPS Coordinates	Lat :21.5626 Long:73.0006
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, Taluka :ANK Distict:ANK Pin no:394116		

Waste Details					
Waste Details	1~36~36.1~Any process or distillation residue				
Waste Intended for	Preprocessing	Total Qty	4.620MT	Consistency	Solid

Transporter Details			
Name	SAI WASTE MANAGEMENT CO.	Contact Details	9327417479 Shastri.jyotiprakash@gobolt.co.in
Address	Plot No.208/2 Panoli GIDC,ANKLESHWAR District :Bharuch Taluka :Bharuch		

Vehicle Details					
Vehicle no	GJ16AU8601	GPS Enabled	Yes	Type of Vehicle	Tempo
Driver name	Shiv Pal	Driver Contact No	8200944067		

Waste Transportation Details					
Vehicle Depart.	02/02/2022 11:05AM	Number of Drums	80	Loose Waste	0.000
Remarks	Process waste		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and stamp of sender: Gujarat Fluorochemicals Ltd. GIDC Dahej Industrial State Tal Vagra Distt Bharuch-392 130

Date: 02/02/2022

Signature: DAHEJ

Transporter's Acknowledgement of Receipt of waste

Stamp:

Date: 02/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp:

Date: 2/2/22

Signature:

5979

Recycling Solutions Private Limited [66336]

Manifest No: 1538562 04/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details

Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details

State	Gujarat	Type of Facility	Pre- processing
Facility Details	Recycling Solutions Private Limited [66336]		
Contact Details	9328261613 jvm@rs-pl.com	GPS Coordinates	Lat :21.5626 Long:73.0006
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, Taluka :ANK Distict:ANK Pin no:394116		

Waste Details

Waste Details	1~36~36.1~Any process or distillation residue				
Waste Intended for	Preprocessing	Total Qty	9.450MT	Consistency	Solid

Transporter Details

Name	RSPL	Contact Details	7069028336 marketing@rs.pl.com
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, City :Pan,Bharuch District :Bharuch Taluka :Bharuch		

Vehicle Details

Vehicle no	GJ26T8617	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	OM PRAKASH	Driver Contact No	9724930165		

Waste Transportation Details

Vehicle Depart	04/02/2022 1:30PM	Number of Drums	0	Loose Waste	0.000
Remarks	Spent Resin		No of bags	9	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name And Comp of sender: Gujarat Fluorochemicals Ltd. Dahej Industrial State Tal Vagra Distt Bharuch-392 130

Date: 04/02/2022

Signature:

Transporter's Acknowledgement of Receipt of waste

Stamp:

Date: 04/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp:

Date: 4/2/22

Signature:

5980

Recycling Solutions Private Limited [66336]

Manifest No: 1544710 10/02/2022 | Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details

Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details

State	Gujarat	Type of Facility	Pre- processing
Facility Details	Recycling Solutions Private Limited [66336]		
Contact Details	9328261613 jvm@rs-pl.com	GPS Coordinates	Lat :21.5676 Long:73.0006
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, Taluka :ANK Distict:ANK Pin no:394116		

Waste Details

Waste Details	1~36~36.1~Any process or distillation residue				
Waste Intended for	Preprocessing	Total Qty	4.000MT	Consistency	Solid

Transporter Details

Name	RSPL	Contact Details	9327417479 sashtri.jyotiprakash@gobolt.co.in
Address	Plot No.223.panoli,panoli gidc District :Bharuch Taluka :Bharuch.		

Vehicle Details

Vehicle no	GJ16Z6330	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	HARIKESH YADAV	Driver Contact No	7388810361		

Waste Transportation Details

Vehicle Depart.	10/02/2022 11:15AM	Number of Drums	80	Loose Waste	0.000
Remarks	Process waste		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and Stamp of sender: Gujarat Fluorochemicals Ltd. 12/A, G.I.D.C. Industrial Estate Tal Vagra Distt Bharuch-392 130

Date: 10/02/2022

Signature: DAHEJ

Transporter's Acknowledgement of Receipt of waste

Stamp:

Date: 10/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp:

Date: 10/2/22

Signature:

5981

Recycling Solutions Private Limited [66336]

Manifest No: 15-40012 dt 05/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Pre- processing
Facility Details	Recycling Solutions Private Limited [66336]		
Contact Details	9328261613 jvm@rs-pl.com	GPS Coordinates	Lat :21.5626 Long:73.0006
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, Taluka :ANK Distict:ANK Pin no:394116		

Waste Details					
Waste Details	I~36~36.1~Any process or distillation residue				
Waste Intended for	Preprocessing	Total Qty	6.630MT	Consistency	Solid

Transporter Details			
Name	RSPL	Contact Details	9327417479 sashtri.jyotiprakash@gobolt.co.in
Address	Plot No.223,panoli,panoli gidc District :Bharuch Taluka :Bharuch		

Vehicle Details					
Vehicle no	GJ16Z6330	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	HARIKESH YADAV	Driver Contact No	7388810361		

Waste Transportation Details					
Vehicle Depart.	05/02/2022 4:50PM	Number of Drums	0	Loose Waste	0.000
Remarks	Process waste		No of bags	10	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Gujarat Fluorochemicals Ltd.
12/A/GIDC Dahej Industrial Estate
Tal-Vagra Dist-Bharuch-392130

Name and stamp of Sender:

Date: 05/02/2022

Signature:

Transporter's Acknowledgement of Receipt of waste

Stamp:

Date: 05/02/2022

Signature: Harikesh Yadav

Receiver's Certification of Receipt of Hazardous waste

Stamp:

Date: 5/2/22

Signature:

5982

Recycling Solutions Private Limited [66336]

Manifest No: 1537137 / 03/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details

Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details

State	Gujarat	Type of Facility	Pre- processing
Facility Details	Recycling Solutions Private Limited [66336]		
Contact Details	9328261613 jvm@rs-pl.com	GPS Coordinates	Lat :21.5626 Long:73.0006
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, Taluka :ANK Distict:ANK Pin no:394116		

Waste Details

Waste Details	1~36~36.1~Any process or distillation residue				
Waste Intended for	Preprocessing	Total Qty	7.940MT	Consistency	Solid

Transporter Details

Name	Murlidhar Services	Contact Details	9328261613 jvm@rs-pl.com
Address	Plot No.208/2,GIDC Estate, ,District :Ankleshwar District :Ankleshwar Taluka :Ankleshwar		

Vehicle Details

Vehicle no	GJ01DX7304	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	RAJU BHAI	Driver Contact No	8000941622		

Waste Transportation Details

Vehicle Depart.	03/02/2022 11:05AM	Number of Drums	0	Loose Waste	0.000
Remarks	Process waste		No of bags	10	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and stamp of sender: Gujarat Fluorochemicals Ltd. Industrial State Tal Vagra Distt Bharuch-392 130

Date: 03/02/2022

Signature: DHEJ

Transporter's Acknowledgement of Receipt of waste

Stamp:

Date: 03/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp:

Date: 3/2/22

Signature:

5983

Recycling Solutions Private Limited [66336]

Manifest No: 1537735 03/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Pre- processing
Facility Details	Recycling Solutions Private Limited [66336]		
Contact Details	9328261613 jvm@rs-pl.com	GPS Coordinates	Lat :21.5626 Long:73.0006
Address	Plot No. 208/2, GIDC Panoli, Ankleshwar, Taluka :ANK Distict:ANK Pin no:394116		

Waste Details					
Waste Details	I~36~36.1~Any process or distillation residue				
Waste Intended for:	Preprocessing	Total Qty	8.570MT	Consistency	Solid

Transporter Details			
Name	RSPL	Contact Details	9328261613 pankaj.sinha@rs-pl.com
Address	Plot No.208/2 GIDC PANOLI.,RSPL-Panoli District :Ankleshwar Taluka :Ankleshwar		

Vehicle Details					
Vehicle no	GJ16Z4216	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	sailender kumar	Driver Contact No	7778950526		

Waste Transportation Details					
Vehicle Depart	03/02/2022 4:05PM	Number of Drums	0	Loose Waste	0.000
Remarks	Spent Carbon		No of bags	10	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and Stamp of sender: Gujarat Fluorochemicals Ltd. 12/A GIDC Industrial estate Tal Vagra Distt Bharuch-392 130

Date: 03/02/2022

Signature:

Transporter's Acknowledgement of Receipt of waste

Stamp:

Date: 03/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp:

Date: 3/2/22

Signature:

5984

BEIL Infrastructure Ltd [40137]

Manifest No: 1543809 09/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC , DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details					
Waste Details	Others-1~S~S1~Insulation waste				
Waste Intended for	LandFill	Total Qty	3.240MT	Consistency	Solid

Transporter Details			
Name	MAA CHAMUNDA EARTH MOVERS	Contact Details	8866029350 aagohil1411@gmail.com
Address	NEAR BARBORI MATA TEMPLE,Dahej District :Bharuch Taluka :Vagra		

Vehicle Details					
Vehicle no	GJ22T0851	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	Mansa ram	Driver Contact No	6386513104		

Waste Transportation Details					
Vehicle Depart.	09/02/2022 1:20PM	Number of Drums	0	Loose Waste	3.240
Remarks	Insulation waste		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and Stamp of sender: Gujarat Fluorochemicals Ltd, Industrial State Tal Vagra Distt Bharuch-392 130

Date: 09/02/2022

Signature: DAHEJ

Transporter's Acknowledgement of Receipt of waste

Stamp: Barbori Mata Temple, Dahej, Vagra, Dist.Bharuch Mob: 8866029350 / 9978614279

Date: 09/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp: BEIL INFRASTRUCTURE LIMITED DAHEJ

Date: 09 FEB 2022

Signature:

Print by 15136 @ 09/02/2022 01:04:19 PM 1 (Through XGN)

N I O

5985

BEIL Infrastructure Ltd [40137]

Manifest No: 1536463 02/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC , DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details					
Waste Details	I~35~35.3~Chemical sludge from waste water treatment				
Waste Intended for	LandFill	Total Qty	9.460MT	Consistency	Solid

Transporter Details			
Name	MAA CHAMUNDA EARTH MOVERS	Contact Details	9978910279 aagohil1411@gmail.com
Address	NEAR BARBORI MATA TEMPLE,GIDC District :Bharuch Taluka :Bharuch		

Vehicle Details					
Vehicle no	GJ17UU1797	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	Priyaranjan	Driver Contact No	8910556517		

Waste Transportation Details					
Vehicle Depart.	02/02/2022 3:00PM	Number of Drums	0	Loose Waste	9.460
Remarks	ETP Sludge		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and stamp of sender: Gujarat Fluorochemicals Ltd. Dahej Industrial State Tal. Vagra Dist. Bharuch-392 130

Date: 02/02/2022

Signature:

Transporter's Acknowledgement of Receipt of waste

Stamp: Maa Chamunda Earth Movers NR. Barbori Mata Temple, Dahej, Vagra, Dist.Bharuch Mob.: 8866029350 / 9978910279

Date: 02/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp:

RECEIVED 03 FEB 2022

Date:

Signature:

Print by 15136 @ 02/02/2022 02:40:53 PM 1 (Through XGN) N | C

5986

BEIL Infrastructure Ltd [40137]

Manifest No: 1538950 04/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC , DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details					
Waste Details	Others-1~S~S1~Insulation waste				
Waste Intended for	LandFill	Total Qty	2.280MT	Consistency	Solid

Transporter Details			
Name	MAA CHAMUNDA EARTH MOVERS	Contact Details	8866029350 aagohil1411@gmail.com
Address	NEAR BARBORI MATA TEMPLE,Dahej District :Bharuch Taluka :Vagra		

Vehicle Details					
Vehicle no	GJ22T0851	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	Mansa ram	Driver Contact No	6386513104		

Waste Transportation Details					
Vehicle Depart.	04/02/2022 5:15PM	Number of Drums	0	Loose Waste	2.280
Remarks	Filter Cloth		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and stamp of sender: Gujarat Fluorochemicals Ltd. Dahej Industrial State Tal Vagra Dist Bharuch 392 130

Date: 04/02/2022 Signature: Fluorochemicals Ltd. DAHEJ

Transporter's Acknowledgement of Receipt of waste

Stamp: Mr. Barbori Mata Temple, Dahej, Vagra, Dist.Bharuch Mob.: 8866029350 / 9879016579

Date: 04/02/2022 Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp: BEIL INFRASTRUCTURE LIMITED DAHEJ

RECEIVED 05 FEB 2022

Date: Signature:

Print by 15136 @ 04/02/2022 04:57:34 PM I (Through XGN) N C

5987

BEIL Infrastructure Ltd [40137]

Manifest No: 1541325 07/02/2022 — **Copy 6**

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details

Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details

State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC , DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details

Waste Details	Others-1~S~S1~Insulation waste				
Waste Intended for	LandFill	Total Qty	2.560MT	Consistency	Solid

Transporter Details

Name	MAA CHAMUNDA EARTH MOVERS	Contact Details	9978910279 aagohil1411@gmail.com
Address	NEAR BARBORI MATA TEMPLE,GIDC District :Bharuch Taluka :Bharuch		

Vehicle Details

Vehicle no	GJ17UU1797	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	Priyaranjan	Driver Contact No	8910556517		

Waste Transportation Details

Vehicle Depart.	07/02/2022 12:40PM	Number of Drums	0	Loose Waste	2.560
Remarks	Insulation waste		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and stamp of sender/ : Gujarat Fluorochemicals Ltd, P/A, GIDC Dahej, Tal. Vagra, Dist. Bharuch-392 130 — Date: 07/02/2022 — Signature: DAHEJ

Transporter's Acknowledgement of Receipt of waste

Stamp: Maa Chamunda Earth Movers, At. Barbori Mata Temple, Dahej, Vagra, Dist.Bharuch, Mob.: 9978910279 — Date: 07/02/2022 — Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp: BEIL INFRASTRUCTURE LIMITED DAHEJ — Date: RECEIVED 07 FEB 2022 — Signature:

5988

BEIL Infrastructure Ltd [40137]

Manifest No: 1541325
07/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC ; DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details					
Waste Details	Others-1~S~S1~Insulation waste				
Waste Intended for	LandFill	Total Qty	2.560MT	Consistency	Solid

Transporter Details			
Name	MAA CHAMUNDA EARTH MOVERS	Contact Details	9978910279 aagohil1411@gmail.com
Address	NEAR BARBORI MATA TEMPLE,GIDC District :Bharuch Taluka :Bharuch		

Vehicle Details					
Vehicle no	GJ17UU1797	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	Priyaranjan	Driver Contact No	8910556517		

Waste Transportation Details					
Vehicle Depart	07/02/2022 12:40PM	Number of Drums	0	Loose Waste	2.560
Remarks	Insulation waste	No of bags	0		

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Gujarat Fluorochemicals Ltd,
P.O. GIDC Dahej Industrial Estate
Name and stamp of Sender Taluka Vagra. Distt. Bharuch-392 130

Date: 07/02/2022

Signature:

Transporter's Acknowledgement of Receipt of waste

Maa Chamunda Earth Movers
At. Barbori Mata Temple,
Dahej, Vagra, Dist.Bharuch
Mob : 9978910279, 8511122222

Stamp:

Date: 07/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp:

Date:

Signature:

BEIL INFRASTRUCTURE LIMITED DAHEJ

RECEIVED
07 FEB 2022

Print by 15136 @ 07/02/2022 12:22:09 PM

1 (Through XGN)

5989

BEIL Infrastructure Ltd [40137]

Manifest No: 1544867 10/02/2022 | Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details

Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details

State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC , DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details

Waste Details	Others-1~S~S1~Insulation waste				
Waste Intended for	LandFill	Total Qty	2.120MT	Consistency	Solid

Transporter Details

Name	MAA CHAMUNDA EARTH MOVERS	Contact Details	9978910279 aagohil1411@gmail.com
Address	NEAR BARBORI MATA TEMPLE,GIDC District :Bharuch Taluka :Bharuch		

Vehicle Details

Vehicle no	GJ17UU1797	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	Priyaranjan	Driver Contact No	8910556517		

Waste Transportation Details

Vehicle Depart.	10/02/2022 12:25PM	Number of Drums	0	Loose Waste	2.120
Remarks	Insulation waste		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled , and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and stamp of sender: Gujarat Fluorochemicals Ltd. Plot No. 12/A, GIDC Dahej Industrial Estate Tal. Vagra Dist. Bharuch-392 130

Date: 10/02/2022

Signature: DHEJ

Transporter's Acknowledgement of Receipt of waste

Stamp: Mr. Barbori Mata Temple, Dahej, Vagra, Dist.Bharuch Mob : 8866029350 / 9978910279

Date: 10/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

Stamp:

Date: 9 FEB 2022

Signature:

BEIL INFRASTRUCTURE LIMITED DAHEJ

5990

BEIL Infrastructure Ltd [40137]

Manifest No: 1544899 10/02/2022

Copy 6

To be forwarded by To be returned by the Operator of the facility to the Occupier after treatment and disposal of hazardous material/waste.

Sender's Details			
Sender Name	Gujarat Fluorochemicals Limited [15136]		
Address	-Plot No. 12 / A Dahej GIDC Industrial Estate, Taluka :VAG Distict:BHA Pin no:-392130		
Contact Details	9998984700 manoj.kamaliya@gfl.co.in	GPS Coordinates	Lat :21.4100 Long :72.3500

Receiver's Details			
State	Gujarat	Type of Facility	Common TSDF
Facility Details	BEIL Infrastructure Ltd [40137]		
Contact Details	9099057365 mistryrg@beil.co.in	GPS Coordinates	Lat :21.4300 Long:72.3500
Address	GIDC , DAHEJ, Taluka :VAG Distict:BHA Pin no:392130		

Waste Details					
Waste Details	Others-1~S~S1~Insulation waste				
Waste Intended for	LandFill	Total Qty	1.740MT	Consistency	Solid

Transporter Details			
Name	Maa Chamunda Earth Movers	Contact Details	9978910279 aagohil1411@gmail.com
Address	Nr. Babari Mata Temple,Dahej District :Bharuch Taluka :Vagra		

Vehicle Details					
Vehicle no	GJ16W1270	GPS Enabled	Yes	Type of Vehicle	Truck
Driver name	CHUNU SINGH	Driver Contact No	8406057356		

Waste Transportation Details					
Vehicle Depart.	10/02/2022 12:45PM	Number of Drums	0	Loose Waste	1.740
Remarks	Insulation waste		No of bags	0	

Sender's Declaration :

1. I hereby declare that contents of the consignment are fully and accurate described above by proper shipping name and are categorized , packed, marked , and labeled ; and are all in all respects in proper condition for transport by road according to applicable national government regulations.
2. I hereby declare that we have obtained membership of common facility / carried out agreement with actual user for disposal/ actual use of hazardous waste.

Name and Stamp of sender: Gujarat Fluorochemicals Ltd. Dahej Industrial Estate Tal. Vagra Distt. Bharuch-392130

Date: 10/02/2022

Signature: DAHEJ

Transporter's Acknowledgement of Receipt of waste

Stamp: Maa Chamunda Earth Movers Nr. Babari Mata Temple Dahej, Vagra, Dist.Bharuch

Date: 10/02/2022

Signature:

Receiver's Certification of Receipt of Hazardous waste

1.790 MT

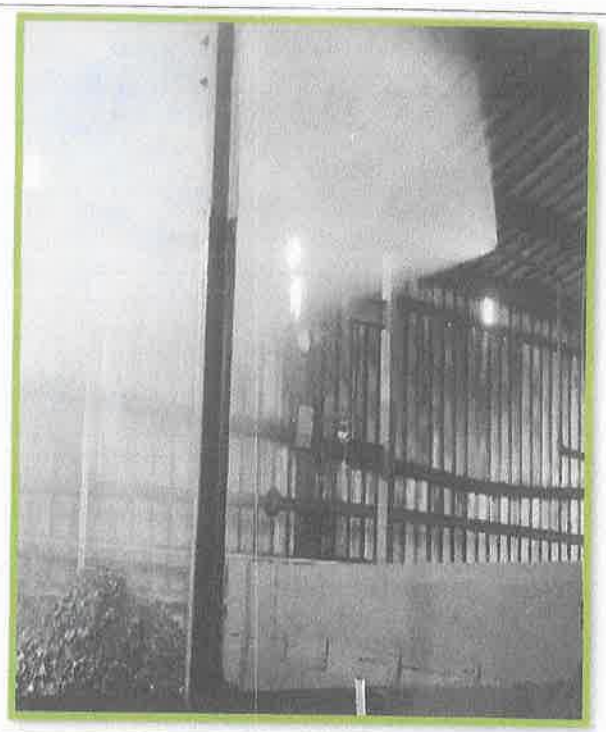
Stamp: BEIL INFRASTRUCTURE LIMITED DAHEJ

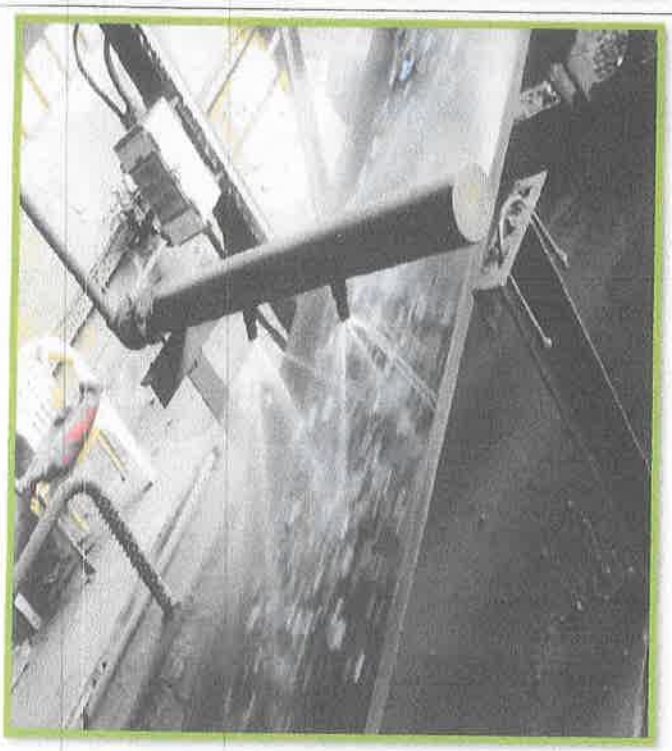
Date: 10 FEB 2022

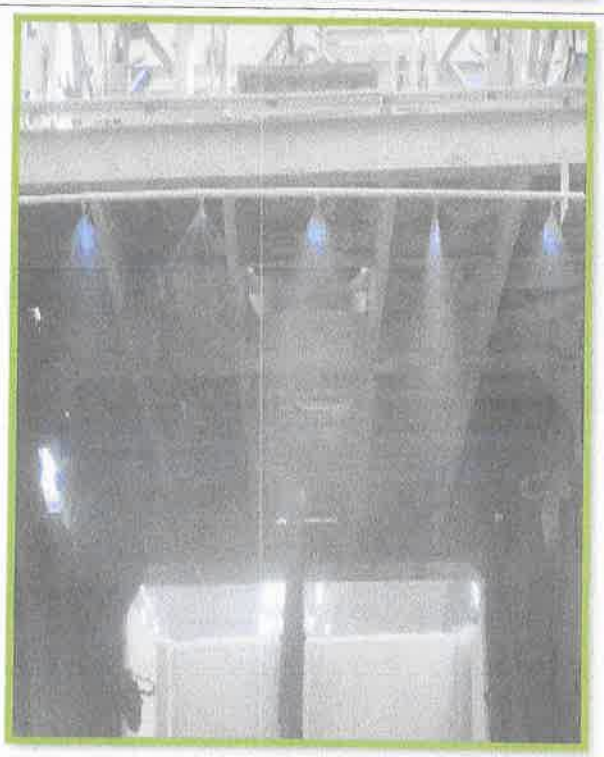
Signature:

Annexure :- 15

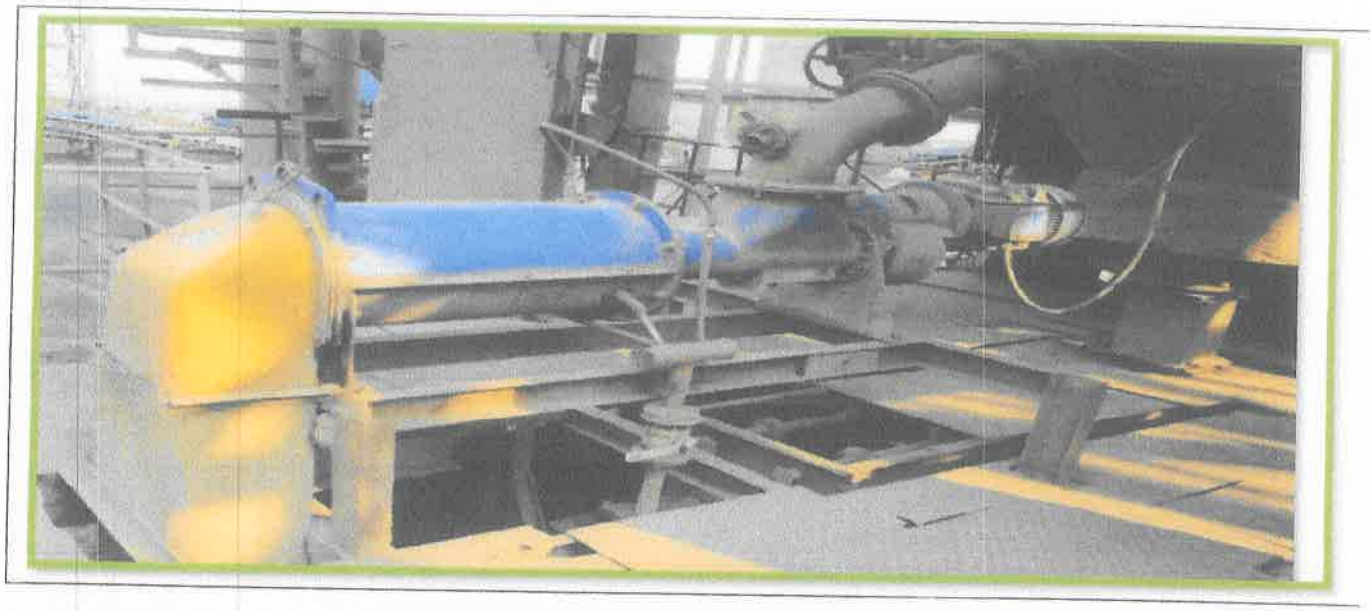
Following are the systems / installations to improve handling of coal dust, fly ash and other wastes inside the premises and implement good housekeeping practices.



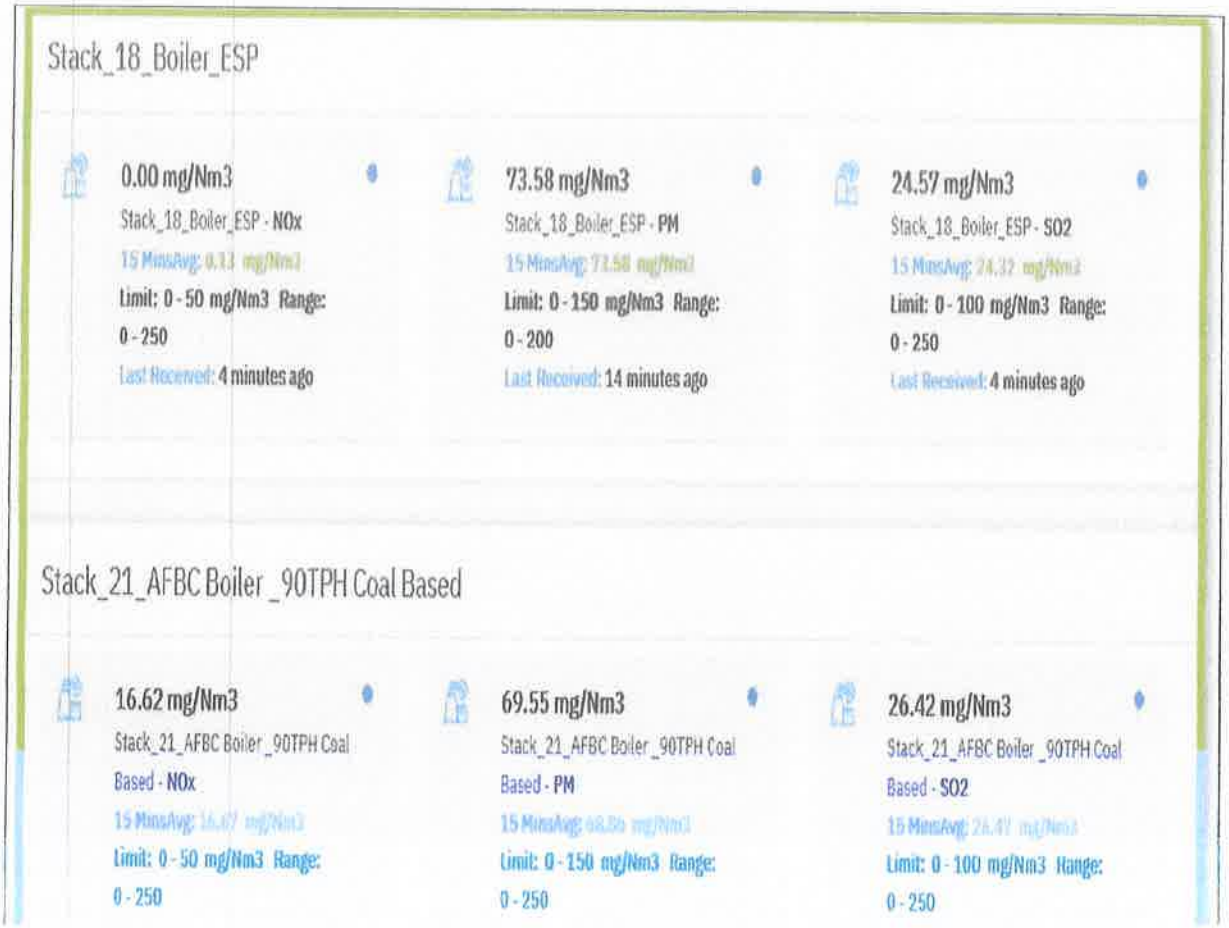




5992

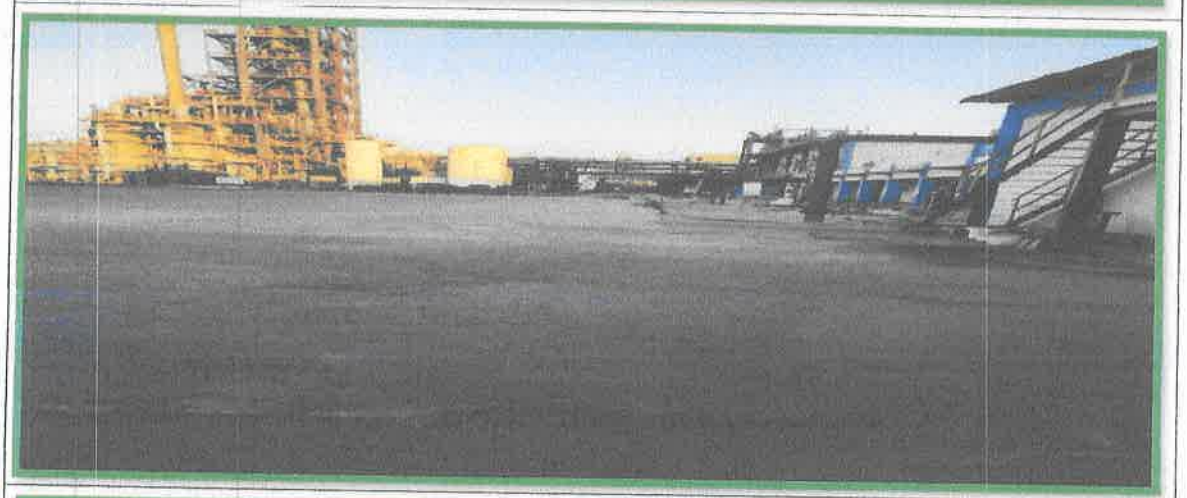


A photograph of Online monitoring of Stack dust



Annexure :16

Unit is being maintained good housekeeping within our premises and will continue to do the same. Please see the attached photographs.



5995

5996

Annexure : 17

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:209001 - Analysis Completion:11/05/2017

Organic Chemicals manufacturing / LAB Inward : 30825

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 30825 Date: 21/05/2017

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej–392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By : Vijay K. Patel, AEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 209001
7. Date & Time of Collection & Inwarding : 11/04/2017 , (1515 to 1515) & 12/04/2017
8. Date of Start & Completion of Analysis : 12/04/2017 & 11/05/2017
9. Sampling Point : ## Final Outlet of the ETP ~ -
10. Flow Details (Remarks) : yes
11. Mode of Disposal : in to u/g drain
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 30 & pH Range on pH Strip :7 to 8 on PH strip
14. Carboys Nos for : Barcode & Color & Appearance :colorless,sl.turbid
    : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD) : 12 ,Cap No & Weight :

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	30
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.23
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	20
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Metho	10 – 200000 mg/L	33256
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Metho	2 – 10000 mg/L	88
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standai	1 - 2000 mg/l.	7.28
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	15904
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	345
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	240
10	Oil & Grease	mg/l	Liquid – Liquid Partition Gravimetric method. (5520 B	01 – 1000 mg/l	1.2
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	13.5
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirmed	05–50000 mg/l	71

Laboratory Remarks : freeze By:436-lab_436 Dt.: 21/05/2017

H.C. Solanki, Lab Head

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23rd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

5997

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:211513 - Analysis Completion:16/06/2017

Organic Chemicals manufacturing / LAB Inward : 31124

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 31124 Date: 30/06/2017

1. Name of the Customer	: Gujarat Fluorochemicals Limited - 15136
2. Address	: 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample	: REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By	: L. M. Ahir, AEE
5. Quantity of Sample Received	: 5lts
6. Code No. of the Sample	: 211513
7. Date & Time of Collection & Inwarding	: 30/05/2017 , (1450 to 1450) & 31/05/2017
8. Date of Start & Completion of Analysis	: 31/05/2017 & 16/06/2017
9. Sampling Point	: ## Final Outlet of the ETP ~ ---
10. Flow Details (Remarks)	: --
. Mode of Disposal	: Through pipeline into final pumping station
12. Ultimate Receiving Body	: Sea
13. Temperature on Collection	: 28 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for	: barcode & Color & Appearance :colorless
	: Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD)	: 12 ,Cap No & Weight : --

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	28
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	6.80
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	10
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	40538
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	76
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	7.28
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	19100
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	553
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	235
10	Oil & Grease	mg/l	Liquid – Liquid Partition Gravimetric method. (5520 B:	01 – 1000 mg/l	0.8
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	12.6
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	68

Laboratory Remarks : freeze By:436-lab_436 Dt.: 30/06/2017

H.C. Solanki, Lab Head

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

5998

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:217523 - Analysis Completion:12/10/2017

Organic Chemicals manufacturing / LAB Inward : 32012

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 32012

Date: 16/10/2017

1. Name of the Customer	: Gujarat Fluorochemicals Limited - 15136
2. Address	: 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej–392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample	: REP-Representative/Grab, (Insp Type : ROU-Routine Visit)
4. Sample Collected By	: H.C. Solanki, Lab Head
5. Quantity of Sample Received	: 5lt
6. Code No. of the Sample	: 217523
7. Date & Time of Collection & Inwarding	: 04/09/2017 , (2355 to 2355) & 05/09/2017
8. Date of Start & Completion of Analysis	: 11/09/2017 & 12/10/2017
9. Sampling Point	: ## Final Outlet of the ETP ~ -
10. Flow Details (Remarks)	: —
11. Mode of Disposal	: GIDC underground effluent pipeline
12. Ultimate Receiving Body	: Sea
13. Temperature on Collection	: 29 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for	: 4 & Color & Appearance :colorless
15. Water Consumption & W.W.G (KLPD)	: Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
	: 12 ,Cap No & Weight :

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	29
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	6.05
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	10
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	33832
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	58
6	Ammonical Nitrogen	mg/l	1). Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/L	7.84
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	17407
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	634
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	239
10	Oil & Grease	mg/l	Liquid – Liquid Partition Gravimetric method. (5520 B	01 – 1000 mg/l	0.8
	luoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	3.20
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	70

Laboratory Remarks : Freezed By:210-vig_210 Dt.: 16/10/2017

K. I. Karelia,SO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

14/05/2022 20:03:09

*** END OF TEST REPORT ***

5999

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:217522 - Analysis Completion:12/10/2017

Organic Chemicals manufacturing / LAB Inward : 32016

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 32016

Date: 16/10/2017

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej–392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : ROU-Routine Visit)
4. Sample Collected By : H.C. Solanki, Lab Head
5. Quantity of Sample Received : 5lt
6. Code No. of the Sample : 217522
7. Date & Time of Collection & Inwarding : 04/09/2017 , (2325 to 2325) & 06/09/2017
8. Date of Start & Completion of Analysis : 11/09/2017 & 12/10/2017
9. Sampling Point : From final discharge point at collection sump of final pumping station, Ambheta, Dahej. ~ -
10. Flow Details (Remarks) : —
11. Mode of Disposal : GIDC underground effluent pipeline
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 29 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for : 2 & Color & Appearance :Milky white
15. Water Consumption & W.W.G (KLPD) : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	29
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or.	6.64
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	15
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	35780
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	430
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	10.08
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	16878
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	560
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	175
10	Oil & Grease	mg/l	Liquid – Liquid Partition Gravimetric method. (5520 B	01 – 1000 mg/l	0.8
	luoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	1.40
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	50

Laboratory Remarks : Freezed By:210-vig_210 DL: 16/10/2017

K. I. Karelia,SO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

14/05/2022 20:03:36

*** END OF TEST REPORT ***

6000

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:224558 - Analysis Completion:20/01/2018

Organic Chemicals manufacturing / LAB Inward : 32960

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 32960

Date: 20/01/2018

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By : Bhumika A. Bhuva, AEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 224558
7. Date & Time of Collection & Inwarding : 02/01/2018 , (1400 to 1400) & 03/01/2018
8. Date of Start & Completion of Analysis : 03/01/2018 & 20/01/2018
9. Sampling Point : ## Final Outlet of the ETP ~
10. Flow Details (Remarks) : ----
11. Mode of Disposal : GIDC u/g drainage system
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 29 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for : Barcode & Color & Appearance :colorless
15. Water Consumption & W.W.G (KLPD) : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000 : 12 ,Cap No & Weight :

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	29
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.12
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	10
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	53946
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 -- 10000 mg/L	74
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	5.6
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	37974
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	1187
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	242
10	Oil & Grease	mg/l	Liquid – Liquid Partition Gravimetric method. (5520 B	01 – 1000 mg/l	0.8
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	9.0
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05--50000 mg/l	70

Laboratory Remarks : FREEZED By:210-vig_210 Dt.: 20/01/2018

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

14/05/2022 20:04:10

*** END OF TEST REPORT ***

6001

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:227593 - Analysis Completion:05/03/2018

Organic Chemicals manufacturing / LAB Inward : 33387

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 33387 Date: 05/03/2018

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej–392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : ROU-Routine Visit)
4. Sample Collected By : Bhumika A. Bhuva, AEE
5. Quantity of Sample Received : 5lit
6. Code No. of the Sample : 227593
7. Date & Time of Collection & Inwarding : 09/02/2018 , (1420 to 1420) & 14/02/2018
8. Date of Start & Completion of Analysis : 15/02/2018 & 05/03/2018
9. Sampling Point : From treated waste water Guard pond ~ --
10. Flow Details (Remarks) : –
11. Mode of Disposal : Through underground pipeline into FPS.
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 28 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for : Barcode & Color & Appearance :Light Yellowish
    : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD) : 12 ,Cap No & Weight : —

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	28
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.47
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	15
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	36450
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	508
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	15.68
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	28872
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	702
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	167
10	Oil & Grease	mg/l	Liquid – Liquid Partition Gravimetric method. (5520 B	01 – 1000 mg/l	0.4
	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	12.4
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirmed	05 -50000 mg/l	47

Laboratory Remarks : Freezed By:210-vig_210 Dt.: 05/03/2018

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

6002

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:231582 - Analysis Completion:05/05/2018

Organic Chemicals manufacturing / LAB Inward : 33992

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Telc:(0264)2246333

TEST REPORT

Test Report No. : 33992

Date: 08/05/2018

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej–392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By : Vijay K. Patel, AEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 231582
7. Date & Time of Collection & Inwarding : 10/04/2018 , (1320 to 1320) & 12/04/2018
8. Date of Start & Completion of Analysis : 12/04/2018 & 05/05/2018
9. Sampling Point : ## Final Outlet of the ETP ~ --
10. Flow Details (Remarks) : ---
11. Mode of Disposal : Through GIDC underground line.
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 28 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for : barcode & Color & Appearance :Light Yellowish
: Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD) : 12 ,Cap No & Weight : ----

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	28
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.30
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	10
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	36612
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	06
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	5.6
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	16889
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	607
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2	5.0- 50000 mg/l	233
10	Oil & Grease	mg/l	Liquid – Liquid Partition Gravimetric method. (5520 B	01 – 1000 mg/l	0.4
	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	6.45
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	59

Laboratory Remarks : freezed By:210-vig_210 Dt.: 08/05/2018

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23rd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

14/05/2022 20:05:12

6003

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:248500 - Analysis Completion:11/12/2018

Organic Chemicals manufacturing / LAB Inward : 36511

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 36511 Date: 11/12/2018

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : OTH-Others/Higher Authority)
4. Sample Collected By : R.R.Vyas, R.O Head
5. Quantity of Sample Received : 2 lit
6. Code No. of the Sample : 248500
7. Date & Time of Collection & Inwarding : 09/12/2018 , (1645 to 1645) & 10/12/2018
8. Date of Start & Completion of Analysis : 10/12/2018 & 11/12/2018
9. Sampling Point : From final discharge point at collection sump of final pumping station, Ambheta, Dahej. ~ (P2)
10. Flow Details (Remarks) : ---
11. Mode of Disposal : individual drainage pipeline to Final Pumping station at
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 29 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for : Barcode & Color & Appearance :Slight turbid
15. Water Consumption & W.W.G (KLPD) : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	6.69
2	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 - 200000 mg/L	69328
3	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	162
4	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standai	1 - 2000 mg/l.	5.6
5	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	LYSED (Chlor

Laboratory Remarks : freezed. Not Analyzed due to high chloride interference By:210-vig_210
Dt.: 11/12/2018

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

6004

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:255854 - Analysis Completion:31/03/2019

Organic Chemicals manufacturing / LAB Inward : 37597

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 37597 Date: 31/03/2019

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : REV-On/For Revocation)
4. Sample Collected By : A.V.Shah, Unit Head
5. Quantity of Sample Received : 2 Lit
6. Code No. of the Sample : 255854
7. Date & Time of Collection & Inwarding : 29/03/2019 , (2315 to 2315) & 30/03/2019
8. Date of Start & Completion of Analysis : 30/03/2019 & 31/03/2019
9. Sampling Point : From final discharge point of unit at FPS (GL) ~
10. Flow Details (Remarks) : ---
11. Mode of Disposal : Through GIDC underground line.
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 28 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for : barcode & Color & Appearance :Yellowish
15. Water Consumption & W.W.G (KLPD) : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
: 6 ,Cap No & Weight : ---

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.09
2	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	48640
3	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	54
4	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	23.97
5	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	25206
6	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	157

Laboratory Remarks : freezed By:210-vig_210 Dt.: 31/03/2019

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

6005

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:260798 - Analysis Completion:29/06/2019

Organic Chemicals manufacturing / LAB Inward : 38261

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 38261

Date: 29/06/2019

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By : Vijay K. Patel, AEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 260798
7. Date & Time of Collection & Inwarding : 15/06/2019 , (1535 to 1535) & 17/06/2019
8. Date of Start & Completion of Analysis : 17/06/2019 & 29/06/2019
9. Sampling Point : ## Final Outlet of the ETP ~ --
10. Flow Details (Remarks) : ---
11. Mode of Disposal : Through GIDC underground line.
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 28 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for : barcode & Color & Appearance :colorless
15. Water Consumption & W.W.G (KLPD) : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000 : 10 ,Cap No & Weight : ---

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	28
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	8.24
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	5.0
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	55570
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	40
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	8.96
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	26856
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	793
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	210
10	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirmed	05–50000 mg/l	40

Laboratory Remarks : freezed By:210-vig_210 Dt.: 29/06/2019

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582;Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

6006

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:262285 - Analysis Completion:20/07/2019

Organic Chemicals manufacturing / LAB Inward : 38610

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 38610 Date: 20/07/2019

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : ROU-Routine Visit)
4. Sample Collected By : Bhumika A. Bhuva, AEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 262285
7. Date & Time of Collection & Inwarding : 05/07/2019 , (1540 to 1545) & 06/07/2019
8. Date of Start & Completion of Analysis : 06/07/2019 & 20/07/2019
9. Sampling Point : ## Final Outlet of the ETP ~ From treated waste water holding guard pond
10. Flow Details (Remarks) : —
11. Mode of Disposal : GIDC u/g drainage
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 28 & pH Range on pH Strip :@ 7 to 8 on pH strip
14. Carboys Nos for : Barcode & Color & Appearance :tinge yellow
15. Water Consumption & W.W.G (KLPD) : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	28
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.16
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	10
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	31018
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	186
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	8.01
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	17164
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	763
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	233
10	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	6.95
11	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirmed	05–50000 mg/l	45

Laboratory Remarks : freezed By:210-vig_210 Dt.: 20/07/2019

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

6007

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:270218 - Analysis Completion:25/11/2019

Organic Chemicals manufacturing / LAB Inward : 39721

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 39721 Date: 25/11/2019

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : REV-On/For Revocation)
4. Sample Collected By : Vijay K. Patel, AEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 270218
7. Date & Time of Collection & Inwarding : 14/11/2019 , (1500 to 1500) & 15/11/2019
8. Date of Start & Completion of Analysis : 15/11/2019 & 25/11/2019
9. Sampling Point : ## Final Outlet of the ETP ~ From treated waste water collection tank
10. Flow Details (Remarks) : ---
11. Mode of Disposal : Through GIDC underground line.
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 28 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for : Barcode & Color & Appearance :Yellowish tinge
: Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD) : 12 ,Cap No & Weight : ---

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	6.89
2	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	2.5
3	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	31444
4	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	62
5	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	7.39
6	Calcium	mg/l	Ethylene Diamine Tetra Acetic Acid (EDTA) Titrimetric	1-5000 mg/l	5350.70
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	17083
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	549
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	230
10	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	BDL
	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	10.25
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirmed	05–50000 mg/l	50

Laboratory Remarks : freezed By:210-vig_210 Dt.: 25/11/2019

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

6008

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:271060 - Analysis Completion:17/12/2019

Organic Chemicals manufacturing / LAB Inward : 39809

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 39809 Date: 17/12/2019

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej–392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By : Shri B.D.Prasad,DEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 271060
7. Date & Time of Collection & Inwarding : 29/11/2019 , (1325 to 1325) & 02/12/2019
8. Date of Start & Completion of Analysis : 02/12/2019 & 17/12/2019
9. Sampling Point : ## Final Outlet of the ETP ~ From treated waste water collection tank
10. Flow Details (Remarks) : ---
11. Mode of Disposal : Through GIDC underground line.
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 28 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for : Barcode & Color & Appearance :Light Brown
    : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD) : 12 ,Cap No & Weight : ----

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B API IA Standard Methods 23rd edi.2012	1 – 14 pH value As or	6.99
2	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	70
3	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Metho	10 – 200000 mg/L	21322
4	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	152
5	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	1.57
6	Calcium	mg/l	Ethylene Diamine Tetra Acetic Acid (EDTA) Titrimetric	1-5000 mg/l	1463
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	11159
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	784
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2	5.0- 50000 mg/l	241
10	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	0.42
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	7.25
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	51

Laboratory Remarks : froezed By:210-vig_210 Dt.: 17/12/2019

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

6009

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:273574 - Analysis Completion:20/01/2020

Organic Chemicals manufacturing / LAB Inward : 40131

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 40131 Date: 23/01/2020

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By : Shri B.D.Prasad,DEE
5. Quantity of Sample Received : 5 Lit
6. Code No. of the Sample : 273574
7. Date & Time of Collection & Inwarding : 04/01/2020 , (1320 to 1320) & 06/01/2020
8. Date of Start & Completion of Analysis : 06/01/2020 & 20/01/2020
9. Sampling Point : ## Final Outlet of the ETP ~ ---
10. Flow Details (Remarks) : —
11. Mode of Disposal : gidc effluent conveyance pipeline
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 28 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for : barcode & Color & Appearance :colorless
    : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD) : 12 ,Cap No & Weight : —

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.69
2	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	2.5
3	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	29616
4	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	66
5	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	5.21
6	Calcium	mg/l	Ethylene Diamine Tetra Acetic Acid (EDTA) Titrimetric	1-5000 mg/l	7896.0
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	15997
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	789
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	241
10	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	BDL
	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	11.30
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05--50000 mg/l	54

Laboratory Remarks : Freezed By:210-vig_210 Dt.: 23/01/2020

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

14/05/2022 20:13:45

6010

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:288860 - Analysis Completion:07/10/2020

Organic Chemicals manufacturing / LAB Inward : 41998

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 41998 Date: 07/10/2020

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej--392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : OTH-Others/Higher Authority)
4. Sample Collected By : Shri Niraj Patel
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 288860
7. Date & Time of Collection & Inwarding : 16/09/2020 , (1715 to 1718) & 17/09/2020
8. Date of Start & Completion of Analysis : 18/09/2020 & 07/10/2020
9. Sampling Point : ## Final Outlet of the ETP ~ From Final outlet of ETP
10. Flow Details (Remarks) : —
11. Mode of Disposal : disposal to the GIDC pipeline/common disposal system ut to sea
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : & pH Range on pH Strip :@7-8 on pH Strip
14. Carboys Nos for : Bar code & Color & Appearance :turbide
    : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD) : 12 ,Cap No & Weight :

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.50
2	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	2.5
3	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	30620
4	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	86
5	Ammonical Nitrogen	mg/l	1) Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	7.84
6	Calcium	mg/l	Ethylene Diamine Tetra Acetic Acid (EDTA) Titrimetric	1-5000 mg/l	5098
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	18185
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	1636
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	239
10	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	0.13
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	7.8
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	60

Laboratory Remarks : Approved By:236-lab_236 Dt.: 07/10/2020

D. N. Vasadia, Lab Head

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

6011

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:305192 - Analysis Completion:01/07/2021

Organic Chemicals manufacturing / LAB Inward : 79959

Gujarat Pollution Control Board, Central Laboratory
Paryavaran Bhavan
Sector-10A
Gandhinagar-382010
Tele:23222756

TEST REPORT

Test Report No. : 79959 Date: 01/07/2021

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej–392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : VIG-By Vigilance Team)
4. Sample Collected By : J.M. Mahida, D.E.E
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 305192
7. Date & Time of Collection & Inwarding : 01/06/2021 , (1310 to 1310) & 03/06/2021
8. Date of Start & Completion of Analysis : 04/06/2021 & 01/07/2021
9. Sampling Point : ## Final Outlet of the ETP ~
10. Flow Details (Remarks) :
11. Mode of Disposal : into final pumping station of GIDC through pieline
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 30 & pH Range on pH Strip :7 to 8
14. Carboys Nos for : & Color & Appearance :Light yellow
15. Water Consumption & W.W.G (KLPD) : Ind :13306.720 , Dom :52.500 & Ind :4406.000 , Dom :45.000

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 22nd edi.2012	1 – 14 pH value As or	6.94
2	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	15
3	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 -- 200000 mg/L	33430
4	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	60
5	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	0.84
6	Calcium	mg/l	Ethylene Diamine Tetra Acetic Acid (EDTA) Titrimetric	1-5000 mg/l	28
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	18180
8	Sulphate	mg/l	APHA(22nd edi)4500 SO4 E	2-40mg/l	958
9	Chemical Oxygen Demand	mg/l	APHA (22nd Edition)- 5220 B Open Reflux Method-2	5.0- 50000 mg/l	196
10	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 -- 50 mg/l	0.36
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	1.41
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirmed	05–50000 mg/l	39

Laboratory Remarks : Approved. By:682-aee_682 Dt.: 01/07/2021

Dr. S. N. Agravat

Field Observation :

Note :

1. * - These parameters are NOT covered under the scope of NABL.
2. The results refer only to the tested samples and applicable parameters. Endorsement of products is neither inferred nor implied.
3. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
4. This report is not to be reproduced wholly or in part or used in any advertising media without the permission of the Board in writing.
5. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
6. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
7. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
8. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23rd Edition by APHA.
9. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

17/07/2021 17:18:17

6012

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:312867 - Analysis Completion:06/10/2021

Organic Chemicals manufacturing / LAB Inward : 45346

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 45346 Date: 06/10/2021

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej–392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : AIA-Automated Insp /Random)
4. Sample Collected By : Shri Niraj Patel , DEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 312867
7. Date & Time of Collection & Inwarding : 17/09/2021 , (1500 to 1505) & 18/09/2021
8. Date of Start & Completion of Analysis : 18/09/2021 & 06/10/2021
9. Sampling Point : ## Final Outlet of the ETP ~ From Final outlet of ETP
10. Flow Details (Remarks) : –
11. Mode of Disposal : into GIDC u/g drain
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : & pH Range on pH Strip :@7-8 on pH strip
14. Carboys Nos for : Barcode & Color & Appearance :light yellowish
    : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD) : 12 ,Cap No & Weight :

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.01
2	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	30
3	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	36226
4	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	88
5	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	BDL
6	Calcium	mg/l	Ethylene Diamine Tetra Acetic Acid (EDTA) Titrimetric	1-5000 mg/l	2525.04
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	19400
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	1208
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	214
10	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	BDL
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	3.2
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	47

Laboratory Remarks : Approved By:399-lab_399 Dt.: 06/10/2021

R.C.VASAVA,S.O

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std Methods for Water and Waste Water- 20nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

6013

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:319283 - Analysis Completion:28/12/2021

Organic Chemicals manufacturing / LAB Inward : 46219

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 46219 Date: 28/12/2021

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej–392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By : Shri B.D.Prasad,DEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 319283
7. Date & Time of Collection & Inwarding : 09/12/2021 , (1850 to 1855) & 10/12/2021
8. Date of Start & Completion of Analysis : 10/12/2021 & 28/12/2021
9. Sampling Point : ## Final Outlet of the ETP ~ -
10. Flow Details (Remarks) : —
11. Mode of Disposal : Gidc drainage
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 29 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for : Barcode & Color & Appearance :Faint Yellowish
    : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD) : 13 ,Cap No & Weight :

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As on	6.54
2	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	05
3	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	70
4	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	10.64
5	Total Kjeldahl Nitrogen	mg/l	Titrimetric method followed by preliminary distillation	1 – 5000 mg/l	14
6	Nitrate	mg/l	Cadmium reduction method As per Specirophotometr	0.005 – 100 mg/l	3.41
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	30345
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	1106
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	202
10	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	< 0.1
	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	5.65
12	Sulphide	mg/l	APHA (23rd Edi.)4500-s2-F –iodometric Method	1-500.0 mg/l	p.nil
13	B.C.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	32

Laboratory Remarks : Approved By:399-lab_399 Dt.: 28/12/2021

R.C.VASAVA,S.O

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

6014

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:324582 - Analysis Completion:04/03/2022

Organic Chemicals manufacturing / LAB Inward : 46945

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 46945 Date: 05/03/2022

1. Name of the Customer : Gujarat Fluorochemicals Limited - 15136
2. Address : 12-A, ,-Plot No. 12 / A Dahej GIDC Industrial Estate, -Dahej–392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej
3. Nature of Sample : REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By : Shri Niraj Patel , DEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 324582
7. Date & Time of Collection & Inwarding : 22/02/2022 , (1210 to 1215) & 23/02/2022
8. Date of Start & Completion of Analysis : 23/02/2022 & 04/03/2022
9. Sampling Point : ## Final Outlet of the ETP ~ From Final outlet of ETP
10. Flow Details (Remarks) : –
11. Mode of Disposal : into sea through GIDC pipeline
12. Ultimate Receiving Body : Sea
13. Temperature on Collection : 29 & pH Range on pH Strip :@6-7 on pH strip
14. Carboys Nos for : & Color & Appearance :Colourless
    : Ind :13243.000 , Dom :52.500 & Ind :4399.000 , Dom :45.000
15. Water Consumption & W.W.G (KLPD) : 13 ,Cap No & Weight :

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	6.97
2	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	05
3	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	62
4	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	12.32
5	Total Kjeldahl Nitrogen	mg/l	Titrimetric method followed by preliminary distillation	1 – 5000 mg/l	15.68
6	Nitrate	mg/l	Cadmium reduction method As per Spectrophotomet	0.005 – 100 mg/l	3.20
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	37575
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	877
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	5,190
10	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	BDL
	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	1.16
12	Sulphide	mg/l	APHA (23rd Edi.)4500-s2-F –iodometric Method	1-500.0 mg/l	p.nil
13	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05--50000 mg/l	44

Laboratory Remarks : Approved By:399-lab_399 Dt.: 05/03/2022

R.C.VASAVA,S.O

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

6015

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 021.
Website : www.gpcb.gov.in

GPCB

R.P.A.D

DIRECTION UNDER SECTION 33-A OF THE WATER (PREVENTION AND CONTROL OF POLLUTION) Act-1974 (HEREINAFTER REFERRED TO AS THE WATER ACT) AS AMENDED FROM TIME TO TIME.

WHEREAS you GUJARAT FLUOROCHEMICALS LTD are having an industrial plant for manufacturing of Poly Tetra Fluoro Ethylene (PTFE), Methylene Dichloride (MDC), Carbon Tetrachloride (CTC) etc at PLOT NO 12-A, DAHEJ GIDC INDUSTRIAL ESTATE, DAHEJ-392 130, TAL: VAGRA, DIST: BHARUCH.

AND WHEREAS the Gujarat Pollution Control Board has granted you Consolidated Consent and Authorization (CC & A) under the provisions of the Environmental Acts/Rules by its Consent Order No. AWH-85503 Dated 25/04/2017 which was valid up to 16/02/2022 for the manufacture of above said product subject to the conditions mentioned therein.

AND WHEREAS, during the inspection of your industrial plant on 11/01/2019, 15/01/2019 and 18/01/2019 under Section-23 of the Water Act by the authorized officer of the Board, following was observed:

1. Discharge/leakage of effluent is going on through one hole (bakora) in boundary wall of GFL unit to adjacent storm water drainage line. A/R of the sample collected from storm water drain during visit indicates pH- <1, Fluoride- 1675 mg/lit, BOD- 140 mg/lit, S.S.- 606 mg/lit, Ammonical Nitrogen- 72.8 mg/lit, Chloride- 89036 mg/lit, TDS- 173784 mg/lit.
2. You have sold hazardous crude material (SULFOLANE CRUDE) to M/s. Padmavati Chemicals, GIDC Vapi violating conditions prescribed in CCA and without permission of the Board.
3. Selling of HCFC-22/R-22 as product is observed without obtaining permission of the Board.

UNDER THE CIRCUMSTANCES, I A.V.Shah, Senior Environmental Engineer of Gujarat Pollution Control Board is directed to issue the directions under Section –33A of the Water (Prevention and Control of Pollution) Act-1974 as under:-

1. To prohibit you from manufacturing of above said products unless you obtained necessary permission from the Board.
2. To close the operation of your industrial plant on the above mentioned site.
3. To direct the concerned authority to stop supply of electricity and water.
4. This order will be effective with immediate effect.

Outward No: 35415 10/01/19

IF the above directions are not complied, you are liable for prosecution under Section 41 (2) of the Water (Prevention and Control of Pollution) Act-1974 which provides punishment with imprisonment for a term not less than one year and six months and may extend to six years and with fine.

For and on behalf of
Gujarat Pollution Control Board

(A.V.Shah)
Senior Environmental Engineer

Notice: In order to ensure safe close down of industry involving continuous process, where it is necessary to remove material in process to prevent accident or pollution in such cases; wherever required industry allowed doing so within maximum 48 hours. Thereafter immediately this order shall be implemented. Officer of the Electricity Company or officer going for sealing of the industry are also requested to comply this notice.

NO: GPCB/BRCH-B/CCA-1080(14)/ID-15136 dated:

Issued to:

M/S. GUJARAT FLUOROCHEMICALS LTD.
PLOT NO 12-A,
DAHEJ GIDC INDUSTRIAL ESTATE,
DAHEJ-392 130,
TAL: VAGRA,
DIST: BHARUCH.

To,

1. The Suprintendent Engineer,
   Circle Office,
   Dakshin Gujarat Vij Co Ltd,
   Maktampur Road, Bharuch.

2. The Executive Engineer,
   O & M, Rural Division,
   Dakshin Gujarat Vij Co Ltd,
   Maktampur Road, Bharuch.

Outward No:49541 , 20/12/09

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 021.
Website : www.gpcb.gov.in

GPCB

3. The Deputy Engineer,
O & M, Sub Division,
Dakshin Gujarat Vij Co Ltd,
Maktampur Road, Bharuch.

I am directed to request you to disconnect supply of electricity with immediate effect of date of issue of this order to the industrial plant of M/S. GUJARAT FLUOROCHEMICALS LTD. PLOT NO 12-A, DAHEJ GIDC INDUSTRIAL ESTATE, DAHEJ-392 130, TAL: VAGRA, DIST: BHARUCH & intimate to us accordingly.

For and on behalf of
Gujarat Pollution Control Board

(A.V.Shah)
Senior Environmental Engineer

Outward No:495416, 20/02/2019

Annexure-B

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 021.
Website : www.gpcb.gov.in

GPCB

BY RPAD

REVOCATION OF CLOSURE DIRECTION ISSUED UNDER SECTION 33-A OF THE WATER (PREVENTION AND CONTROL OF POLLUTION) ACT-1974.

WHEREAS you GUJARAT FLUOROCHEMICALS LTD are having an industrial plant at PLOT NO 12-A, DAHEJ GIDC INDUSTRIAL ESTATE, DAHEJ-392 130, TAL: VAGRA, DIST: BHARUCH.

AND WHEREAS closure direction was issued under Section 33-A of the Water (Prevention and Control of Pollution) Act, 1974, as amended from time to time vide letter No. GPCB/BRCH-B/CCA-1080(14)/ID-15136/495416 dated 20/02/2019.

AND WHEREAS, during the inspection of your industrial plant on 25/02/2019 under Section-23 of the Water Act by the authorized officer of the Board and observed that:

1. The electricity supply was disconnected.
2. You have repaired leakages in pit and 1 meter height of dyke wall is prepared to prevent overflow.
3. You have repaired hole of boundary wall.
4. You have stopped selling of crude Sulfolane and selling of R-22.

AND WHEREAS you have submitted the Bank Guarantee of Rs. 500000/- of ICICI Bank valid upto 20/02/2020.

AND WHEREAS you have submitted undertaking for providing pipeline for sea disposal on Rs.100/- stamp paper dated 26/02/2019.

AND WHEREAS you have submitted undertaking for compliance and corrective measures on Rs.100/- stamp paper dated 23/02/2019.

Outward No: 43609 Dt: 02/12/19

Under the circumstances, I, **A.V.Shah, Senior Environment Engineer,** Gujarat Pollution Control board is directed to revoke the closure direction for three months from the date of issue of order with following conditions:

1) You shall submit Detail Project Report (DPR) upto 30/04/2019 with 10 % Bank Guarantee of cost mentioned in the DPR including cost of project which are to be implemented in reference to direction issued vide letter no. GPCB/BRCH-B/CCA-1080(14)/ID-15136/493046 dated 30/01/2019.
2) You shall submit bank guarantee of rupee 25 lakhs within 3 days.
3) You shall strictly comply all the conditions of the CC&A.
4) You shall follow the undertaking dated 23/02/2019 & 26/02/2019 submitted by you.

For and on behalf of
Gujarat Pollution Control Board

(A.V.Shah)
Senior Environmental Engineer

NO: GPCB/BRCH-B/CCA-1080(14)/ID-15136 dated:

Issued to:

M/S. GUJARAT FLUOROCHEMICALS LTD.
PLOT NO 12-A,
DAHEJ GIDC INDUSTRIAL ESTATE,
DAHEJ-392 130,
TAL: VAGRA,
DIST: BHARUCH.

To,

1. **The Suprintendent Engineer, (O & M),**
   Circle Office,
   Dakshin Gujarat Vij Co Ltd,
   Maktampur Road, Bharuch.

Outward No: 496094, 21/12/2019

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 021.
Website : www.gpcb.gov.in

GPCB

2. **The Executive Engineer, (O & M),**
O & M Rural Division,
Dakshin Gujarat Vij Co Ltd,
Maktampur Road, Bharuch.

3. **The Deputy Engineer, (O & M),**
O & M Sub Division,
Dakshin Gujarat Vij Co Ltd,
Maktampur Road, Bharuch.

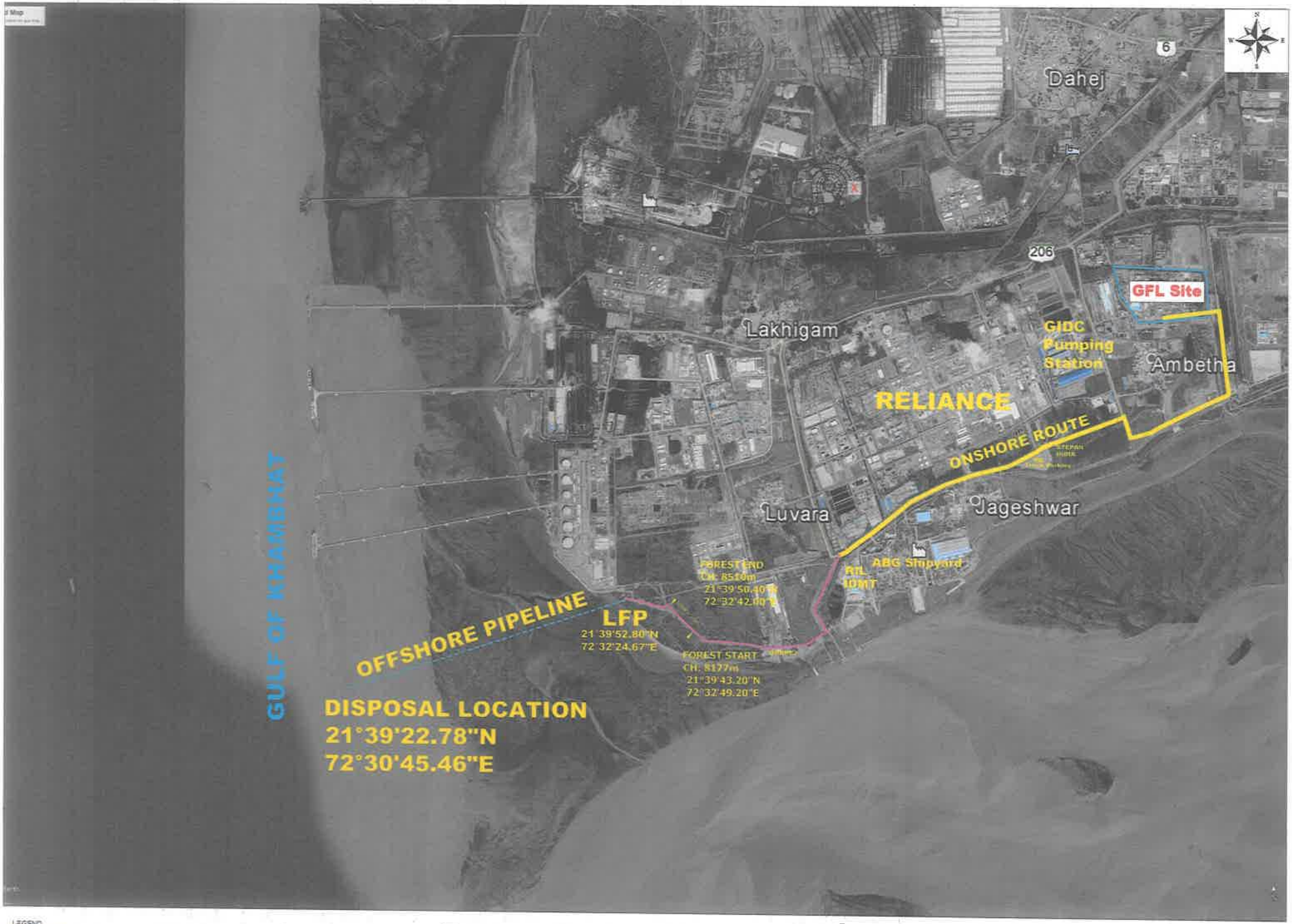
With a request to Re-connect the supply of electricity with immediate effect from the date of issue of this order of **M/S. GUJARAT FLUOROCHEMICALS LTD PLOT NO 12-A, DAHEJ GIDC INDUSTRIAL ESTATE, DAHEJ-392130, TAL: VAGRA, DIST: BHARUCH** & intimate to us accordingly.

For and on behalf of
Gujarat Pollution Control Board

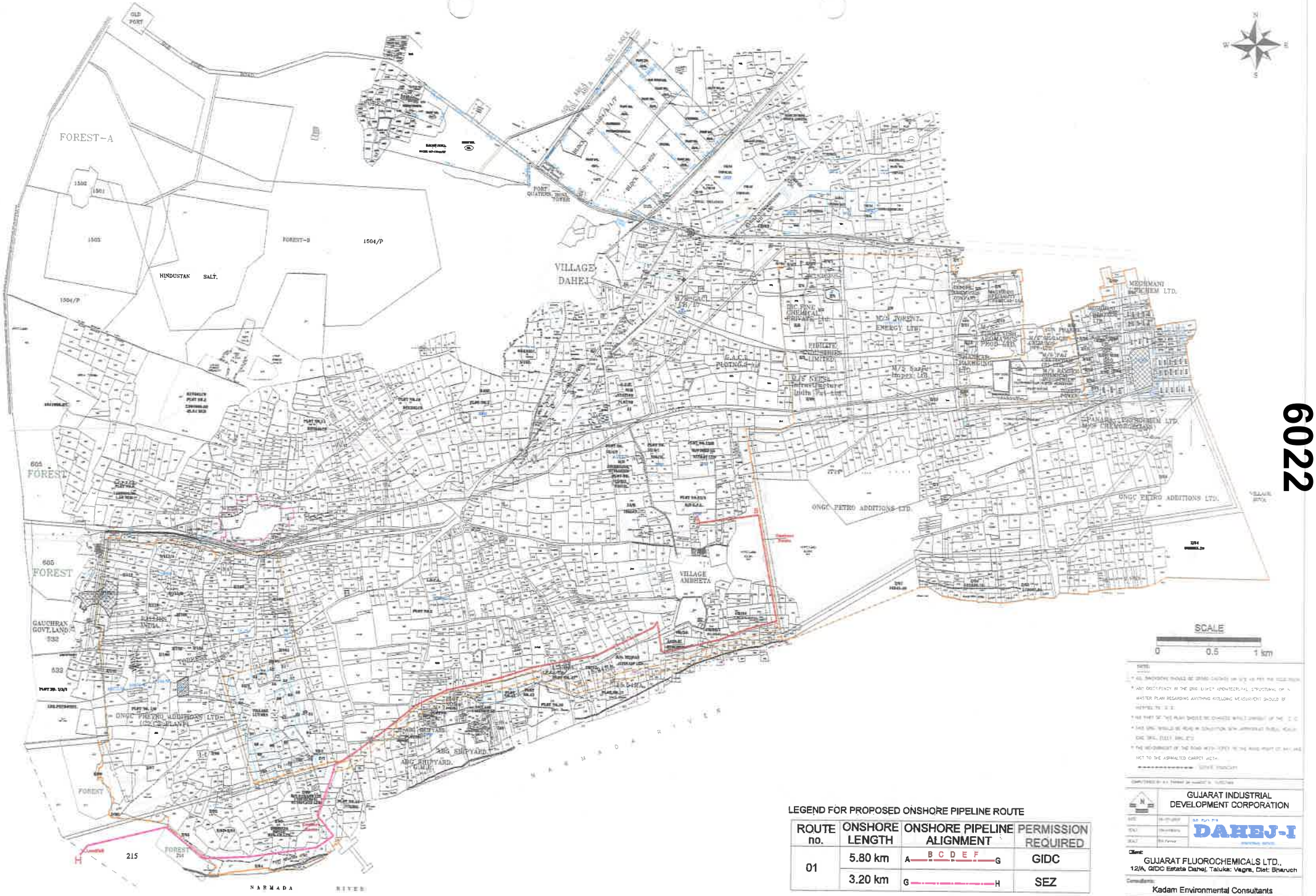
(A.V.Shah)
Senior Environmental Engineer

Outward No: 496094, 27/02/2019

6021



E-1/1938468352/ : MAP SHOWING ONSHORE & OFFSHORE PIPELINE ROUTE ON GOOGLE IMAGERY



6022

LEGEND FOR PROPOSED ONSHORE PIPELINE ROUTE

ROUTE no.	ONSHORE LENGTH	ONSHORE PIPELINE ALIGNMENT	PERMISSION REQUIRED
01	5.80 km	A — B C D E F — G	GIDC
	3.20 km	G — H	SEZ

NOTES:

* ALL DIMENSIONS SHOULD BE STRICTLY CHECKED ON SITE AND NOT TO BE SCALED FROM DRAWING.
* ANY DISCREPANCY IN THE DRG. GIVEN ARCHITECTURAL, STRUCTURAL OR ANY MASTER PLAN REGARDING ANYTHING INCLUDING MEASUREMENT SHOULD BE INFORMED TO G.I.D.C.
* NO PART OF THIS PLAN SHOULD BE CHANGED WITHOUT CONSENT OF THE G.I.D.C.
* THIS DRG. SHOULD BE READ IN CONJUCTION WITH APPROVED PLOTTED PLAN, LAND USE DRG., ELEVATION DRG. ETC.
* THE ROAD WIDTH MENTIONED IN THE DRG. REFERS TO THE ROAD RIGHT OF WAY AND NOT TO THE ASPHALTED CARPET WIDTH.

GUJARAT INDUSTRIAL DEVELOPMENT CORPORATION

DAHEJ-I

Client: GUJARAT FLUOROCHEMICALS LTD., 1.2/A, GIDC Estate Dahej, Taluka: Vagra, Dist: Bharuch

Consultants: Kadam Environmental Consultants

Title: Alternate Alignment Route Map

Drawing No. Map: 01

Annexure:-21

Monthly Report from Industry

Form No D2

Gujarat Pollution Control Board

January , 2017

1. Name & address of Industry : Gujarat Fluorochemicals Limited,
-Plot No. 12 / A Dahej GIDC Industrial Estate,
-Dahej - -392130
DIST : Bharuch, TAL : Vagra, SIDC : Dahej

PCB ID : 15136

2. Phone No. : 02641618090

3. Date of commencement of Manufacturing process : 10/09/2009

4. CTEs No. & Date : CEP-117035,07/12/2028

5. CCA No . & Date of Expiry : AWH-118244, 15/02/2027

6. Water Cess (with Interest) paid up to which Period : 2017-2018

7. Laboratory charges pending if any : 0

8. Water consumed during the month (by all sources)in KL : Meter Reading=7355145,Kilo Litre=318846

Water Cess Cooling Boiler/Dom/BIO Degrable/Non BIO Degrable : 210439 / 6377 / 102030 / 0

9. Electricity consumed in PRODUCTION : 45203134 **ETP/CETP :** 45977 **APCM :** 0

9A. Stack attached to : Boiler,D.G. Sets,Furnace,.... Any Other

10. Fuel consumed during the month : Coal

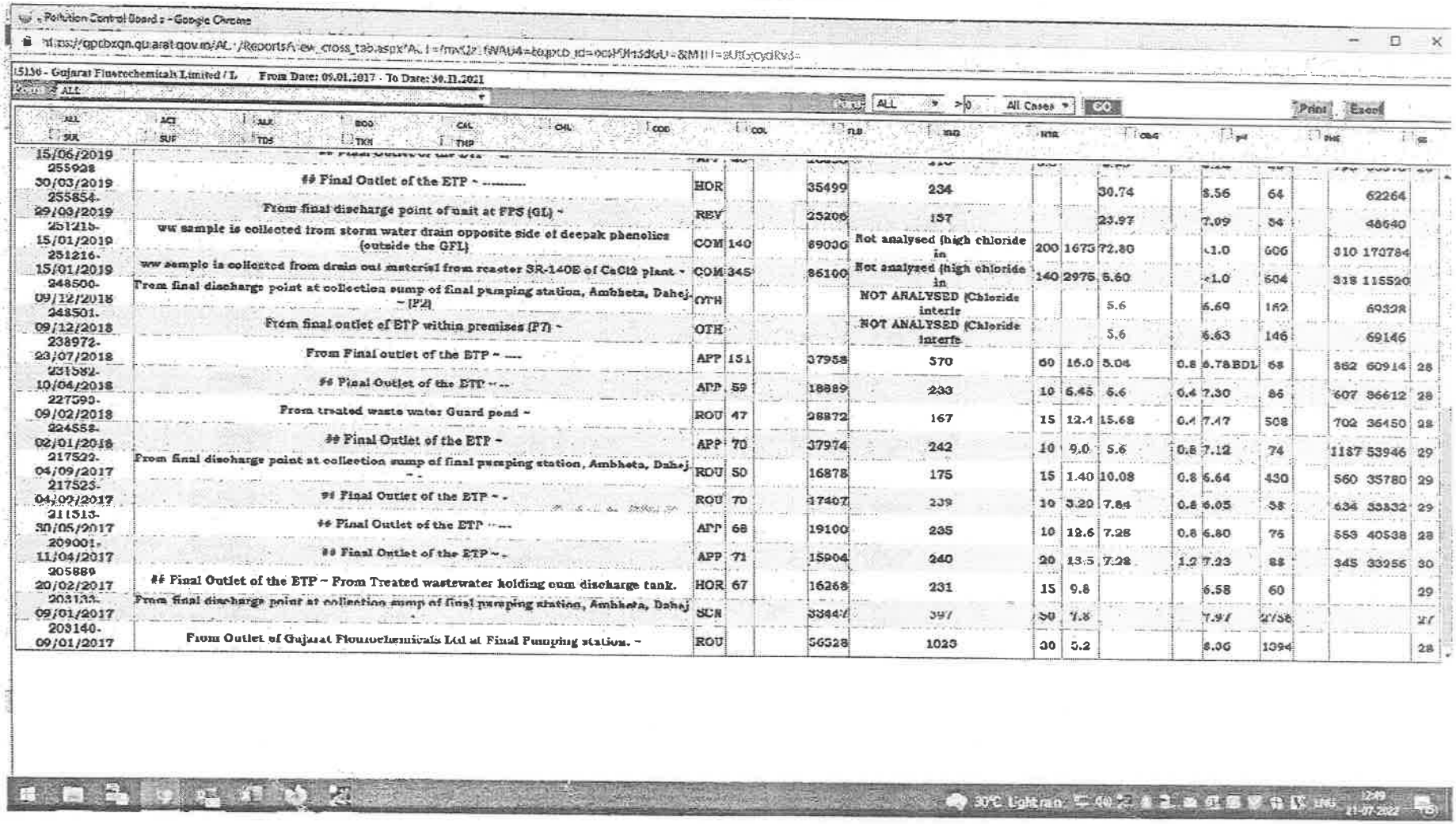
11. Products : carbon tetra chloride (99.5 %),caustic soda (dry basis),chlorine (dry basis),chloroform,fkm 26/246,fluorinated ethylene propylene (fep),gypsum,hexa fluoro propylene (hfp),hydro chloric acid (100 %),methylene dichloride,poly tetra fluoro ethelene (ptfe),sodium hypochlorite in terms of 10% chlorine),sulphuric acid 70% to 88 %

12. Work of Control Measures In Progress : Any other control technique,APCM Up gradation ,ETP Up gradation ,Reduction or safe treatment plant for COD,color,toxicity,solvent,acid etc,Solid Waste reduction or safe disposal method

13. Upgradation / Addition of PCM is Required : ETP

14. HAZ Waste Disposal(in Metric Tonne): Trucks despatched=78

Annexure :-22



Pollution Control Board :: - Google Chrome

https://gpcbxgn.gujarat.gov.in/AL.../ReportsAnew_cross_tab.aspx?A...

15136 - Gujarat Fluorochemicals Limited / L From Date: 09.01.2017 - To Date: 30.11.2021

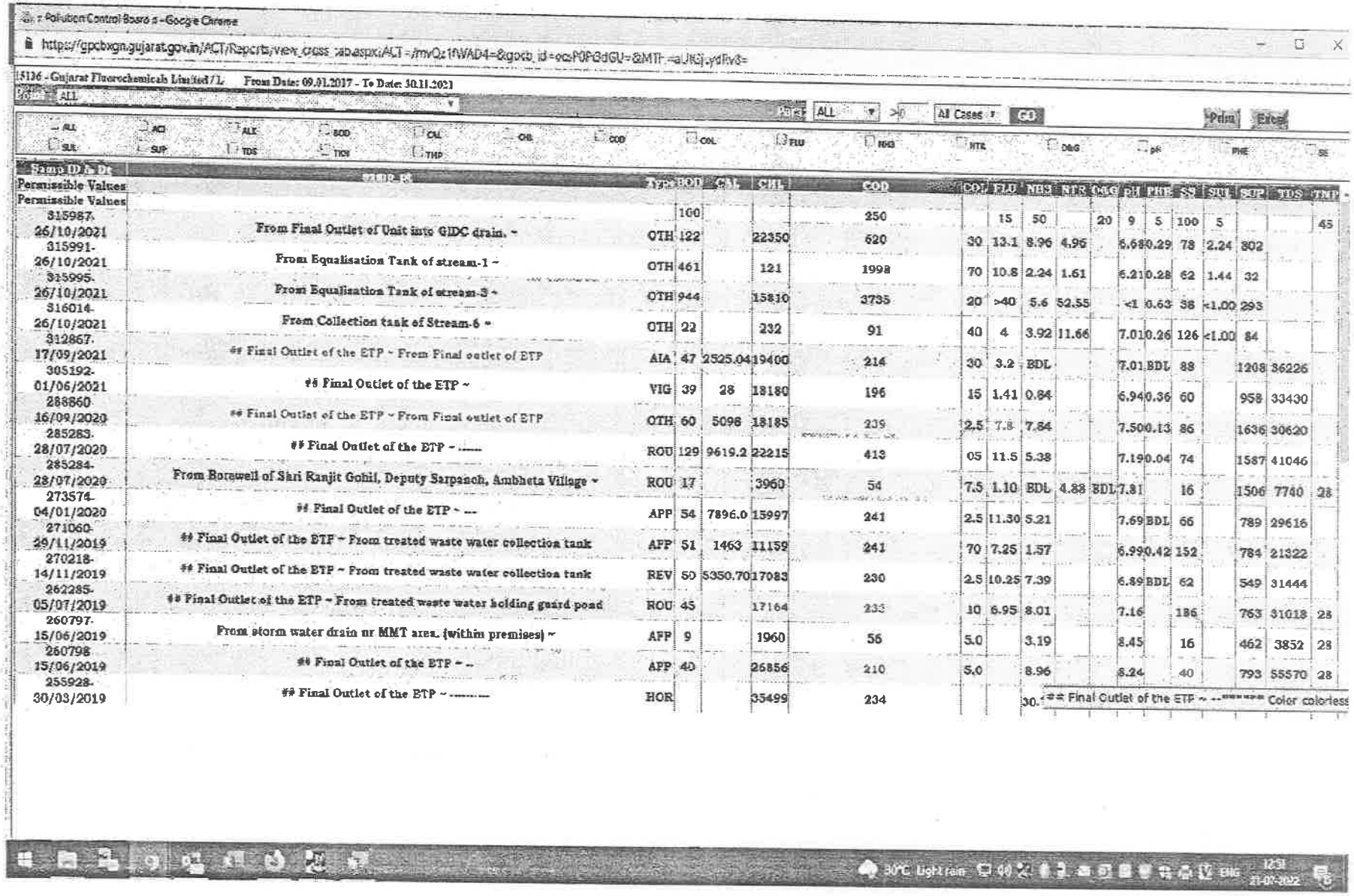
ALL ALL >0 All Cases GO Print Excel

15/06/2019 255928	## Final Outlet of the ETP -	HOR			35499	234					30.74		8.56	64			62264						
30/03/2019 255854	From final discharge point of unit at FPS (GL) -	REV			25206	157					23.97		7.09	54			48640						
29/09/2019 251215	ww sample is collected from storm water drain opposite side of deepak phenolics (outside the GFL)	COM	140		89000	Not analysed (high chloride in	200	1675	72.80		<1.0	600		310	170784								
15/01/2019 251216	ww sample is collected from drain out material from reactor SR-140E of CaCl2 plant -	COM	345		86100	Not analysed (high chloride in	140	2975	5.60		<1.0	504		318	115520								
15/01/2019 248500	From final discharge point at collection sump of final pumping station, Ambheta, Dahej - (F2)	OTH				NOT ANALYSED (Chloride interfe			5.6		6.69	162			69328								
09/12/2018 248501	From final outlet of ETP within premises (F7) -	OTH				NOT ANALYSED (Chloride interfe			5.6		6.63	146			69146								
09/12/2018 238972	From Final outlet of the ETP -	APP	151		37958	570	60	16.0	5.04	0.8	6.78	BDL	68		862	60914	28						
23/07/2018 231582	## Final Outlet of the ETP - ...	APP	59		18889	233	10	6.45	6.6	0.4	7.30		86		607	36612	28						
10/04/2018 227599	From treated waste water Guard pond -	ROU	47		28872	167	15	12.1	15.68	0.4	7.47		508		702	36450	28						
09/02/2018 224558	## Final Outlet of the ETP -	APP	70		37974	242	10	9.0	5.6	0.8	7.12		74		1187	53946	29						
02/01/2018 217522	From final discharge point at collection sump of final pumping station, Ambheta, Dahej -	ROU	50		16878	175	15	1.40	10.08	0.8	5.64		430		560	35780	29						
04/09/2017 217523	## Final Outlet of the ETP -	ROU	70		17407	239	10	3.20	7.84	0.8	6.05		58		634	33832	29						
04/09/2017 211513	## Final Outlet of the ETP - ...	APP	68		19100	235	10	12.6	7.28	0.8	6.80		76		553	40538	28						
30/05/2017 209001	## Final Outlet of the ETP -	APP	71		15904	240	20	13.5	7.28	1.2	7.23		88		345	33956	30						
11/04/2017 205889	## Final Outlet of the ETP - From Treated wastewater holding cum discharge tank.	HOR	67		16268	231	15	9.8			6.58		60				29						
20/02/2017 203133	From final discharge point at collection sump of final pumping station, Ambheta, Dahej	SCR			33447	397	50	7.8			7.97		2758				27						
09/01/2017 203140	From Outlet of Gujarat Fluorochemicals Ltd at Final Pumping station. -	ROU			56528	1023	30	5.2			8.06		1094				28						
09/01/2017																							

30°C Light rain 12:49 11-07-2022

6024

Annexure-22



: Pollution Control Board s - Google Chrome

https://gpcbxgn.gujarat.gov.in/ACT/Reports/view_cpss_rpt.aspx?ALT=/mvQz1fWAD4=&gpcb_id=ocP0P3dGU=&MTI=aUKjydfv3=

15136 - Gujarat Fluorochemicals Limited (L From Date: 09.01.2017 - To Date: 30.11.2021

ALL

Para: ALL >> All Cases GO Print Excel

ALL ACI ALK BOD CAL CHL COD COL FLU NH3 NTR O&G pH PHE SS SUL SUP TDS TOC TMP

Stmp ID & Dt	Sample ID	Type	BOD	CAL	CHL	COD	COL	FLU	NH3	NTR	O&G	pH	PHE	SS	SUL	SUP	TDS	TMP
Permissible Values			100			250		15	50		20	9	5	100	5			45
315987-26/10/2021	From Final Outlet of Unit into GIDC drain. ~	OTH	122		22350	620	30	13.1	8.96	4.96		6.68	0.29	78	2.24	802		
315991-26/10/2021	From Equalisation Tank of stream-1 ~	OTH	461		121	1998	70	10.8	2.24	1.61		6.21	0.28	62	1.44	32		
315995-26/10/2021	From Equalisation Tank of stream-3 ~	OTH	944		15810	3735	20	>40	5.6	52.55		<1	0.63	38	<1.00	293		
316014-26/10/2021	From Collection tank of Stream-6 ~	OTH	22		232	91	40	4	3.92	11.66		7.01	0.26	126	<1.00	84		
312867-17/09/2021	## Final Outlet of the ETP ~ From Final outlet of ETP	AIA	47	2525.04	19400	214	30	3.2	BDL			7.01	BDL	88		1208	36226	
305192-01/06/2021	#$ Final Outlet of the ETP ~	VIG	39	28	18180	196	15	1.41	0.84			6.94	0.36	60		958	33430	
288860-16/09/2020	## Final Outlet of the ETP ~ From Final outlet of ETP	OTH	60	5098	18185	239	2.5	7.8	7.84			7.50	0.13	86		1636	30620	
285283-28/07/2020	#$ Final Outlet of the ETP ~	ROU	129	9619.2	22215	413	05	11.5	5.38			7.19	0.04	74		1587	41046	
285284-28/07/2020	From Borewell of Shri Ranjit Gohil, Deputy Sarpanch, Ambheta Village ~	ROU	17		3960	54	7.5	1.10	BDL	4.88	BDL	7.81		16		1506	7740	28
273574-04/01/2020	#$ Final Outlet of the ETP ~ ---	APP	54	7896.0	15997	241	2.5	11.30	5.21			7.69	BDL	66		789	29616	
271060-29/11/2019	#$ Final Outlet of the ETP ~ From treated waste water collection tank	APP	51	1463	11159	241	70	7.25	1.57			6.99	0.42	152		784	21322	
270218-14/11/2019	#$ Final Outlet of the ETP ~ From treated waste water collection tank	REV	50	5350.70	17083	230	2.5	10.25	7.39			6.89	BDL	62		549	31444	
262285-05/07/2019	#$ Final Outlet of the ETP ~ From treated waste water holding guard pond	ROU	45		17164	233	10	6.95	8.01			7.16		186		763	31018	28
260797-15/06/2019	From storm water drain nr MMT area. (within premises) ~	APP	9		1960	56	5.0		3.19			8.45		16		462	3852	28
260798-15/06/2019	#$ Final Outlet of the ETP ~ --	APP	40		26856	210	5.0		8.96			8.24		40		793	55570	28
255928-30/03/2019	## Final Outlet of the ETP ~	HOR			35499	234			30.4	## Final Outlet of the ETP ~ ..... Color colorless								

30°C Light rain ENG 12:51 21-02-2022

6025

6026

NOCIL LIMITED

Regd. Office : Mafatlal House, Backbay Reclamation, H.T. Parekh Marg, Churchgate, Mumbai 400 020. India T: +91 22 6636 4062 F: +91 22 6636 4060

Plant-1:C-37, TTC Industrial Area, Post Turbhe, Off Thane Belapur Road, Pawne Village Navi Mumbai - 400 705 India. T: +91 22 6673 0551 / 552 / 553 / 554 / 555 F:+91 22 2767 1865

Plant -2: Plot No. 12-A-1, GIDC, Industrial Area, Dahej, Tal. Vagra, Bharuch, Gujarat-392130 T : +91 02641-208201/227

website : www.nocil.com CIN- L99999MH1961PLC012003

ARVIND MAFATLAL GROUP
The ethics of excellence

Gujarat Pollution Control Board
RECEIVED ON
29 JUL 2022
23203

29.07.2022

To,
Unit Head - Bharuch
Gujarat Pollution Control Board
Paryavaran Bhavan, Sector 10 – A,Gandhinagar – 382 010, Gujarat

Subject –Objection against proposed EDC in report of Joint committee of May-22 submitted to National Green Tribunal.

Reference –1. Report of Joint Committee of Nov-21 submitted to NGT
2.Report of Joint Committee of May-22 submitted to NGT
3.NGT order dated-06.07.2022 passed on OA 60/2021
4.Direction under section 33-A of water Act issued on 05.03.2022
5.Mail from GPCB Gandhinagar for implementation of Direction of NGT in the matter of O.A.No 60/2021

Respected Sir,

This is with reference to the CPCB-GPCB joint committee reports submitted to NGT in November 2021and May 2022, NGT order dated 6th July 2022, and Direction issued by GPCB dated 5th March 2022 and mail dated 13.07.2022 in the matter by GPCB O.A. 60/2021.

As per the report of May 2022, EDC is increased to Rs.57.64 Lacs from Rs. 10.5 Lacs as per the earlier report of November 2021.

Following is our humble submission in the matter.

- As per the joint committee report of November 2021, based on the concerned officials visit of 26.10 2021, EDC charged to us was Rs 10.50 Lacs. It was based on higher COD value of the Effluent discharge (322mg/l).It was a onetime deviation due to our one of the adsorption columns of ETP got short-circuited due to damage of adsorption column mesh & untreated effluent of same stream was passed without adsorption of COD so high COD value found in final treated effluent. The same is mentioned in our reply dated 31.03.2022.

- In subsequent report of May 2022, the EDC is now increased to Rs. 57.64 Lacs, considering the average COD and flow of all the industries at the final discharge point. This approach is not acceptable to us.

- We would like to highlight that for last five years our final discharge COD parameters have marginally deviated only twice as can be seen from the GPCB sample analysis at **Annexure - I**

- In addition to above under "Environment monitoring analysis" we have appointed Siddhi Green Excellence Pvt Limited, Ankleshwar as external agency to check COD and many more parameters of final discharge effluent. As per analysis data, our COD trend of final discharge is under control and never deviated since last one year. Attached here with last one year data for your ready reference ats **Annexure -2.**

- As per reports of the Government appointed Environment Audit Agency, Parul institute of Technology, Vadodara for the year 2020-21 & 2021-22. zero deviation is reported on COD. Same has been submitted to GPCB RO, Bharuch and GPCB Head office, Gandhinagar. Attached here with COD value and its graph according to Environmental Audit report for the year 2020-21 & 2021-22 as **Annexure -3** for your ready reference.

- In addition to this, GIDC is also taking samples from final discharge effluent for four to five times in a month for analysis, but no deviation is reported on COD or any other parameters.

- Our final effluent discharge quantity is granted 1720 KL/day in consent of GPCB (CC& A No-AWH-91873 date of issue-20.03.2018). And our final discharge quantity has never been higher than consented quantity limit in last five years of record. Last Five-year discharge quantity data is given at **Annexure -4** for your ready reference.

- We have employed modern and latest Effluent Treatment technologies at our plant like Soil Bio Technology (SBT), Hydrodynamic Cavitation and Multiple Effect Evaporator (MEE) to ensure strict adherence to the effluent discharge norms.

- We have not received any strict disciplinary strictures from the authorities in the last five years

In view of the above submission, it is our humble request to kindly waive off the EDC charged to us completely. However, in extreme situation our EDC should not exceed a maximum amount of Rs 98239.50, as per the internal calculations done by us at Annexure - 5

We at NOCIL Limited are highly committed towards the compliances and assure the same in future.

Would appreciate your sympathetic consideration of our submission on the matter.

Thanks, and Regards

For, Nocil Limited

Authorized Signatory

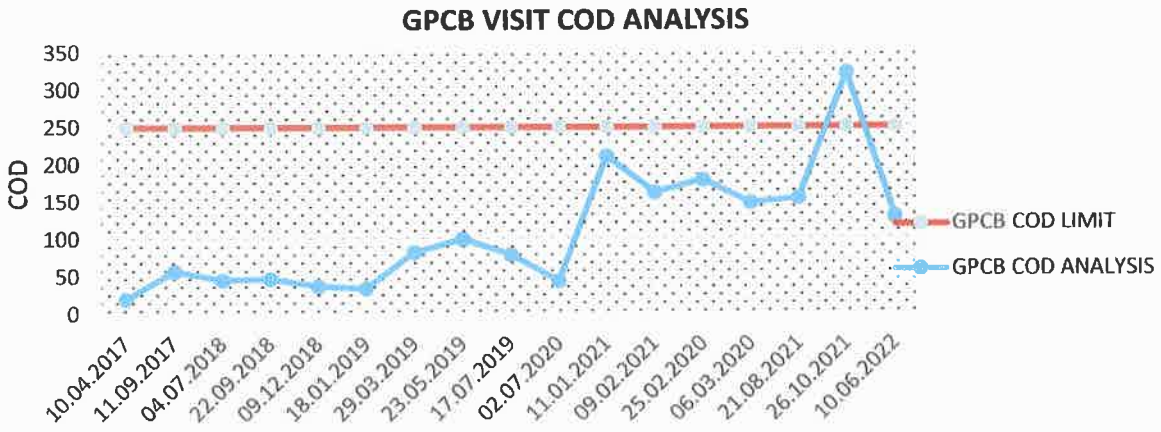
NOCIL LIMITED DAHEJ

CC to-GPCB RO Office, Bharuch.

Enc :-

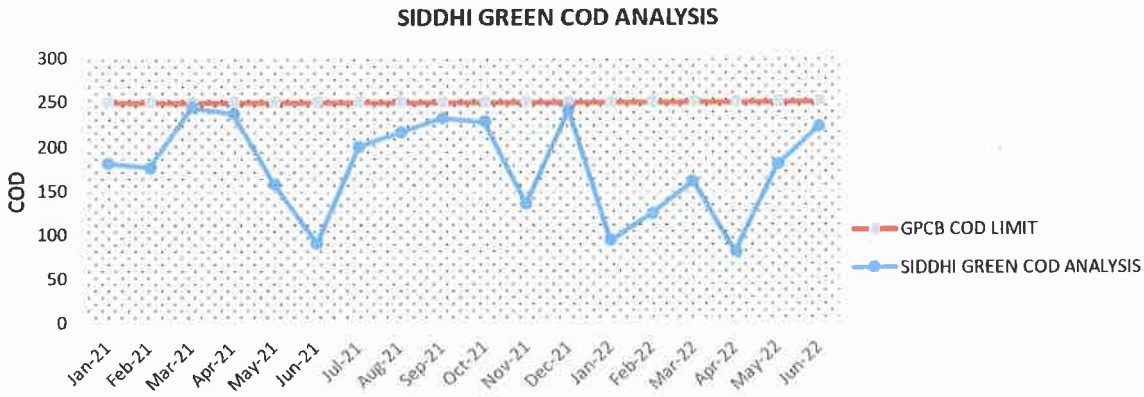
1.) Annexure – 1 -COD Trend for last one year.
2.) Annexure – 2 -Third Party Analysis data for Last one year.
3.) Annexure –3- "Environmental Audit Report" 2020-21 & 2021-2022.
4.) Annexure –4-Last Five-year Effluent Discharge data (2017-2021)
5.) Annexure---5-NOCIL Internal EDC calculation.

Annexure -1



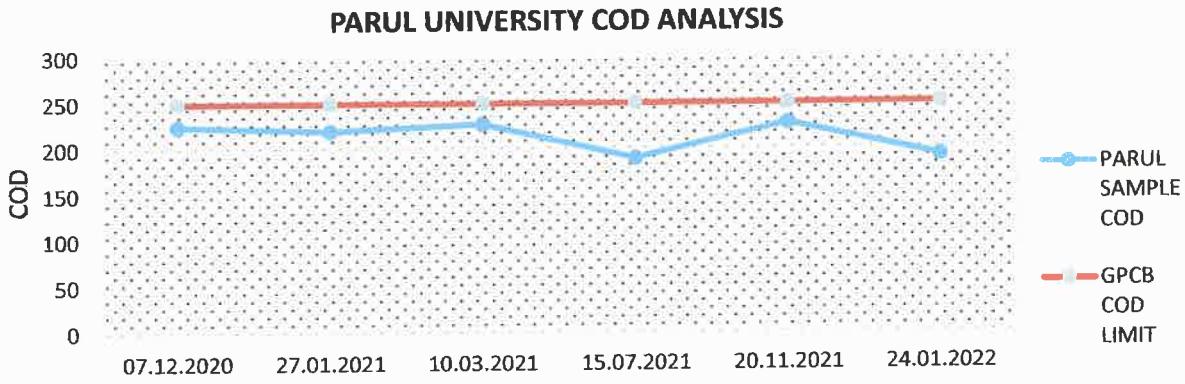
GPCB VISIT DATE	GPCB COD ANALYSIS VALUE	GPCB COD LIMIT
10.04.2017	20	250
11.09.2017	57	250
04.07.2018	45	250
22.09.2018	47	250
09.12.2018	37	250
18.01.2019	34	250
29.03.2019	82	250
23.05.2019	100	250
17.07.2019	79	250
02.07.2020	44	250
11.01.2021	211	250
09.02.2021	162	250
25.02.2020	179	250
06.03.2020	148	250
21.08.2021	154	250
26.10.2021	322	250
10.06.2022	130	250

Annexure -2



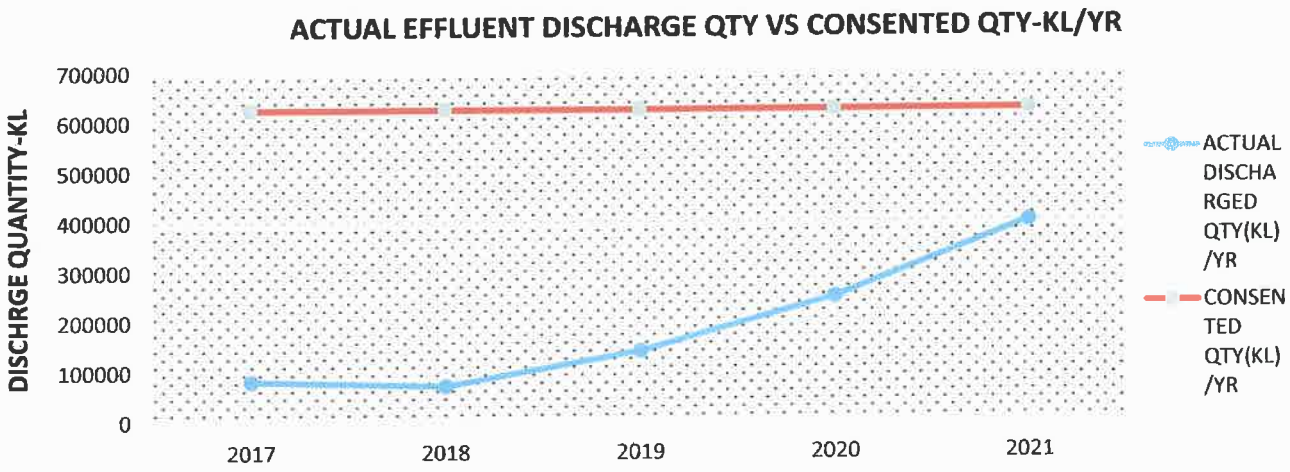
SAMPLE MONTH	SIDDHI GREEN COD ANALYSIS	GPCB COD LIMIT
Jan-21	181	250
Feb-21	176	250
Mar-21	244	250
Apr-21	237	250
May-21	157	250
Jun-21	90	250
Jul-21	200	250
Aug-21	216	250
Sep-21	232	250
Oct-21	228	250
Nov-21	135	250
Dec-21	241	250
Jan-22	93	250
Feb-22	124	250
Mar-22	160	250
Apr-22	80	250
May-22	179	250
Jun-22	222	250

Annexure -3



SAMPLE DATE	PARUL SAMPLE COD	GPCB COD LIMIT
07.12.2020	225	250
27.01.2021	220	250
10.03.2021	227	250
15.07.2021	190	250
20.11.2021	228	250
24.01.2022	192	250

Annexure -4



YEAR	ACTUAL DISCHARGED QTY(KL)/YR	CONSENTED QTY(KL)/YR
2017	83435	627800
2018	73781	627800
2019	143256	627800
2020	251057	627800
2021	401857	627800

Annexure -5

EDC CALCULATION FOR NOCIL ACCORDING TO JOINT COMMITTEE REPORT-NOV-2022			
	Description	**Value**	**Source of data**
A	Actual volume discharge during 2017-2021, m3	954458.3786	As per our data submission to GIDC (During 2017-2021, calendar year)
B	Total volume of other industries, m3(For Final Pumping station)	21521383.88	As per record of GPCB/GIDC (Total of industries categorized as others)
C	Ratio of wastewater discharge by NOCIL (A/B)	0.044349303	
D	Total samples collected 2017-2021	17	Available from XGN portal of industry
E	Total samples failed during 2017-2021	2	Available from XGN portal of industry
F	Ratio of failed samples for NOCIL (E/D)	0.117647059	
G	Flow failed for NOCIL, NCj (C*F)	0.005217565	
H	∑NCj	0.206631997	Total factor of flow failed (common for final pumping station industries)
I	Deterrent factor of NOCIL, Dfj (G/H)	0.025250519	
J	Station wise EC-Final Pumping Station	228309249.8	Based on committee report, contribution of other industries in EC1 is 8.48 %.
K	EC1 (New) for NOCIL (I*J)	5764926.955	
L	EC1 (old) for NOCIL (previous value)	1050000	
M	EC1 (Revised) for NOCIL	5764926.955	Whichever is higher among EC1 (New) and EC1 (old) for NOCIL
N	EC2 (considering Haz waste)	0	
O	Total EDC for NOCIL according to Joint Committee. (Rs)	5764926.955	

EDC AS PER INTERNAL NOCIL CALCULATION			
P	Total volume discharge (in KL) (Vt)	954458.3786	Total Discharge quantity of NOCIL in Last five year (2017-21) As per GIDC discharge record
Q	Average COD considered, mg/l (CA)	1019.1	As per GPCB record
R	Excess COD discharges (CA-250), mg/l	769.1	
S	Excess organic load (EOL) (=Vt*(CA-250)/1000), in KG	734073.939	
U	Total EC1 (EOL*62.5), in Rs.	45879621.19	62.5 is cost given by GIDC to treat per KG of organic
V	Station wise EC for other industries-Final Pumping station	3890591.88	8.48 % of total EC1
I	Deterrent factor of NOCIL, Dfj (G/H)	0.025250519	
	ACTUAL EDC for NOCIL - Rs.	98239.46248	

6034

NOCIL LIMITED

Regd. Office : Mafatlal House, Backbay Reclamation, H.T. Parekh Marg, Churchgate, Mumbai 400 020. India. T: +91 22 6636 4062 F: +91 22 6636 4060

Plant-1: C-37, TTC Industrial Area, Post Turbhe, Off Thane Belapur Road, Pawne Village Navi Mumbai - 400 705 India. T: +91 22 6673 0551 / 552 / 553 / 554 / 555 F: +91 22 2767 1865

Plant -2: Plot No. 12-A-1, GIDC, Industrial Area, Dahej, Tal. Vagra, Bharuch, Gujarat-392130 T: +91 02641-208201 / 227

website : www.nocil.com CIN - L99999MH1961PLC012003

ARVIND MAFATLAL GROUP
The ethics of excellence

Date: 13.07.2025

TO,

Unit Head,

Paryavaran Bhuvan,

PCB ID: 31700

GPCB, Gandhinagar.

Subject: - Objection against proposed EDC in report of Joint committee of May-22 submitted to National Tribunal.

Reference – 1. Report of Joint committee of Nov -21 submitted to NGT

2. Report of Joint committee of May-22 submitted to NGT.

3. NGT order dated 06-07-2022 passed on OA 60.2021.

4. Direction under section 33-A of water Act issued on 05-03-2022.

5. Mail from GPCB Gandhinagar for implementation of direction of NGT in the matter of O.A No 60.2021.

Respected Sir,

We have expressed our objection to the above subject matter through a letter dated 01-08-2022, Furthermore, on 10-06-2025, we have also expressed our objection to the CPCB Chairman in person.

After the face-to-face meeting on 10-06-2025, we would like to once again convey our presentation to you, which is as follows.

1. Calculation 0f number of days for violation: - The present method considers a 05-year period for calculation the number of violation days, which is not appropriate. Instead, the calculation should be based on the number of days between the date of sample collection and the date of reply submitted by us.

2. COD Treatment cost: - The COD treatment cost has been considered at approximately Rs. 62 per kg, which is significantly high. As this includes the capital and other fix cost, in addition to the O & M cost. It should be reasonably be in the range of Rs.8 to 10 per kg which is actual average cost for treatment.

Responsible Care®
OUR COMMITMENT TO SUSTAINABILITY

G. P. C. BOARD
BHARUCH
Inward No. 50092
15-07-25

Dfo-I
14.07.25

14/7/25

6035

NOCIL LIMITED

Regd. Office : Mafatlal House, Backbay Reclamation, H T Parekh Marg, Churchgate, Mumbai 400 020 India T: +91 22 6636 4062 F: +91 22 6636 4060

Plant-1: C-37, TTC Industrial Area, Post Turbhe, Off Thane Belapur Road, Pawne Village Navi Mumbai 400 705 India T: +91 22 6673 0551 / 552 / 553 / 554 / 555 F:+91 22 2767 1865

Plant -2: Plot No. 12-A-1, GIDC, Industrial Area, Dahej, Tal. Vagra, Bharuch, Gujarat-392130 T : +91 02641-208201/227

website : www.nocil.com CIN- L99999MH1961PLC012003

ARVIND MAFATLAL GROUP
The ethics of excellence

For more clarity we would like to high light that our final effluent discharge quantity is granted 1720 KL/day in consent of GPCB (CC&A No – AWH – 91873 dates of issue – 20-03-2018). Discharge quantity has never been higher than consented quantity limit in last five years of record. Last five years data has been submitted with earlier later dated 01-08-2022.

In view of above clarification, it is our humble request to kindly waive off the EDC charged to us completely. However, in extreme situation our EDC should be calculate with consideration of said facts in sr. no -01 & 02.

We at Nocil Limited are highly committed towards the compliances and assure the same in future.

Would appreciate your sympathetic consideration of our submission on the matter.

Thanks, and Regards

For, Nocil Limited

Authorized Signatory

NOCIL LTD. DAHEJ

CC To

The regional Officer,
GPCB,
Bharuch.

Enc: - copy of latter dated 01-08-2022.

Responsible Care®
OUR COMMITMENT TO SUSTAINABILITY

6036

NOCIL LIMITED

Regd. Office : Mafatlal House, Backbay Reclamation, H.T. Parekh Marg, Churchgate, Mumbai 400 020. India T: +91 22 6636 4062 F: +91 22 6636 4060

Plant-1:C-37, TTC Industrial Area, Post Turbhe, Off Thane Belapur Road, Pawne Village Navi Mumbai - 400 705 India. T: +91 22 6673 0551 / 552 / 553 / 554 / 555 F:+91 22 2767 1865

Plant -2:Plot No. 12-A-1, GIDC, Industrial Area, Dahej, Tal. Vagra, Bharuch, Gujarat-392130 T : +91 02641-208201/227

website : www.nocil.com CIN- L99999MH1961PLC012003

ARVIND MAFATLAL GROUP
The ethics of excellence

29.07.2022

To,
Unit Head - Bharuch
Gujarat Pollution Control Board
Paryavaran Bhavan, Sector 10 – A,Gandhinagar – 382 010, Gujarat

Subject –Objection against proposed EDC in report of Joint committee of May-22 submitted to National Green Tribunal.

Reference –1. Report of Joint Committee of Nov-21 submitted to NGT
2.Report of Joint Committee of May-22 submitted to NGT
3.NGT order dated-06.07.2022 passed on OA 60/2021
4.Direction under section 33-A of water Act issued on 05.03.2022
5.Mail from GPCB Gandhinagar for implementation of Direction of NGT in the matter of O.A.No 60/2021

Respected Sir,

This is with reference to the CPCB-GPCB joint committee reports submitted to NGT in November 2021and May 2022, NGT order dated 6th July 2022, and Direction issued by GPCB dated 5th March 2022 and mail dated 13.07.2022 in the matter by GPCB O.A. 60/2021.

As per the report of May 2022, EDC is increased to Rs.57.64 Lacs from Rs. 10.5 Lacs as per the earlier report of November 2021.

Following is our humble submission in the matter.

- As per the joint committee report of November 2021, based on the concerned officials visit of 26.10 2021, EDC charged to us was Rs 10.50 Lacs. It was based on higher COD value of the Effluent discharge (322mg/l).It was a onetime deviation due to our one of the adsorption columns of ETP got short-circuited due to damage of adsorption column mesh & untreated effluent of same stream was passed without adsorption of COD so high COD value found in final treated effluent. The same is mentioned in our reply dated 31.03.2022.

29/07/22
Gujarat Pollution Control Board
Head Office
Sector No.-10-A,
Gandhinagar-382010

Responsible Care®
OUR COMMITMENT TO SUSTAINABILITY

1/8/22
Post Received
Gujarat Pollution Control Board
BHARUCH

- In subsequent report of May 2022, the EDC is now increased to Rs. 57.64 Lacs, considering the average COD and flow of all the industries at the final discharge point. This approach is not acceptable to us.

- We would like to highlight that for last five years our final discharge COD parameters have marginally deviated only twice as can be seen from the GPCB sample analysis at **Annexure - I**

- In addition to above under "Environment monitoring analysis" we have appointed Siddhi Green Excellence Pvt Limited, Ankleshwar as external agency to check COD and many more parameters of final discharge effluent. As per analysis data, our COD trend of final discharge is under control and never deviated since last one year. Attached here with last one year data for your ready reference ats **Annexure -2.**

- As per reports of the Government appointed Environment Audit Agency, Parul institute of Technology, Vadodara for the year 2020-21 & 2021-22. zero deviation is reported on COD. Same has been submitted to GPCB RO, Bharuch and GPCB Head office, Gandhinagar. Attached here with COD value and its graph according to Environmental Audit report for the year 2020-21 & 2021-22 as **Annexure -3** for your ready reference.

- In addition to this, GIDC is also taking samples from final discharge effluent for four to five times in a month for analysis, but no deviation is reported on COD or any other parameters.

- Our final effluent discharge quantity is granted 1720 KL/day in consent of GPCB (CC& A No-AWH-91873 date of issue-20.03.2018). And our final discharge quantity has never been higher than consented quantity limit in last five years of record. Last Five-year discharge quantity data is given at **Annexure -4** for your ready reference.

- We have employed modern and latest Effluent Treatment technologies at our plant like Soil Bio Technology (SBT), Hydrodynamic Cavitation and Multiple Effect Evaporator (MEE) to ensure strict adherence to the effluent discharge norms.

- We have not received any strict disciplinary strictures from the authorities in the last five years

In view of the above submission, it is our humble request to kindly waive off the EDC charged to us completely. However, in extreme situation our EDC should not exceed a maximum amount of Rs 98239.50, as per the internal calculations done by us at Annexure - 5

We at NOCIL Limited are highly committed towards the compliances and assure the same in future.

Would appreciate your sympathetic consideration of our submission on the matter.

Thanks, and Regards

For, Nocil Limited

Authorized Signatory

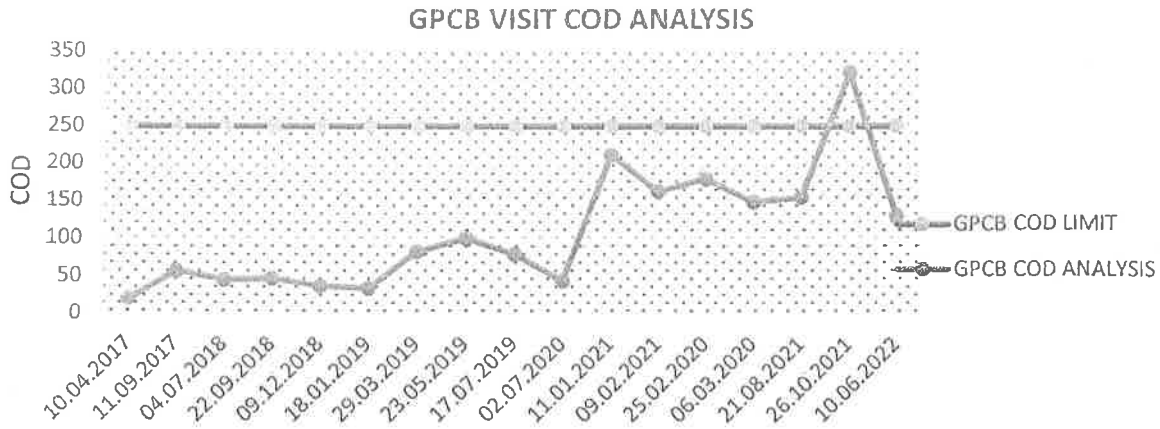
NOCIL LIMITED DAHEJ

CC to-GPCB RO Office, Bharuch.

Enc :-

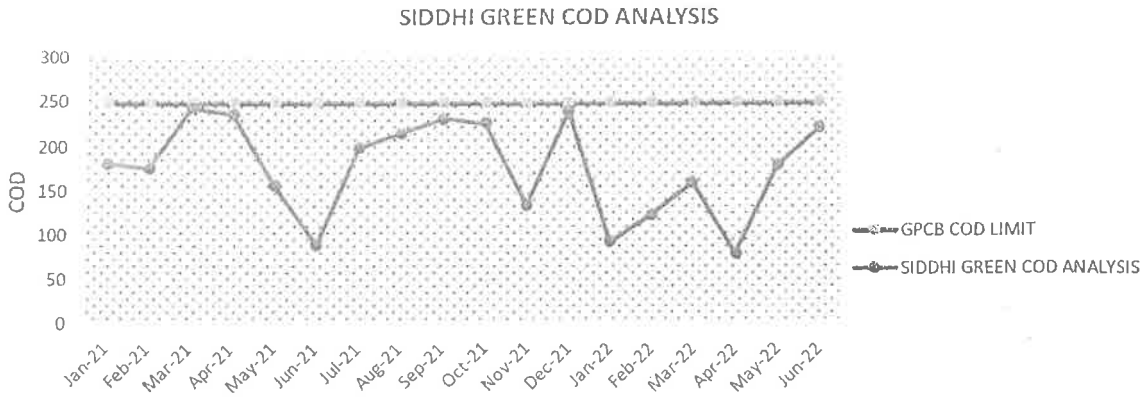
1.) Annexure – 1 -COD Trend for last one year.
2.) Annexure – 2 -Third Party Analysis data for Last one year.
3.) Annexure –3- "Environmental Audit Report" 2020-21 & 2021-2022.
4.) Annexure –4-Last Five-year Effluent Discharge data (2017-2021)
5.) Annexure---5-NOCIL Internal EDC calculation.

Annexure -1



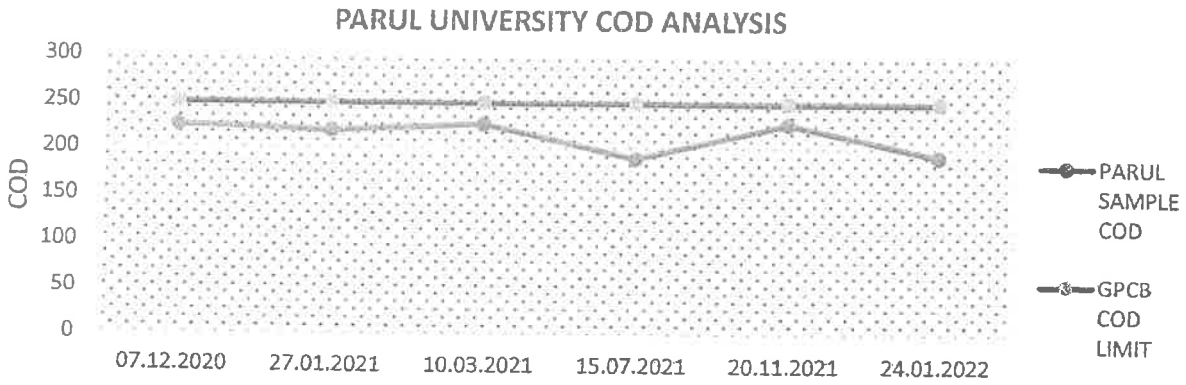
GPCB VISIT DATE	GPCB COD ANALYSIS VALUE	GPCB COD LIMIT
10.04.2017	20	250
11.09.2017	57	250
04.07.2018	45	250
22.09.2018	47	250
09.12.2018	37	250
18.01.2019	34	250
29.03.2019	82	250
23.05.2019	100	250
17.07.2019	79	250
02.07.2020	44	250
11.01.2021	211	250
09.02.2021	162	250
25.02.2020	179	250
06.03.2020	148	250
21.08.2021	154	250
26.10.2021	322	250
10.06.2022	130	250

Annexure -2



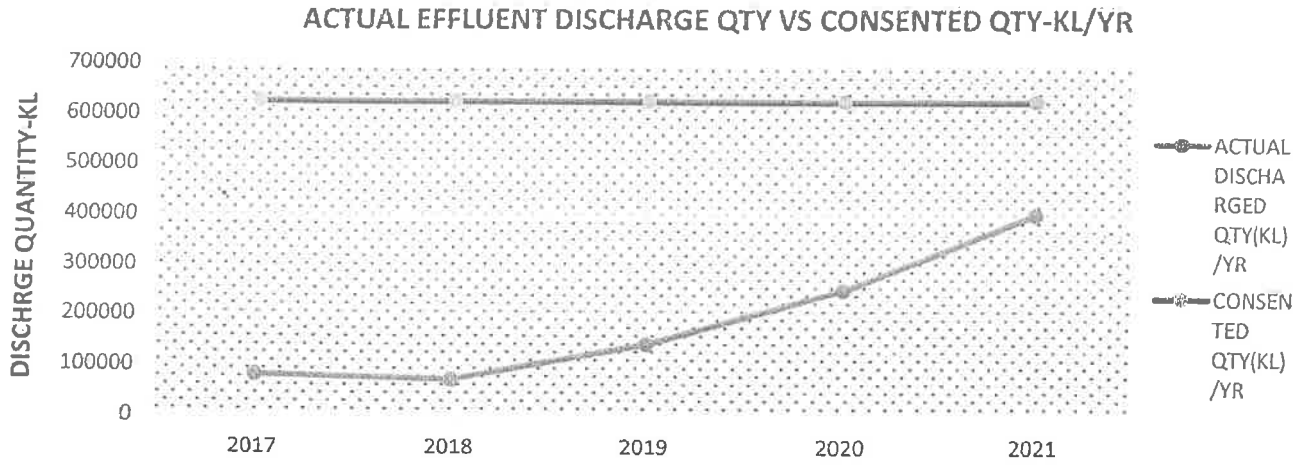
SAMPLE MONTH	SIDDHI GREEN COD ANALYSIS	GPCB COD LIMIT
Jan-21	181	250
Feb-21	176	250
Mar-21	244	250
Apr-21	237	250
May-21	157	250
Jun-21	90	250
Jul-21	200	250
Aug-21	216	250
Sep-21	232	250
Oct-21	228	250
Nov-21	135	250
Dec-21	241	250
Jan-22	93	250
Feb-22	124	250
Mar-22	160	250
Apr-22	80	250
May-22	179	250
Jun-22	222	250

Annexure -3



SAMPLE DATE	PARUL SAMPLE COD	GPCB COD LIMIT
07.12.2020	225	250
27.01.2021	220	250
10.03.2021	227	250
15.07.2021	190	250
20.11.2021	228	250
24.01.2022	192	250

Annexure -4



YEAR	ACTUAL DISCHARGED QTY(KL)/YR	CONSENTED QTY(KL)/YR
2017	83435	627800
2018	73781	627800
2019	143256	627800
2020	251057	627800
2021	401857	627800

Annexure -5

EDC CALCULATION FOR NOCIL ACCORDING TO JOINT COMMITTEE REPORT-NOV-2022			
	Description	Value	Source of data
A	Actual volume discharge during 2017-2021, m3	954458.3786	As per our data submission to GIDC (During 2017-2021, calendar year)
B	Total volume of other industries, m3(For Final Pumping station)	21521383.88	As per record of GPCB/GIDC (Total of industries categorized as others)
C	Ratio of wastewater discharge by NOCIL (A/B)	0.044349303	
D	Total samples collected 2017-2021	17	Available from XGN portal of industry
E	Total samples failed during 2017-2021	2	Available from XGN portal of industry
F	Ratio of failed samples for NOCIL (E/D)	0.117647059	
G	Flow failed for NOCIL, NCj (C*F)	0.005217565	
H	∑NCj	0.206631997	Total factor of flow failed (common for final pumping station industries)
I	Deterrent factor of NOCIL, Dfj (G/H)	0.025250519	
J	Station wise EC-Final Pumping Station	228309249.8	Based on committee report, contribution of other industries in EC1 is 8.48 %.
K	EC1 (New) for NOCIL (I*J)	5764926.955	
L	EC1 (old) for NOCIL (previous value)	1050000	
M	EC1 (Revised) for NOCIL	5764926.955	Whichever is higher among EC1 (New) and EC1 (old) for NOCIL
N	EC2 (considering Haz waste)	0	
O	Total EDC for NOCIL according to Joint Committee. (Rs)	5764926.955	

EDC AS PER INTERNAL NOCIL CALCULATION			
P	Total volume discharge (in KL) (Vt)	954458.3786	Total Discharge quantity of NOCIL in Last five year (2017-21) As per GIDC discharge record
Q	Average COD considered, mg/l (CA)	1019.1	As per GPCB record
R	Excess COD discharges (CA-250), mg/l	769.1	
S	Excess organic load (EOL) (=Vt*(CA-250)/1000), in KG	734073.939	
U	Total EC1 (EOL*62.5), in Rs.	45879621.19	62.5 is cost given by GIDC to treat per KG of organic
V	Station wise EC for other industries-Final Pumping station	3890591.88	8.48 % of total EC1
I	Deterrent factor of NOCIL, Dfj (G/H)	0.025250519	
	ACTUAL EDC for NOCIL - Rs.	98239.46248	

0.08

6044

RESPONSIBLE CARE®
OUR COMMITMENT TO SUSTAINABILITY

Gujarat Pollution Control Board
RECEIVED ON
01 AUG 2022
23493

DEEPAK NITRITE

Ref.: DNL/GPCB ID-35477/2022/17

July 28, 2022

To,
Member Secretary,
Gujarat Pollution Control Board,
Paryavaran Bhavan, Sector 10A,
Gandhinagar, Gujarat-382010

GPCB-ID: 35477

Refe.:
1. CPCB, Vadodara and GPCB, Bharuch officials visit dated 26.10.2021
2. Order dated 02.02.2022 of National Green Tribunal, Western Zone Bench, Pune passed in O A 60/202.
3. Report of Joint Committee May 2022 submitted to NGT
4. Order dated 06.07.2022 of National Green Tribunal, Western Zone Bench, Pune passed in O A 60/2021

Subject: Objections against proposed EDC in report of Joint Committee of May 2022 submitted to National Green Tribunal.

We refer to the order dated 02.02.2022 of Hon NGT- Western Bench passed in O A 60/2021 whereby Joint Committee was appointed. We also refer to the report of Joint Committee as also order dated 06.07.2022 of Hon NGT- WesternBench passed in O A 60/2021. As per the direction given in para 7(ii), we are submitting present objections as we are one of the so-called defaulting industries named in said report even though the Joint committee had not collected sample from our unit at the time of visit because of our unit was under annual shutdown.

We have protests EDC based on following:

- CPCB, Vadodara and GPCB, Bharuch officials had been visited our unit on 26.10.2021 for inspection, on that day our unit was under annual shut down and there was not any production activity continued. For this reason, joint Committee team has not collected treated effluent sample from our unit.

- For the continuous betterment of EMS at the plant, we have installed 01 set of new MEE having 300 KLD, in addition of Old MEE of 350 KLD, so we are having total MEE capacity 650 KLD for our Unit. And 60 KLD Stripper column, 500 KLD RO system, Lamella clarifier and made all essential modification in existing MEE and ETP in Year-2019. For modification and upgradation of EMS facility, we have invested Rs. 15 Crore in year-2019.

- As per order dated 22.02.2017 passed by Hon Supreme Court in Writ petition No 375/2012, we as industry are required to impart primary treatment to our liquid effluent discharge and release them in Common Effluent Treatment Plant set up by GIDC.

DEEPAK NITRITE LIMITED
CIN: L24110GJ1970PLC001735
Dahej Division : 12/B/2 GIDC Dahej, Village Ambheta, Taluka Vagra, Dist. Bharuch - 392 130. Gujarat, India.
Tel : +91 2641 266700 to 799
Registered & Corporate Office : Aaditya-I, Chhani Road, Vadodara-390 024. Gujarat, India.
Tel: +91 265 276 5200/396 0200 | Fax: +91 265 276 5344
Investor Relations Contact: investor@godeepak.com
www.godeepak.com

DEEPAK NITRITE LIMITED DAHEJ

- But we as M/s Deepak Nitrite Ltd Dahej Plant ETP facility has fully established and well adequate from primary treatment to tertiary treatment, to treat, our total effluent load to meet GPCB prescribed norms. And We have always discharged treated effluent as per GPCB prescribed Norms from our Unit.

- We declare that we have not discharged any effluent directly to any river, pond, sea etc. and have discharged only in the designated sump of GIDC at Ambheta village through our dedicated single pipeline.

- We further declare that we have not resorted to any ghost connection to discharge any effluent.

- Furthermore, the EC formula does not take into account the Environment Management systems adopted by the industry for control of water, Air and Land Pollution. Even if adequate EMS is provided, the industry has to pay same amount of compensation at par with the industries which have not provided adequate effluent treatment Plants, installed proper Air pollution control equipment or adopted appropriate measures for Hazardous waste disposal.

- Calculation steps shown in report from page 47 have faulty assumptions. The formula of EDC is not applicable to our M/s. Deepak Nitrite Limited, Dahej because of this formula is created for those industries who are having common GIDC discharge pipeline from their industry to pumping station. While our plant is having separate dedicated discharge pipeline from our plant to GIDC final pumping station at Ambheta village with open outlet before discharging to common sump at GIDC final pumping station (Ambheta village).

- We are strongly opposed the COD data as determined by you is not necessarily contributed by our unit, and this thus cannot be a reason to name us as a defaulting industry and levy EDC on us.

- We would like to draw your kind attention that since 2019, GPCB has collected many samples at different intervals and all samples are found as per GPCB norms.

- In summary, we believe that inadvertently and erroneously, you have named us as a defaulting party liable to pay EDC. For reasons cited above, we strongly object to this.

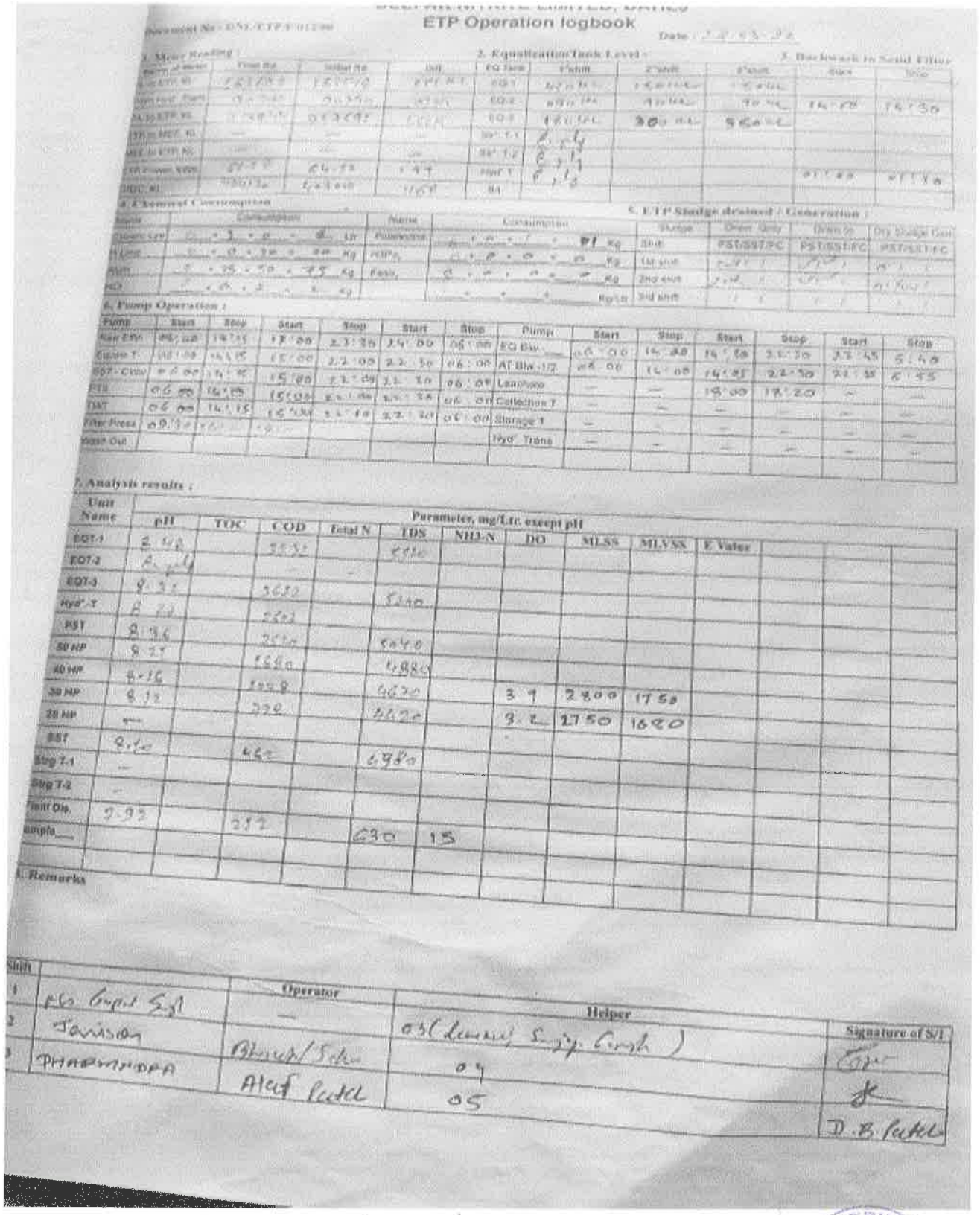
- Thus, we are requesting to your kind authority, the EDC imposed on us in the report of the Joint Committee is totally one side, and EDC is not applicable and will be wave off from M/s. Deepak Nitrite Limited, Dahej. We as M/s. Deepak Nitrite Limited is also committed to follow rules and regulations related to Environmental Laws.

- We would like to share that our company has accredited by ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 & Responsible Care® certificates. Our management are committed toward Environmental protection due to that concern; our company have invested of 15 Crore in year-2019.

- point wise reply against each of the points issued by Show cause notice No: SCN-637628 dated 05.04.2022 to M/s.Deepak Nitrite Limited and we also submitted point wise reply of SCN-637628 at your good office on 20.04.2022. Point wise reply of SCN as under:

Observations-1: Proper records of ETP operation and discharge of wastewater into the final pumping station was not maintained.

Reply: We are maintaining record of ETP operation and wastewater discharge. ETP operation and waste discharge record as under:



ETP Operation logbook

Date : 7.2.23.22

2. Equalisation Tank Level :

3. Backwash to Sand Filter

4. Chemical Consumption

5. ETP Sludge drained / Conservation :

6. Pump Operation :

Pump	Start	Stop	Start	Stop	Start	Stop	Pump	Start	Stop	Start	Stop	Start	Stop
Raw Eff.	06:00	14:15	17:00	23:30	24:00	06:00	EQ Bla...	06:00	14:30	14:50	23:30	23:45	5:40
Equal T.	06:00	14:15	15:00	22:00	22:30	06:00	AT Blo.-1/2	06:00	14:00	14:35	22:30	22:55	6:55
BST-Clow	06:00	14:15	15:00	23:00	23:30	06:00	Leachate	—	—	19:00	19:20	—	—
ETP	06:00	14:15	15:00	23:00	23:30	06:00	Collection T	—	—	—	—	—	—
TWT	06:00	14:15	15:00	23:00	23:30	06:00	Storage T	—	—	—	—	—	—
Filter Press	09:30	17:00	19:00	—	—	—	Hyd. Trans	—	—	—	—	—	—
Bags Out													

7. Analysis results :

Unit Name	Parameter, mg/Ltr. except pH											
	pH	TOC	COD	Total N	TDS	NH3-N	DO	MLSS	MLVSS	F Value		
EQT-1	8.42		3850		6960							
EQT-2	8.41		—	—								
EQT-3	8.31		3630		5240							
Hyd. T	8.23		2783									
PST	8.36		2530		5040							
50 HP	8.27		1650		4880							
40 HP	8.16		1448		4620		3.9	2800	1750			
30 HP	8.12		330		4620		3.2	2750	1680			
25 HP	—											
BST	8.10		462		6480							
Stg T-1	—											
Stg T-2	—											
Final Dis.	7.92		252		630	15						
Sample												

8. Remarks

Shift	Operator	Helper	Signature of S/I
1	EQ Oper. S.I	—	
2	Division	Bhatt/Soha	03 (Lunch S.I. Oper.)
3	PHARMADPA	Afief Patel	04
			05

D. B. Patel

DEEPAK NITRITE LIMITED • DAHEJ •

Observation-02: Flow meter is not provided at inlet of ETP.

Reply: We already have flow meter in inlet stream of ETP. Photographs of ETP inlet as under:

DEEPAK NITRITE LIMITED DAHEJ

Observation-03: The current flow meter readings were not matching with the last discharge of wastewater into GIDC pumping station.

Reply: We are taking meter reading from 06:00 AM to 06:00 AM (24Hrs.) on everyday basis. At the time of visit the meter reading mention in logbook is up to 06:00 AM@26.10.2021.

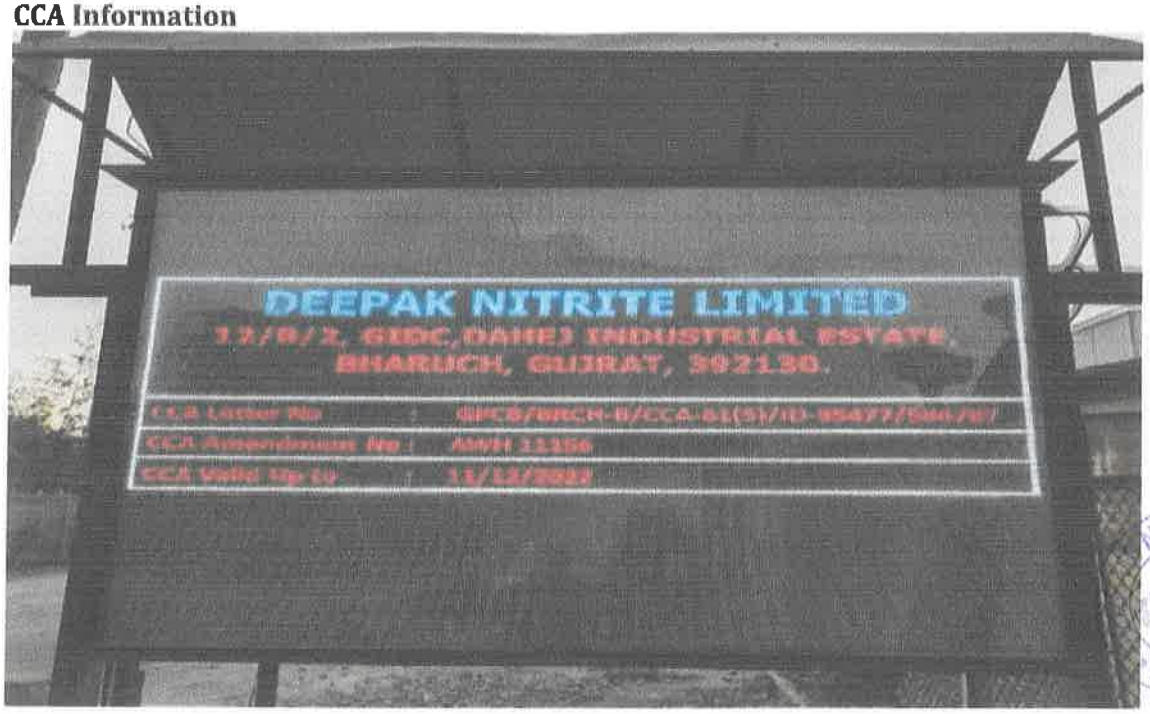
Our wastewater discharge in to GIDC pumping station is well within the limit. Details of wastewater discharge attached as under:

Effluent Discharge Data GPCB Permission for Effluent Discharge to GIDC Pumping Station: 598.8 KL/Day			
Month	**Reading**	**Total**	**Avg./Day**
April-21	621460	12508	417
May-21	634423	12963	418
June-21	647625	13202	440
July-21	661046	13421	433
August-21	678159	17113	552
September-21	691884	13725	458
October-21	700724	8840	285
November-21	712154	11430	381
December-21	725901	13747	443
January-22	739935	14034	453
February-22	752603	12668	452
March-22	766016	13413	433

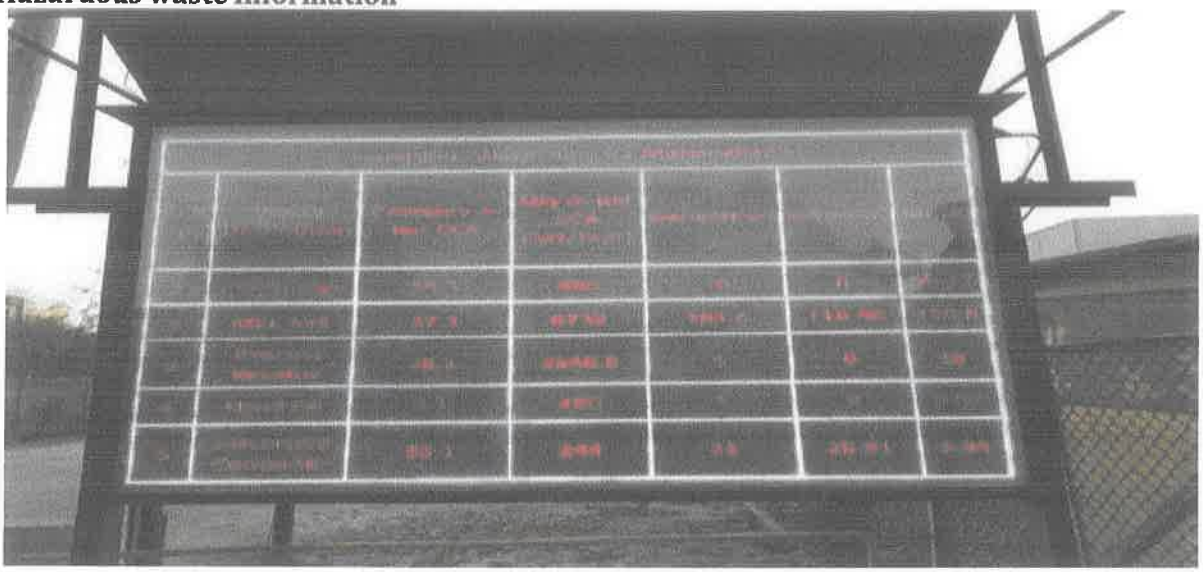
Observations-04: Hazardous waste and other relevant information were not updated on Display board.

Reply: We already have started display Hazardous waste and other relevant data and information on Digital display board like, Information of CCA, Production data, Ambient Air monitoring data, Stack emission data, Wastewater discharge and water consumption data. Photographs attached as under:

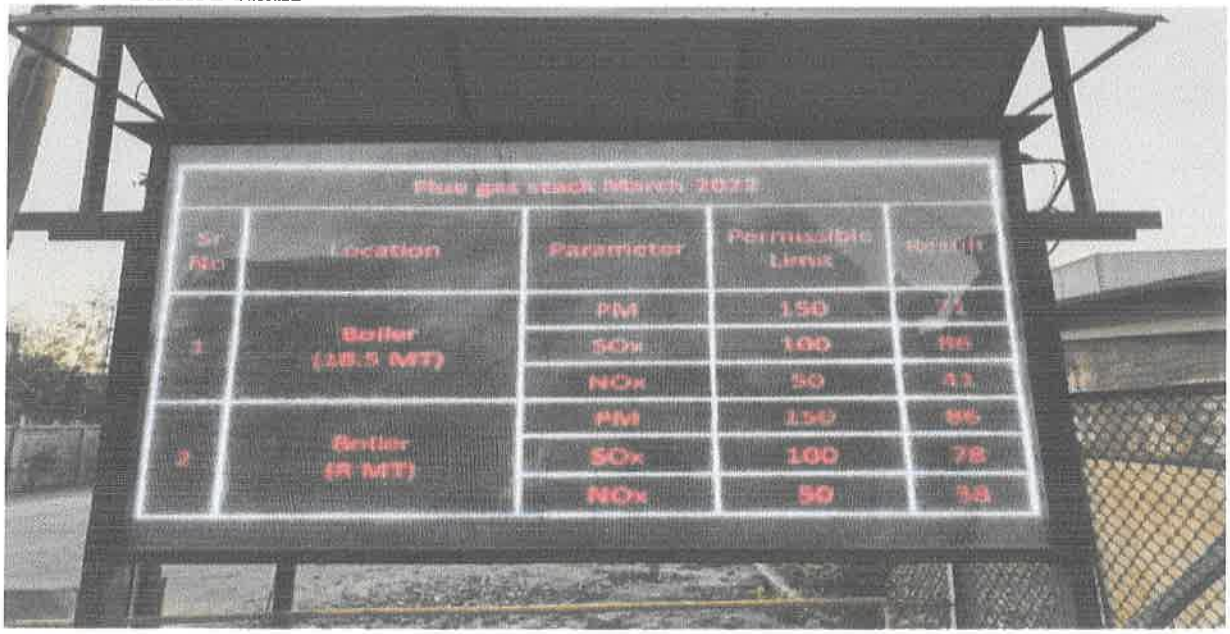
CCA Information



Hazardous waste Information



Flue Gas Stack Details

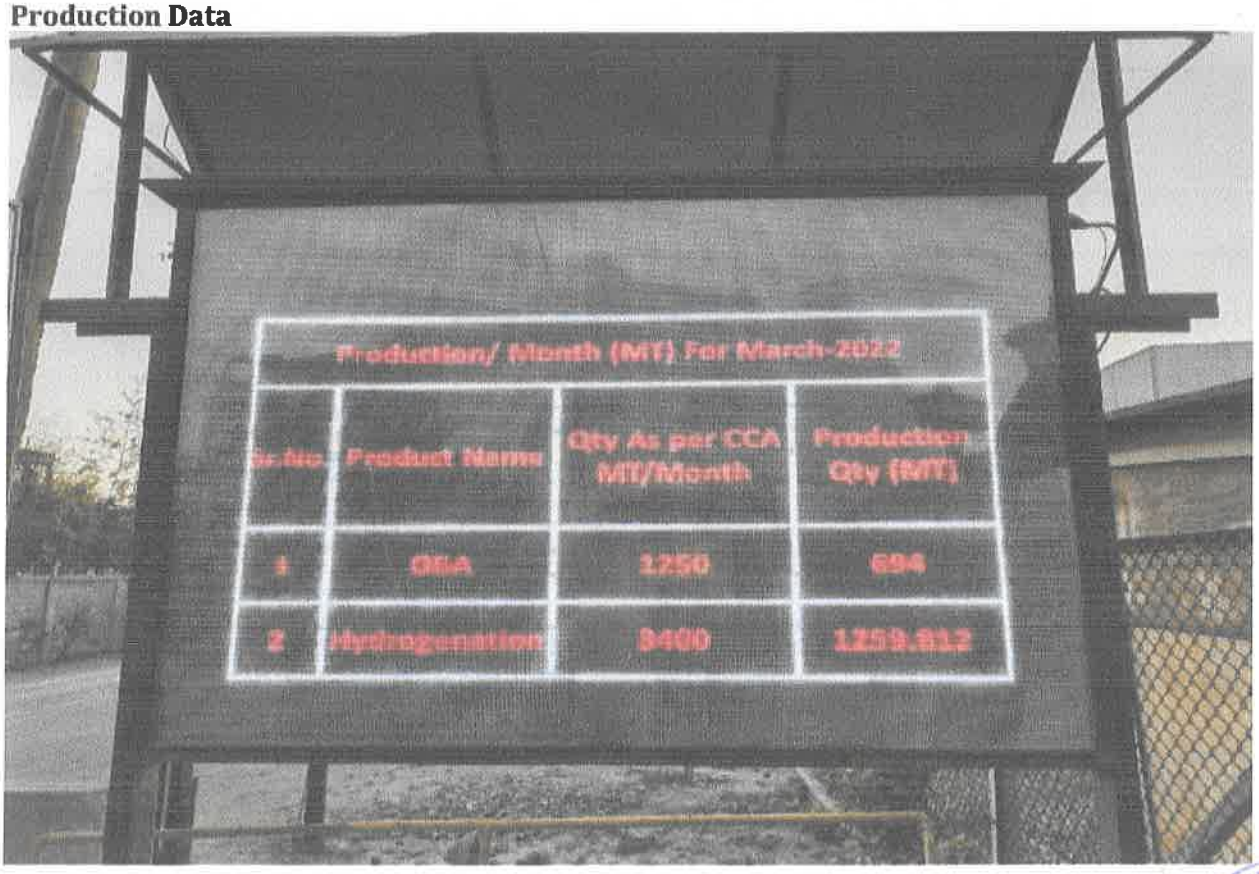


Ambient Air Details

Water Consumption **and Wastewater** Discharge Detail.

Sr. No.	Description	Qty As per CCA Kl./Month	Qty Kl./Month
1	Water Consumption	62511.4	58000
2	Waste Water Discharge	19705.6	19813

Production **Data**



Production/ Month (MT) For March-2022

Sr.No	Product Name	Qty As per CCA MT/Month	Production Qty (MT)
1	DEA	1250	694
2	Hydrogenation	3400	1259.812

Observation-05: Large quantity of ETP sludge / MEE salt (about 1000 MT) and stripped out material (About 10 MT) were stored in the storage shed without leachate collection facility. Leachate was observed in the hazardous waste storage shed.

Reply: We have a dedicated Hazardous waste storage shed with Pacca bottom (Concrete) along with proper leachate collection system.
We already have 02 nos. leachate collection facility in Hazardous waste storage yard.

DEEPAK NITRITE LIMITED DAHEJ

We are disposing our waste to M/s. BEIL Infrastructure limited-Dahej & Ankleshwar, M/s. Safe Enviro Pvt Ltd-Jambusar and M/s. Recycling Solution Pvt Ltd-Panoli on regular basis.

During monsoon season all GPCB approved landfill site had been closed so at that time we have stored approx. 1000MT waste in Hazardous waste storage yard.

We had started disposing of Hazardous waste soon after opening of TSDF site. Current Stock of Hazardous waste is 10 MT.

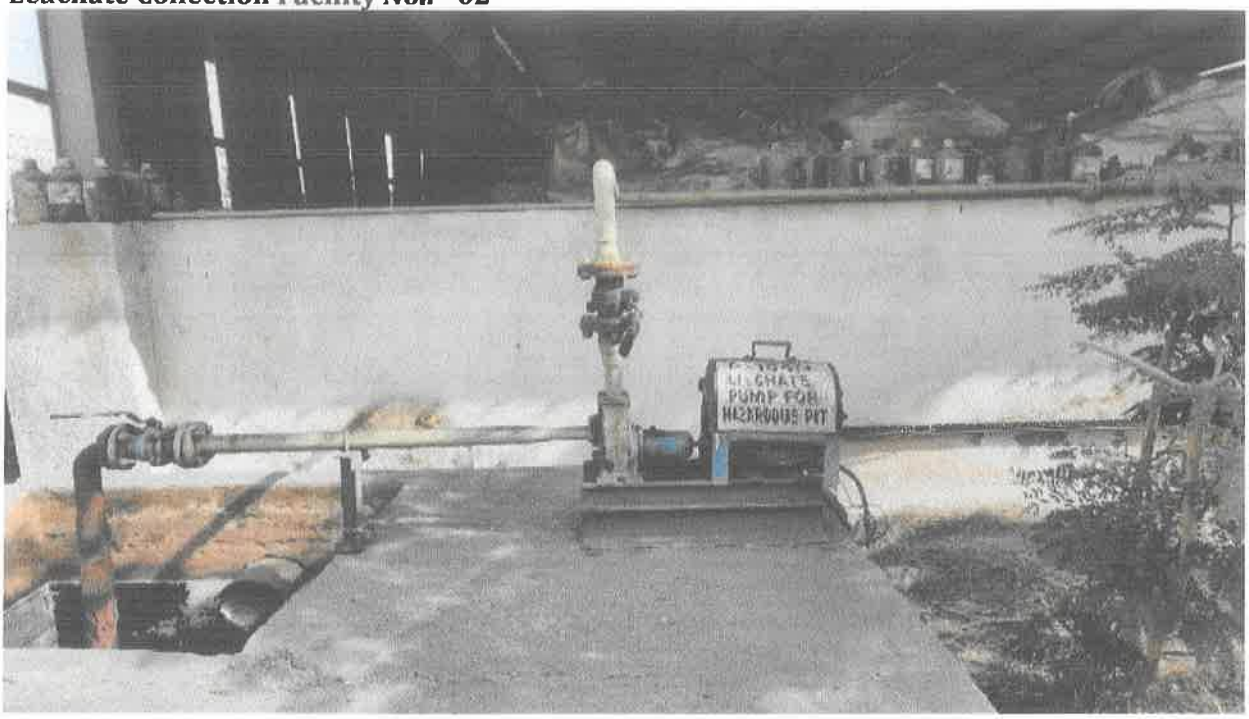
Photographs of Hazardous waste storage yard and leachate collection facility as under:

Photographs of Hazardous waste Storage Yard

Leachate Collection Facility No.: - 01

DEEPAK NITRITE LIMITED • DAHEJ •

Leachate Collection Facility No.: - 02



Leachate collection Trench.

Observation-06: Huge quantity of contaminated drums and bags were stored in the hazardous waste storage area and in open space.

Reply: We already have dedicated separate storage yard for bags and contaminated drums. The quantity was looking huge because of not discarded during monsoon time, the stock was pileup because of it. We have started discarding to authorized vendor. Photographs scrap yard attached as under:

DEEPAK NITRITE LIMITED
DAHEJ

Scrap yard for Bag Storage

Empty Drums Storage

We request your good office, kindly consider our above facts & figure and withdraw EDC amount from our company.

Thanking you,

For, **Deepak Nitrite Limited.**

Authorized Signatory

CC: 1. The Regional Officer, Gujarat pollution Control Board, Bharuch.
2. The President/Hon. Secretary, Dahej Industries Association, Dahej.

6054

DEEPAK PHENOLICS

Gujarat Pollution Control Board
RECEIVED ON
01 AUG 2022
23495 2

Ref: - L-DPL-GPCB-GEN-22018

28th July, 2022

To,
The Member Secretary, Bharuch
Gujarat Pollution Control Board,
Paryavaran Bhavan, Sector 10A,
Gandhinagar, Gujarat 382010

PCB-ID: 18808
Sub.: - Objections against proposed EDC in report of Joint Committee of May 2022 submitted to National Green Tribunal

Ref: - 1. Order dated 02.02.2022 of National Green Tribunal, Western Zone Bench, Pune passed in O A 60/2021
2. Report of Joint Committee May 2022 submitted to NGT
3. Order dated 06.07.2022 of National Green Tribunal, Western Zone Bench, Pune passed in O A 60/2021

Dear Sir,

We refer to the order dated 02.02.2022 of Hon NGT- Western Bench passed in O A 60/2021 whereby a Joint Committee was appointed. We also refer to the report of Joint Committee as also order dated 06.07.2022 of Hon NGT- Western Bench passed in O A 60/2021. As per the direction given in para 7(ii), we are submitting present objections as we have been erroneously named as one of the so-called defaulting industries in said report, for the reasons mentioned below:

1. The compliance status dated 02.02.2022 (in reference to the joint visit of CPCB and GPCB on 26.10.2021) in the matter of OA 60/2021) as given by the Joint Committee mentions that DPL- Dahej plant "meets the norms for outlet discharge prescribed by the GPCB and overall compliance is found satisfactory"; and had further qualified Deepak Phenolics Limited's Dahej plant as "complying"
2. We declare that we have not discharged any effluent directly to any river, pond, sea etc. and have discharged only in the designated sump of GIDC through pipeline. We discharged treated effluent into final pumping station as per GIDC and GPCB norms through HDPE pipeline.
3. We further declare that we have not resorted to any ghost connection to discharge any effluent.
4. In summary, we believe that inadvertently and erroneously, you have named us as a defaulting party liable to pay EDC. For reasons cited above, we strongly object to this.

DEEPAK PHENOLICS LIMITED
CIN: U24100GJ2011PLC064669
Dahej Division : 12/B/1, GIDC Dahej, Village : Ambheta, Taluka : Vagra, Dist : Bharuch, Gujarat, 392 130, India.
Tel. : +91 2641 280700 / 291495
Registered & Corporate Office :
1st Floor, Aaditya - II, Chhani Road, Vadodara - 390024. Gujarat, India.
Tel: +91 265 276 5500 | Fax: +91 265 276 5557
www.godeepak.com

We are also submitting for your quick reference reply against each of the points issued under show cause notice as directed by NGT, in **Annexure-1**

In addition, we would like to submit that as per order dated 22.02.2017 passed by Hon Supreme Court in Writ petition No 375/2012, we as industry are required to impart primary treatment to our liquid effluent discharge and release them in Common Effluent Treatment Plant set up by GIDC. It is expected that GIDC would support us in effluent treatment in case our system is under shutdown or, in rare occasions not performing well enough to meet the prescribed CCA norms.

We hope you will consider the above and withdraw your notice on us to pay EDC.

Thanking you,

Yours faithfully,
For Deepak Phenolics Limited

Authorized Signatory

Encl.: As above
CC to: GPCB Regional Office, Bharuch

DEEPAK PHENOLICS LIMITED
CIN: U24100GJ2011PLC064669
Dahej Division : 12/B/1, GIDC Dahej, Village : Ambheta, Taluka : Vagra, Dist : Bharuch, Gujarat, 392 130, India.
Tel. : +91 2641 280700 / 291495
Registered & Corporate Office :
1st Floor, Aaditya - II, Chhani Road, Vadodara - 390024. Gujarat, India.
Tel: +91 265 276 5500 | Fax: +91 265 276 5557
www.godeepak.com

O/C 6056

Ref: - L-DPL-GPCB-GEN-22011

To,
The Unit head, Bharuch
Gujarat Pollution Control Board,
Paryavaran Bhavan, Sector 10A,
Gandhinagar, Gujarat 382010

28th April, 2022

PCB-ID: 18808
Sub.: - Compliance update with respect to issued Show cause notice point no.02

Ref: - Letter No. SCN-637627 dated 05.04.2022

DPL Letter No.- L-DPL-GPCB-GEN-22010, Dated 07.04.2022

Dear Sir,
With regard to the above mentioned subject and reference, our compliance is as follows:

Query and Response.		
Sr.No	**GPCB Query/Suggestion**	**Justification/Action plan/Status**
2	Unit has not provided flow meter to RO feed.	We would like to update you that we have raised PO for procuring flow meter as per required specification. We assured you that we will complete flow meter installation within 14th August'2022 Find attached purchase order as an Annexure-1 for procuring flow meter

We assure to Board that we will abide by all rules and regulations and follow all conditions stipulated in CC&A.

Thanking you,

Yours faithfully,
For Deepak Phenolics Limited

Authorized Signatory

Encl.: As above
CC To: GPCB Regional office, Bharuch

11/5/22
Post Received
Gujarat Pollution Control Board
BHARUCH

DEEPAK PHENOLICS LIMITED
CIN: U24100GJ2011PLC064669
12/B/1, GIDC Dahej, Ambheta Village, Vagra Taluka, Bharuch - 392130, Gujarat, India.
Tel: +91 2641 291 495
Registered Office:
1st Floor, Aaditya - II, Chhani Road, Vadodara - 390024, Gujarat, India.
Tel: +91 265 276 5500 | Fax: +91 265 276 5557
www.deepakphenolics.com

6057

Annexure-1

PURCHASE ORDER -STANDARD(DOMESTIC)

P.O. No. 20238400377

Vendor Address :-	Purchase OrderNo	:	**20238400377**
ENDRESS + HAUSER (INDIA) PVT. LTD.	PO Creation Date	:	27-APR-22
7B, 7th Floor, Godrej One,	Buyer	:	M Kumar
Pirojshnagar Off. Eastern Express Highway,	Revision Number	:	0
Vikroli (East),	Revision Date	:	
Mumbai,MAHARASHTRA 400079	Revision Buyer	:	M Kumar
India	Currency	:	INR
Vendor Contact person details:-	Vendor No	:	15453
Ketan Patel	Vendor PAN No.	:	AAACE5283C
097277 00723, shyam.thakker@endress.com	Vendor Offer Ref.	:	
	Vendor GSTIN	:	27AAACE5283C1ZV
	Vendor StateCode	:	27
Ship To Address :-	Freight Terms	:	FOR
Deepak Phenolics Limited	Previous PO No.	:	
Deepak Phenolics Limited,, 12B/1, GIDC,	Payment Terms	:	30 Days Net
Dahej Industrial Estate,, Bharuch,Gujarat,	Terms of Delivery	:	
392130,	GST No.	:	24AADCD7856R1ZX
India	PAN No.	:	AADCD7856R
	State Code	:	24
Note: -			
If You are MSME Vendor then kindly Submit MSME Certificate, Ignore if already submitted.			

Item Details

S.No	Item Code (HSN /SAC)	Description	Delivery Date	Qty	UOM	Price	Amount
9)	653140041 / 0	Flowmeter, Type: Magnetic, Size: 4 inch, Rating: 150 cl, Integral LCD Display, Supply: 230 VAC, Output: 4-20 mA DC, HART, Area Classification: Non-Hazardous	01-AUG-22	2	Number	140000.00	280,000
1)						Integrated Gst@18%	50400
						Basic Order value	**280,000**
						Total Tax value	**50,400**
Figure In Word : Three Lac Thirty Thousand Four Hundred Only						**Total Order value**	**330,400**

Read understood and unconditionally accepted for and on behalf of:	**For Deepak Phenolics Limited**
ENDRESS + HAUSER (INDIA) PVT. LTD.	
Authorized Signatory	Authorized Signatory
Name :	

Special Instruction : 1) Duplicate copy of this Purchase Order must be duly signed and returned back within 7 days of its receipt by the supplier, failing of which Purchase order will be deemed to have been accepted unconditionally .2) Order No.must appear on the entire Dispatch document, invoices & Correspondence. All bills in duplicate must be sent to our Accounts Department for settlement. 3) Purchases will be governed by our General Terms & Conditions.

PO Approved by: Nirav Joshi

Created By: Manila Kumar

Annexure-1

6058

Ref: - L-DPL-GPCB-GEN-22010

07th April, 2022

To,
The Unit head, Bharuch
Gujarat Pollution Control Board,
Paryavaran Bhavan, Sector 10A,
Gandhinagar, Gujarat 382010

PCB-ID: 18808
Sub.: - Reply to Show cause Notice issued by GPCB dated 05.04.2022

Ref: - Letter No. SCN-637627 dated 05.04.2022

Dear Sir,
With regard to the above mentioned subject and reference, our compliances are as follows:

Query and Response.		
Sr.No	**GPCB Query/Suggestion**	**Justification/Action plan/Status**
1	Display board was not displaying the details.	We had provided digital display board at the factory entrance gate. Display board screening got discontinued due to network connectivity issue. We have now provided UPS battery backup arrangement to enhance reliability and performance of a display board screening. Digital display board photograph attached as Annexure-I.
2	Unit has not provided flow meter to RO feed.	There is a flow meter available at RO outlet. We are closely monitoring in process all ETP parameters on day to day basis. We assure you that we shall provide flow meter to RO feed latest by 30th April 2022.

We assure to Board that we will abide by all rules and regulations and follow all conditions stipulated in CC&A.

Thanking you,

Yours faithfully,
For Deepak Phenolics Limited

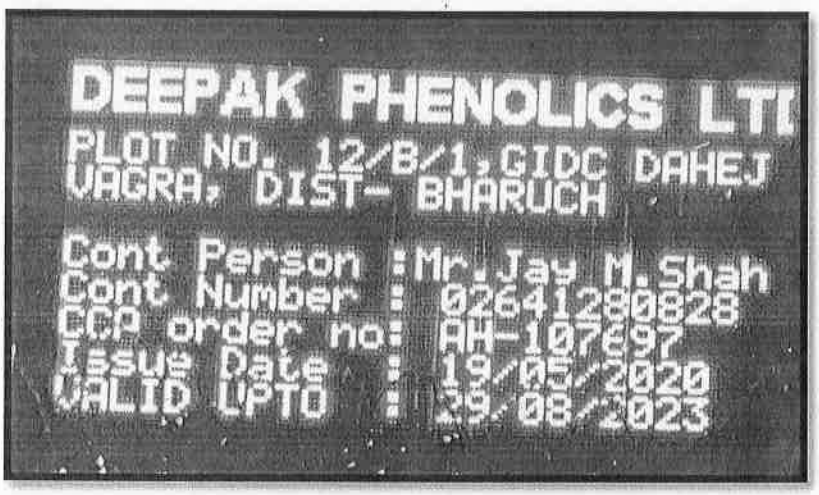
Authorized Signatory

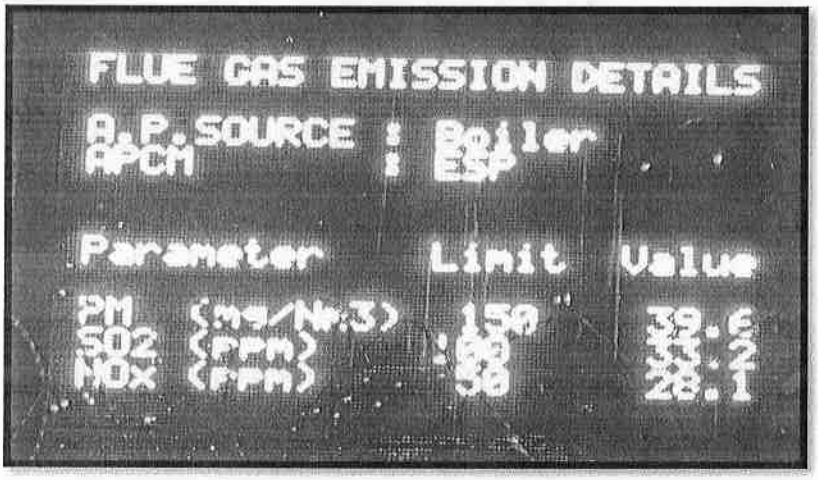
Encl.: As above
CC To: GPCB Regional office, Bharuch

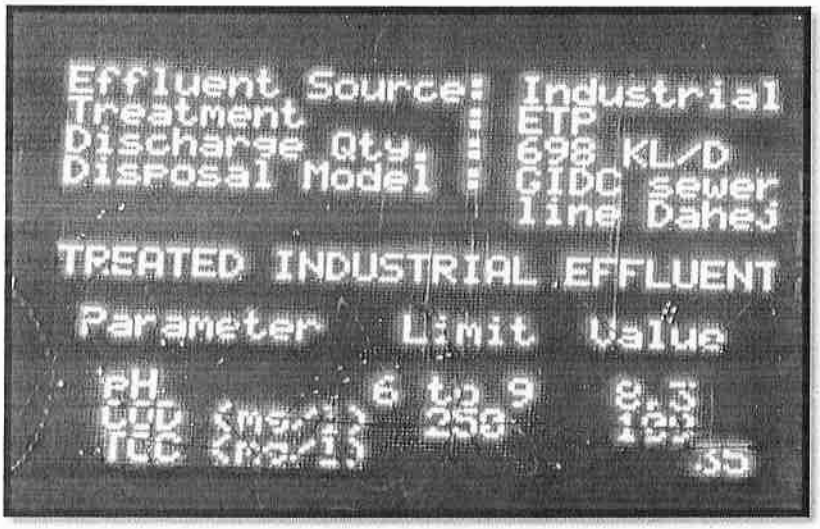
DEEPAK PHENOLICS
CIN: U24100GJ2011PLC064669
12/B/1, GIDC Dahej, Ambheta Village, Vagra Taluka, Bharuch - 392130. Gujarat, India.
Tel: +91 2641 291 495
Registered Office:
1st Floor, Aaditya - II, Chhani Road, Vadodara - 390024. Gujarat, India.
Tel: +91 265 276 5500 | Fax: +91 265 276 5557
www.deepakphenolics.com

Annexure-1

Digital display board photograph







6060

RESPONSIBLE CARE®

DEEPAK PHENOLICS

Ref: - L-DPL-GPCB-GEN-25006

12th July, 2025

To,
The Unit Head,
Gujarat Pollution Control Board,
Paryavaran Bhavan, Sector 10A,
Gandhinagar, Gujarat 382010

PCB-ID: 18808
Sub.: - Additional reply along with earlier submission of Objections against proposed EDC in report of Joint Committee on May 2022 to National Green Tribunal Dated 28th July, 2022

Ref:-
1. Objections against proposed EDC in report of Joint Committee on May 2022 to National Green Tribunal Dated 28th July, 2022
2. Order dated 02.02.2022 of National Green Tribunal, Western Zone Bench, Pune passed in OA 60/2021
3. Report of Joint Committee May 2022 submitted to NGT
4. Order dated 06.07.2022 of National Green Tribunal, Western Zone Bench, Pune passed in OA 60/2021

Dear Sir,

With reference to the subject matter, Please find below justification points against EDC imposed on our unit:

Proposed EDC is due to failure of two samples (Out of 9) as below:

Sr. No.	Sample Date	Sample collection Location	Sample Collection Time	Result of COD (mg/L)	Permissible Limit of COD (mg/L)
1	09/12/2018	Final Discharge Point at collection sump of Final Pumping Station	16:50 hrs	300	250
2	29/03/2019	Final Discharge Point of Unit at Final Pumping Station	23:15 hrs	328	250

1. We were not able to retain the counter sample and its analysis from our end since there was no communication regarding sample collection by GPCB then. This clearly does not match with the requirement of section 21 and its sub-sections from **"The Water (Prevention and Control of Pollution) Act, 1974".** However, our internal lab results for COD on 09/12/2018 is 180 mg/L and on 29/03/2019 it is 243 mg/L which is well within the prescribed standards.

DEEPAK PHENOLICS LIMITED
CIN: U24100GJ2011PLC064669
Dahej Division :
12/B/1, GIDC Dahej, Village : Ambheta, Taluka : Vagra, District : Bharuch - 392 130, Gujarat, India.
Registered & Corporate Office:
4th Floor, Fermenter House, Alembic City, Alembic Avenue Road, Vadodara – 390 003, Gujarat, India.
Tel: +91 265 276 5200 / 276 5500
Email : investor.dpl@godeepak.com I www.godeepak.com

14/7/25

DFE-I
G. P. C. BOARD
BHARUCH
Inward No. 50096
17.07.25
23.07.25
14/07/2025

RESPONSIBLE CARE®
OUR COMMITMENT TO SUSTAINABILITY

DEEPAK PHENOLICS

2. We request, instead of considering Average organic concentration (1019.1 mg/L), individual Severity of non-compliance (in our case 328 mg/L) shall be taken into consideration for EDC calculation.

3. The quantity considered for EDC charge calculation is for the duration of five years. However, apart from above mentioned sample deviation, GPCB visited our site multiple times subsequently and no non-compliance was observed during these visits. Please find below table for the details of the same:

Sr. No.	Date of GPCB Visit	Sample collection Location	Result of COD (mg/L)	Permissible Limit of COD (mg/L)
1	25/04/2019	From the treated wastewater holding cum discharge tank (Guard Pond)	220	250
2	29/07/2019	From treated waste water collection tank	38	250
3	04/01/2020	Final discharge point of ETP	143	250
4	28/10/2020	From Treated waste water disposal tank	111	250
5	06/04/2021	Final Treated waste water holding tank	64	250
6	14/09/2021	Waste water sample collected from treated tank	51	250
7	26/10/2021	Final Outlet of the ETP	142	250

Hence, the EDC calculation shall be based on quantities for the period from Date 09/12/2018 to 24/04/2019 i.e the day before next GPCB visit compliance. With this consideration, the quantity gets reduced from 870639.05 KL to 105698 KL. We request to consider the EDC charges based on this revised quantity of 105698 KL.

4. We re-iterate our commitment towards cleaner environment. As a commitment, we have taken many initiatives to reduce wastewater generation and increase recycling highlighted in **Annexure-1.**

DEEPAK PHENOLICS LIMITED
CIN: U24100GJ2011PLC064669
Dahej Division :
12/B/1, GIDC Dahej, Village : Ambheta, Taluka : Vagra, District : Bharuch - 392 130, Gujarat, India.
Registered & Corporate Office:
4th Floor, Fermenter House, Alembic City, Alembic Avenue Road, Vadodara – 390 003, Gujarat, India.
Tel: +91 265 276 5200 / 276 5500
Email : investor.dpl@godeepak.com I www.godeepak.com

6062

RESPONSIBLE CARE®
OUR COMMITMENT TO SUSTAINABILITY

DEEPAK PHENOLICS

In view of this submission above, we request you to revise the EDC in our case.

Thanking you,

Yours faithfully,
For Deepak Phenolics Limited

DEEPAK PHENOLICS LIMITED DAHEJ

Authorized Signatory

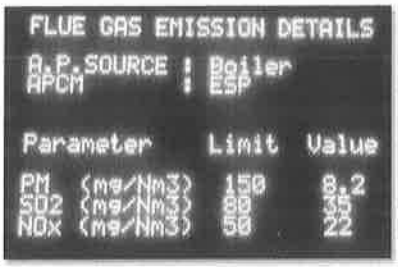
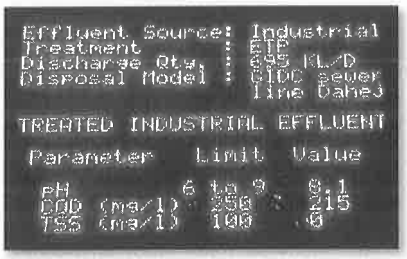
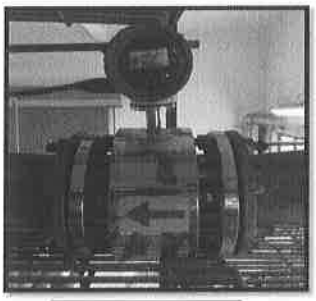
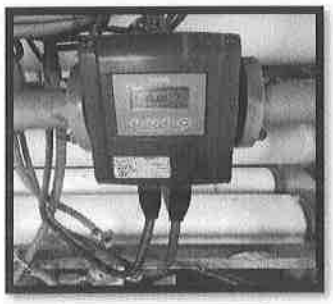
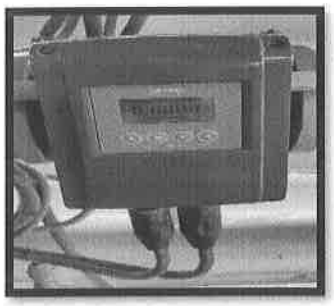
Encl.: As above
CC to: GPCB Regional Office, Bharuch

DEEPAK PHENOLICS LIMITED
CIN: U24100GJ2011PLC064669
Dahej Division :
12/B/1, GIDC Dahej, Village : Ambheta, Taluka : Vagra, District : Bharuch - 392 130, Gujarat, India.
Registered & Corporate Office:
4th Floor, Fermenter House, Alembic City, Alembic Avenue Road, Vadodara – 390 003, Gujarat, India.
Tel: +91 265 276 5200 / 276 5500
Email : investor.dpl@godeepak.com I www.godeepak.com

Annexure-1

Environmental Initiatives at M/s. Deepak Phenolics Ltd.

1. Current Status of SCN:

Sr. No.	GPCB Query/Suggestion	Current Status
1	Digital Display Board was not showing the details.	Digital Display Board is in working condition and showing data.  
2	Unit has not provided flowmeter to RO feed.	Flowmeter provided at RO feed and in working condition.  RO-1 Inlet  RO-1 Outlet RO-2 Inlet  RO-2 Outlet

2. Environmental Initiatives to increase Wastewater Recycling:

- By improved RO performance and ETP efficiency, we have been able to increase our wastewater recycle quantity:

Year	Recycle water quantity (KL)	Wastewater Generation (KL)	Percentage Recovery
2022-2023	239056	490944	48.69 %
2023-2024	247047	488137	50.61 %
2024-2025	282197	529280	53.31 %

- By increasing recycling, wastewater disposal quantity has gradually reduced:

Year	Wastewater Disposal (KL)
2022-2023	251888
2023-2024	241090
2024-2025	247083

- We have replaced our filters and assembly of Ultra filtration which is placed just before RO to increase overall recycle quantity with instalment cost of **25 Lakhs.**

- Focusing on increasing recycling quantity nearly about 100 %, we are in process to implement a project called **TRL-RAIN™** (Patented technology) which is to be placed before ETP with an instalment cost of **11.7 Cr.**

Technology Brief:

- TRL-RAIN™ water is a low temperature application developed for evaporation of water and condensation from any kind of Chemical induced water, produced from various industries.
- The hazardous effluent which needs to be treated is pumped in the storage tank. From there it is feed to the Evaporator and by Circulating Pump it is

continuously circulated in the Evaporator. There is a heat exchanger, which is heated by a heat source, and the heat source maintains the effluent in the Evaporator up to 80º C (Max.) .

- Due to heating of the Waste water vapors are generated in the Self-cleaning Evaporator, which are extracted by a specially designed vacuum blower and sent to a Heat Exchanger (First Condenser), where in the low boilers/ VoC's are condensed and the heavy water vapors will flow to the Second Condenser which is having a cooling water circuit. An energy efficient design.
- The heated dry air from condenser creates a cyclonic effect in the specially designed evaporator giving an multi effect evaporation.
- Whatever water is evaporated and condensed, similar quantity of water to be treated is pumped into the system automatically and the plant runs in continuous mode.

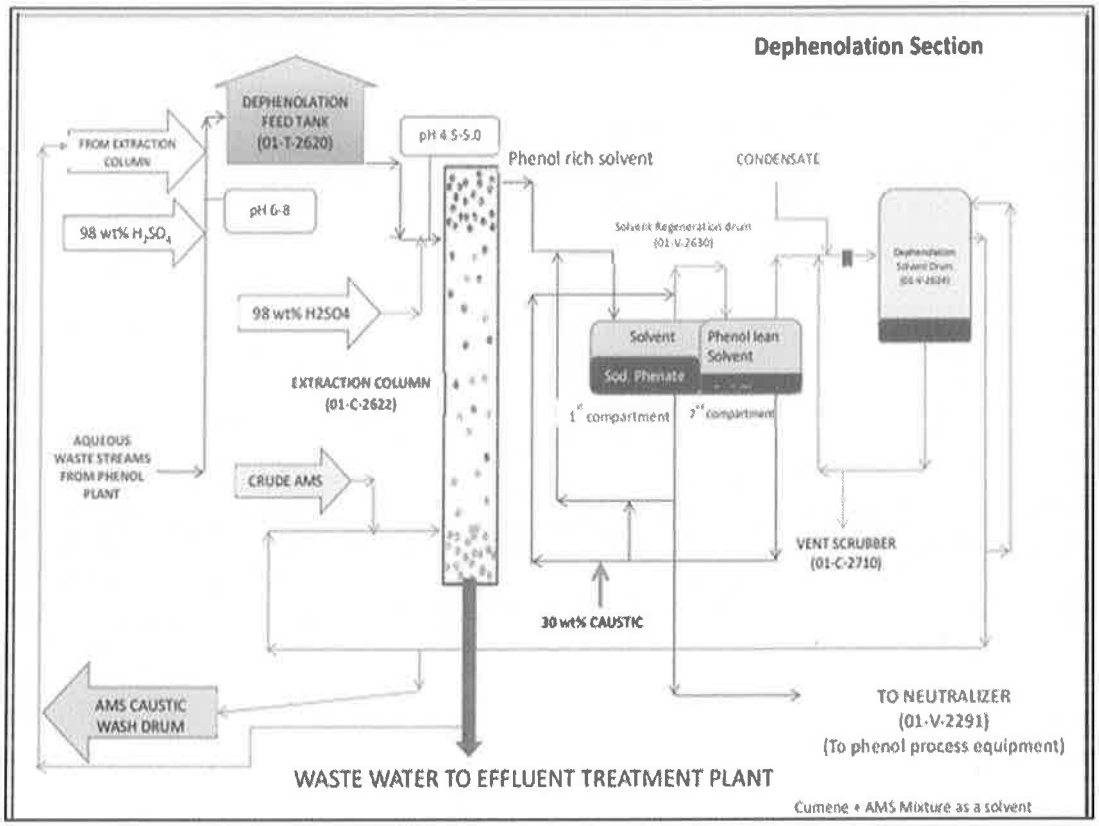
➢ By Implementing Improvement practices in ETP such as lowering lime consumption, instalment of new aerators, blowers for secondary system with an installment cost of 2.2 Cr, etc has shown immense sludge reduction comparing with past years:

Year	Sludge Generation (MT)	Production (MT)	sludge generation Per MT of Production
2022-2023	198.87	907166.23	0.00021
2023-2024	170.8	1016115.01	0.00016
2024-2025	112	1109770.03	0.00010

➢ After successful trial and run, CPCB granted SOP to utilize ETP sludge in CFBC Boiler along with coal under Rule-9. This gives benefit of reduced coal consumption, Utilization of hazardous waste as fuel, Reduce load on TSDF Landfilling site, reduce scope 3 emission in transferring of hazardous waste from Generation site to TSDF disposal facility.

3. Environmental Initiatives to improve effluent quality:

➢ Dephenolation Process:



- Dephenolation section is used to remove phenol from aqueous waste streams by using solvent extraction method. Another purpose is to prevent overloading biological treatment facilities in downstream wastewater treatment processes, where the final effluent must meet the applicable environmental standards for phenol.
- Phenol is removed from the wastewater using a multistage solvent extraction column. Phenol is first extracted from aqueous phase into organic solvent. The aqueous phase is sent offsites for biotreatment. The phenol rich solvent is solvent is regenerated in two stages with caustic.
- In acidic solution, phenol exists as its molecular form whereas in alkaline solution, it exists as sodium phenate form. Phenol may thus be extracted into organic solvent or alkaline solution depending upon the solution pH.

CCA-38 **6067** 187/C

Ref: SRF/ENV/GPCB/2022-23/30
PCB ID: 24521

By Hand Delivery / Courier / R.P.A.D
Date: 25/07/2022

To,
The Unit Head (Bharuch)
Gujarat Pollution Control Board,
Paryavaran Bhavan, Sector 10-A,
Gandhinagar – 382010.

7
29/7/22

Gujarat Pollution Control Board
RECEIVED ON
26 JUL 2022
27
22479 2

Subject: Objections to Environment Damage Compensation charges

Reference: Joint Committee report and the order of 6th July 2022 before the Hon'ble National Green Tribunal, Pune Bench in OA no. 60/2021(WZ)

Dear Sir,

We, SRF Limited has initially started operations in the year 1970. The Company, amongst other businesses, is into the manufacture of fluorochemicals, and specialty chemicals business at GIDC Dahej. The present unit was setup in the year 2012. The unit has valid Consent and Operation / Authorization (CCA) vide AWH-119079 granted on 02/06/2022 valid up to 19/01/2027. Previously the provisional CCA was issued on 04/12/2021 which was valid till 11/01/2022. Before the expiry of the said CCA, the Company applied for renewal of the same and the renewed CCA was granted on 02/06/2022, which is subsisting till 19/01/2027. The CCA copy is attached as per ANNEXURE-I.

This letter is being filed on the ground that the Hon'ble National Green Tribunal vide order dated 29/10/2021 in the present case directed the CPCB and GPCB for joint inspection of Red Category industries discharging wastewater in drainage network maintained by GIDC. Accordingly, the report was submitted vide order dated 02/02/2022 and Hon'ble Tribunal directed the State of Gujarat, CPCB and GPCB to take action and recover the Environmental Damage Compensation (EDC) from the Companies, not following the prescribed norms.

It is humbly stated that the company was not aware of the either the aforementioned Original Application No. 60 of 2021 or proceedings being conducted before the Hon'ble National Green Tribunal (WZ). The Company came to know about the proceeding only after the Dahej Industries Association (Association) held a meeting of all its members on 18/06/2022 and after the name of Company appeared in the list in the Joint Committee Report of May 2022. On coming to know of the above proceedings, the Company appeared for the first time on 6thJuly, 20222 before the Hon'ble Tribunal. That to the knowledge of the Company neither any visit was caused by any of the authorities namely Hon'ble Courts, Board, CPCB or any Joint Committee, nor any Samples / Reports were taken by them from the premises of the Company at any point of time. The Company has also not received any notice or communication in regard to inspection/ collection of sample/ non-compliances and/ or the demand of Environmental Damage Compensation from yourself or Joint Committee or other person or Authority. The Company has also filed its detailed Response before the Hon'ble Tribunal on 6th July 2022 which may be read as part and parcel of this communication to the extent applicable.

SRF LIMITED
Plot No. D-2/1,
GIDC Phase-II, PCPIR,
Dahej - 392130
Taluka : Vagra,
Dist. Bharuch
State : Gujarat
Ph.: 02642 - 289-201/202

Regd. Office :
The Gallaeria, DLF, Mayur Vihar,
Unit No. 236 & 237, Second Floor,
Mayur Place, Nodia Link Road,
Mayur Vihar Phase I Extn,
Delhi - 110 091
CIN No. L18101DL1970PLC005197
http://www.srf.com
E-mail : info@srf.com

189\c

A copy of the said Response is annexed hereto for your reference at **ANNEXURE – R-2**

The wastewater treatment and operation is being carried out under the best management practices. The unit has full-fledged effluent treatment plant (ETP) to treat wastewater generated from the existing unit. ETP consists of primary, secondary and tertiary treatment plants. The existing domestic, industrial and utility effluent is treated in different treatment scheme as;

a) High TDS Effluent treatment scheme
b) Low TDS Effluent Treatment Scheme
c) AHF Effluent Treatment Scheme
d) Sewage Treatment Scheme
e) Utility Effluent stream generated from cooling tower and boiler blow down.

The details of existing effluent treatment scheme are attached **as per ANNEXURE-R-2.**

The treated wastewater is discharged to GIDC Common disposal system up to sea for final disposal to NIO designated point after confirming discharged norms as per CCA & GIDC. The unit has permission to discharge 2399 KLD to common disposal system to sea vide DEE/Drg/GIDC/BRC/293 dated 10/09/2020. The same is attached **as per ANNEXURE-R-3.** The unit has discharged 1516 KLD in FY 19-20, 1781 KLD in FY 20-21 and 1457 KLD in FY 21-22 and hence complied to discharge quantity norms with reference to permitted quantity of 2399 KLD.

The company is strictly adhering to the environmental norms and complying with the consent stipulated in CCA. As an environment protection and measures, the company has environment management program under which periodic monitoring is carried out for air, water, soil and hazardous waste through NABL accredited laboratory. Since inception up to FY 22-23, the company has spent Rs. 97 crores for environment protection and measures relating thereto and Rs. 219 crores in last 3 years for operation and maintenance.
As part of best management practices, we have installed online effluent monitoring system connected to CPCB/GPCB server which shows that there is no deviation in COD level of wastewater discharge to GIDC common disposal system in last 3 years. In addition, samples were collected by GPCB/CPCB from 01/12/2021 to 31/05/2022 from the final discharge point of CETP, Dahej maintained by GIDC. None of these Reports i.e., Online Monitoring system Reports of last 3 years of the GPCB/ CPCB for the period from 01/04/2019 to 31/05/2022, show any deviation in COD level of wastewater discharge to GIDC common disposal system. Copy of the online records retrieved from CEMS are annexed hereto and marked **as per ANNEXURE – R-4.** Further, there is no deviation in COD level of treated wastewater analysis results carried out by GPCB in last 3 years (for the period from 01/04/2019 to 31/05/2022) and copy of the results of sample collected, analysed for the period from 01/012/2021 to 31/05/2022 are annexed hereto and marked **as per ANNEXURE – R-5.**

It is observed that the GPCB has calculated Rs.2,67,59,944/- as the Environmental Damage Compensation (EDC). The GPCB has not communicated the same to the Company till date. The Company has not been communicated about any fact, data, number of days for which calculations done, days of deviation, percentage/ extent of deviation, basis of calculation, components, break up, any sample or any other information with regard to the said EDC. The entire report does not give justification of the fastening the EDC on the Company. In terms of the report, it appears that the formula for calculation of Environmental Compensation is: EC=PIxNxRxSxLF

Where,
EC-Environmental Compensation in Rupees
PI-Pollution Index of the industrial Sector
N-Number of days the violation has taken place
R-Factor of EC in Rupees
S-Factor for scale of operation of industrial unit
LF-Location Factor

Privileged/Confidential Mail - This mail, document can be used by recipients for its intended purpose only.

The GPCB has been periodically monitoring the sites and the SRF is operating based on the permissions given by them and within the norms prescribed. There is online monitoring installed and the same is connected to the servers of the CPCB and GPCB. There is no mention of any of the factors/ norms/ reasons or justification whatsoever which purportedly have been not complied by us either fully or partially, for any period of past, which have formed the basis of the proposed EDC. We believe that in the said report, it has been presumed without referring to any factual data or records that the Company is a polluter and liable to pay the EDC, calculated on entirely wrong premises, facts, data and values.

As per above best treatment practices available at site and, analysis results and our commitment towards environment, we request you to waive off environment damage compensation levied to us.

Thanking You,

Yours faithfully,

For SRF Limited

Authorized Signatory
A.K Singh Gangwar
(SVP - Head of Works)

CC to: The Scientist D, CPCB, Vadodara.

Restricted use: This mail, document can be used by recipients for its intended purpose only

6070

Annexure - R-1

198/c

Gujarat Pollution Control Board
Paryavaran Bhavan, Sector-10/A,
Gandhinagar - 382010
Tele : 23222756

Provisional Consent Order (CCA)

Consent No: AWH-119079 Valid upto: 10/01/2027

Application : CtO:CCA-Renewal, No. 208267 Dt. 22/12/2021, Granted On: 02/06/2022 | PCB Id:24521

Besides streamlining and simplifying of regulatory regime,Gujarat Pollution Control Board has taken initiative in from of introduction of Consolidated Consent and Authorization (CC&A) which provides for a one shot application and clearance of the consents under Water Act,Air Act and Authorization under Hazardous Wastes Rules for a period of 5 years.
Board issues consolidated consent and Authorization to an industrial unit for operation of plant/carrying out industrial activity specifying following conditions.

Consolidated Consent and Authorisation

In exercise of the power conferred under section-25 of the Water (Prevention and Control of Pollution) Act-1974, under section-21 of the Air (Prevention and Control of Pollution)Act-1981
and Authorization under rule 3(e)& 5(5)of the Hazardous Waste (Management, Handling and Transboundary Movement) Rules'2008 framed under the E(P)Act-1986.
And whereas Board has received consolidated Application No.(CtO:CCA-Renewal) 208267 and Dated 22/12/2021 for the consolidated consent and authorization(CC&A) of this Board under the provisions / rules of the aforesaid Acts Consent & Authorization is hereby granted as under.

CONSENT AND AUTHORISATION : (under the provisions / rules of the aforesaid environmental acts)

To,
M/s. Srf Limited,
D-IDA, Dahej,
Dahej,City : Dahej,
Dist : Bharuch, Tal : Vagra, SIDC : Dahej2
Phone : -

1. Consent Order No: AWH-119079 Valid Upto: 10/01/2027

2. All Conditions under the AIR ACT-1981 WATER ACT-1974 HAZARDOUS ACT-2008 shall be Applicable to you as mentioned in the detailed Consent Order ***

Consented CETP: Not Linked to any CETP
Consented TSDF: Bharuch Enviro Infrastructure Ltd is -Dahej[40137]

3. GENERAL CONDITIONS :-

a) This order is provisional order and detailed order is considered as final.
b) All the conditions & provisions under the Water Act 1974, the Air Act 1981 and the Environment (Protection) Act – 1986 and the rules made there under shall be complied with *.
c) All the conditions & provisions under the Hazardous Waste (Management, Handling and Trans boundary Movement) Rules 2008 as amended shall be complied
d) The applicant shall provide portholes, ladder, platform etc at chimney(s) for monitoring the air emissions and the same shall be open for inspection to/and for use of Board's staff. The chimney(s) vents attached to various sources of emission shall be designed by numbers such as S-1, S-2, etc. and these shall be painted/ displayed to facilitate identification.
e) The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standards in respect of noise to less than 75dB(A) during day time and 70dB(A) during night time. Daytime is reckoned in between 6 a.m. and 10 p.m. and nightime is reckoned between 10 p.m. and 6 a.m.
f) In case of change of ownership/management the name and address of the new owners/ partners/ directors, prop/cipal or equipment or working conditions as mentioned in the consents form / order should immediately be intimated to the Board.
g) Industry shall have to display data outside the main factory gate with regard to quantity and nature of hazardous chemicals being handled in the plant, including waste water and air emissions and solid hazardous wastes generated within the factory premises.
h) The CCA shall be produced for inspection at the request of an officer authorized by the Gujarat Pollution Control Board.
i) Any unauthorized change in personnel, equipments or working conditions as mentioned in the CCA order, by CCA holder shall constitute a breach of this CCA.
j) Adequate plantation shall be carried out all along the periphery of the industrial premises in such a way that the density of plantation is atleast 1000 trees per acre of land and a green belt of 5 meters width is developed.
K) The applicant shall have to submit the returns in prescribed form regarding water consumption and shall have to make payment of Water Cess to the Board under the Water Cess Act- 1977.

*** Note : ACT-Specific, Industry-specific, Area-specific Conditions alongwith Product, Waste water effluent details shall be precisely mentioned in the DETAILED Consent Order.

*** Note :This is only provisional communication. The final Consent/Authorization in hard copy with duly signed by competent authority shall the final and valid Consent/Authorization.

For and on behalf of
Gujarat Pollution Control Board

(Member Secretary)

6071

195 C

Gujarat Pollution Control Board
Paryavaran Bhavan, Sector-10/A,
Gandhinagar - 382010
Tele : 23222756

Provisional Consent Order (CCA)

Consent No. AWH-116118 Valid upto: 11/01/2022

Application : CtO:CCA-Re Apply, No. 201959 Dt. 14/09/2021, Granted On: 04/12/2021 | PCB Id:24521

Besides streamlining and simplifying of regulatory regime,Gujarat Pollution Control Board has taken initiative in from of introduction of Consolidated Consent and Authorization (CC&A) which provides for a one shot application and clearance of the consents under Water Act,Air Act and Authorization under Hazardous Wastes Rules for a period of 5 years.
Board issues consolidated consent and Authorization to an industrial unit for operation of plant/carrying out industrial activity specifying following conditions.

Consolidated Consent and Authorisation

In exercise of the power conferred under section-25 of the Water (Prevention and Control of Pollution) Act-1974, under section-21 of the Air (Prevention and Control of Pollution)Act-1981
and Authorization under rule 3(e)& 5(5)of the Hazardous Waste (Management, Handling and Transboundary Movement) Rules'2008 framed under the E(P)Act-1986.
And whereas Board has received consolidated Application No.(CtO:CCA-Re Apply) 201959 and Dated 14/09/2021 for the consolidated consent and authorization(CC&A) of this Board under the provisions / rules of the aforesaid Acts Consent & Authorization is hereby granted as under.

CONSENT AND AUTHORISATION : (under the provisions / rules of the aforesaid environmental acts)

To,
M/s. Srf Limited,
D-II/I, Dahej,
Dahej,City : Dahej,
Dist : Bharuch, Tal : Vagra, SIDC : Dahej2
Phone : -

1. Consent Order No: AWH-116118 Valid Upto: 11/01/2022

2. All Conditions under the AIR ACT-1981 WATER ACT-1974 HAZARDOUS ACT-2008 shall be Applicable to you as mentioned in the detailed Consent Order ***

Consented CETP: Not Linked to any CETP
Consented TSDF: Bharuch Enviro Infrastructure Ltd is -Dahej[40137]

3. GENERAL CONDITIONS :-

a) This order is provisional order and detailed order is considered as final.
b) All the conditions & provisions under the Water Act 1974, the Air Act 1981 and the Environment (Protection) Act 1986 and the rules made there under shall be complied with *
c) All the conditions & provisions under the Hazardous Waste (Management, Handling and Trans boundary Movement) Rules 2008 as amended shall be complied
d) The applicant shall provide portholes, ladder, platform etc at chimney(s) for monitoring the air emissions and the same shall be open for inspection to,and for use of Board's staff. The chimney(s) vents attached to various sources of emission shall be designed by numbers such as S-1, S-2, etc. and these shall be painted/ displayed to facilitate identification.
e) The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standards in respect of noise to less than 75dB(A) during day time and 70dB(A) during night time. Daytime is reckoned in between 6 a.m. and 10 p.m. and nighttime is reckoned between 10 p.m. and 6 a.m.
f) In case of change of ownership/management the name and address of the new owners/ partners/ directors/ proprietor or equipment or working conditions as mentioned in the consents form / order should immediately be intimated to the Board.
g) Industry shall have to display data outside the main factory gate with regard to quantity and nature of hazardous chemicals being handled in the plant, including waste water and air emissions and solid hazardous wastes generated within the factory premises.
h) The CCA shall be produced for inspection at the request of an officer authorized by the Gujarat Pollution Control Board.
i) Any unauthorized change in personnel, equipment or working conditions as mentioned in the CCA order by CCA holder shall constitute a breach of this CCA.
j) Adequate plantation shall be carried out all along the periphery of the industrial premises in such a way that the density of plantation is atleast 1000 trees per acre of land and a green belt of 5 meters width is developed.
K) The applicant shall have to submit the returns in prescribed form regarding water consumption and shall have to make payment of water cess to the Board under the Water Cess Act- 1977.

*** Note : ACT-Specific, Industry-specific, Area-specific Conditions alongwith Product, Waste water effluent details shall be precisely mentioned in the DETAILED Consent Order.

*** Note :This is only provisional communication. The final Consent/Authorization in hard copy with duly signed by competent authority shall the final and valid Consent/Authorization.

For and on behalf of
Gujarat Pollution Control Board

(Member Secretary)

6072

197/C

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

By R.P.A.D.

CONSOLIDATED CONSENT AND AUTHORIZATION (CC & A – Amendment)
CCA AMENDMENT NO: AWH - 116118

NO: GPCB/BRCH-B/CCA- 38(17)/ID-24521/ DT: /03/2022

To,
M/s. SRF Ltd.
Plot No: D-II/I, GIDC, Dahej
Tal: Vagra, Dist: Bharuch.

SUB: Amendment in Consolidated Consent & Authorization (CC&A) under various Environmental Acts/ Rules.
REF: (1) Your application No. 201959 dated 14/09/2021.
(2) CCA No. AWH - 104607 dated : 25/10/2019

This has reference to the CCA order No: AWH-104607, issued vide letter no. GPCB/ BRCH-B/ CCA-38(13)/ID-24521/525661, dated 25/10/2019 under the provisions of the various Environmental Act/ Rules, which stands amended as under.

The Validity of this order shall be up to 11/01/2022.

1. **The list of proposed products to be manufactured shall be as follows:**

Sr. No.	Name of Product	Existing (MT/Annum)	Additional Capacity (MT/Annum)	Total Proposed Capacity (MT/Annum)
1	Trifluoro Acetic Acid	2000	0	2000
2	Speciality □□□□□□□□			
i	Tetrafluorobenzyl Alcohol	9900	0	9900
ii	Ethyldifluoroacetate			
iii	Ethyltrifluroacetate			
iv	Ethyltrifluoroacetoacetate			
v	Amino crotonate			
vi	Trifluoroacetic anhydride			
vii	Pentafluorobenzoic Acid			
viii	Pyrazole Acid			
ix	Chloro trichloro Methyl – Cyclopentene			
x	2-methyl-4- (1,1,1,2,3,3,3-heptafluoro-2-propyl aniline			
xi	Fluoromethyl ester			
xii	Diphenylphenol			
xiii	Tetrafluoropropene -1234yf			
xiv	Isobutyl Acetophenon			
xv	2-Bromo-5-fluorobenzotrifluoride			
xvi	2,2-Difluroethylamine			
xvii	2,3-Dichloro-5-trifluoromethyl-pyridine			

Clean Gujarat Green Gujarat
ISO - 9001 - 2008 & ISO - 14001 - 2004 Certified Organisation

199 C

xviii	N[1-(6-Chloro-3-pyridinyl)methyl)-2(1H)-pyridinylidene]-2,2,2, trifluoroacetamide			
xix	(N-(4-fluorophenyl)-2-hydroxy-N-isopropyl-acetamide			
3	1,1,2,2-Tetrafluoroethyl Methyl Ether	2000	1000	3000
4	Hexafluoropropylene	500	0	500
5	Ethyl Difluoroacetoacetate	100	200	300
6	Difluoromethanesulphonlychloride	100	0	100
7	3-Trifluoromethylacetophenone	0	1000	1000
8	Trifluoromethylbenzamide	1000	700	1700
9	TrifluoroMethyl-2-EthoxyVinyl Ketone	0	1000	1000
10	2-(2-Methoxy-ethoxymethyl)-6-trifluoromethy,-nicotinic acid ethyl ester	1000	500	1500
11	Pentafluorophenol	150	0	150
12	Monomethylhydrazine	3500	0	3500
13	[3-(4,5-dihydro-1,2-oxazol-3-yl)-4-mesyl-o-tolyl](5-hydroxy-1-methylpyrazol-4-yl)methanone (Topramezone)	500	0	500
14	Bromopentafluorobenzene	200	0	200
15	Methyl Hydroxy Pyrazole	0	100	100
16	5-Bromo-2-2-difluoro-1-3-benzodioxide	500	0	500
17	Difluorobenzodioxole methyl ester	0	20	20
18	2,5-Dichloro-4-(1,1,2,3,3,3-hexafluoropropoxy)benzenamine (DHA)	0	500	500
19	2,4,5-Trifluorophenyl acetic acid	0	50	50
20	Methyl-2- Fluoroacrylate	50	0	50
21	Ethyl-Trifluoropyruvate	50	0	50
22	2,3-dichloro pyridine	2000	-2000	0
23	5-Chloro-2,3-difluoropyridine	600	0	600
24	3-(2-Chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl-cyclopropanecarboxylic Acid	3500	0	3500
25	4-methoxy cyclohexanone (4- MCH)	600	0	600
26	2 Amino 3 Chloro 5trifluro methyl pyridine	600	0	600
27	Hydrazine Hydrate	3500	0	3500
28	2-methylsulfonyl 5-(trifluoromethyl)-1,3,4-thiadiazole	600	0	600
29	1,3 Benzodioxole	500	0	500
30	Chlorinated Compounda			
i	Trichloroethylene	90000	60000	150000
ii	Perchloroethylene			
iii	Methyl Chloride			
iv	Methylene dichloride			
v	Chloroform			
vi	Carbon tetrachloride			
31	Anhydrous Hydrofluoric acid	40000	0	40000

201/C

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, **Gandhinagar**-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

GPCB

32	Chlorotrifluoroethane (HCFC 133a)	500	0	500
33	**HFC refrigerants**			
i	1,1,1,2 Tetrafluroethane (HFC 134a)	40000	0	40000
ii	Pentafluoroethane (HFC 125)			
iii	Difluoromethane (HFC - 32)			
iv	1,1 difluoroethane (HFC-152a)			
v	Refrigerant blend of Difluoromethane (HFC-32) + Pentafluoroethane (HFC-125) (R410a)			
vi	Refrigerant blend of Pentafluoroethane (HFC-125) + 1,1,1-Trifluoroethane (R143a) + 1,1,1,2 Tetrafluroethane (HFC 134a) (R404a)			
vii	Refrigerant blend of Difluoromethane (HFC-32) + Pentafluoroethane (HFC-125) + 1,1,1,2 Tetrafluroethane (HFC 134a) (R407c)			
viii	Blend of 1,1-Difluoroethane (HFC-152a) + 1,1,1,2 Tetrafluroethane (HFC-134a)			
34	R600a (Butane)	1000	0	1000
35	Blend of 1-Chloro-1,1-difluoroethane (R142b) + Chlorodifluoromethane (R22)	500	0	500
36	Blend of 1,1,1,2 Tetrafluroethane (R134a) + Di Methyl Ether (DME)	500	0	500
37	R&D Products			
i	Organo Heterocyclic Compounds	2000	0	2000
ii	Aryl/Alkyl/Alicyclic Compounds			
iii	Elemental Fluorine/Bromine /Iodine and their Products/Derivatives			
iv	Alkali Metal / Boron / Phosphorous / Sulphur Based Product / Derivatives			
38	Hydrofluoric acid (20-70%)	18446	0	18446
39	Anhydrous Hydrochloric acid	900	0	900
40	Chlorodifluoromethane (R22)	0	12000	12000
41	Calcium Chloride (33.5%)	0	120000	120000
Total		**227296**	**195070**	**422366**
Captive Power Plant		**25 MW**	-	**25 MW**

2. Specific conditions:

a) **Unit shall comply with all the provisions of Ozone Depleting Substances Regulation and Control Rules, 2000 and its amendment from time to time.**

b) Unit shall not carry out any construction activities and production which attracts provisions of Environment Clearance without obtaining EC from competent authority under EIA notification dated 14/09/2006 and amended thereafter.

Clean Gujarat Green Gujarat
ISO - 9001 - 2008 & ISO - 14001 - 2004 Certified Organisation

203/c

c) Unit shall comply with all the conditions stipulated by SEIAA / MoEF in the order of Environment Clearance issued vide letter no. SEIAA/GUJ/EC/5(f)/1538/2020 dated: 15/12/2020.
d) Unit shall sell out their hazardous waste to authorized end users who are having authorization with valid CCA and rule 9 permission to receive this waste. Unit shall make MoU with such authorized endusers and submit MoU.
e) All the efforts shall be made to send hazardous waste to cement industry for Co-processing first & there after it shall be disposed through other option.
f) Unit shall follow spent solvent management guideline framed by board and shall make MoU with outside distillation units, if any. Also submit the prescribed forms as per guideline.
g) Unit shall strictly follow the Solid Fuel guideline framed by Board and shall install APCM as per guideline.
h) Unit shall follow coal handling guideline framed by Board and provide close ash handling facility.
i) Unit shall strictly follow the Fly Ash Notification for disposal of generated ash.
j) Unit shall install online Continuous Emission Monitoring Systems (CEMS) and link it with the server of GPCB for real time data transfer for boiler more than 8 TPH capacity or equivalent capacity of TFH.

3. **CONDITION UNDER THE WATER ACT:**

3.1 The condition No. 2.1 for Water Consumption under Water Act of the CCA order No: AWH-104607, issued vide letter no. GPCB/ BRCH-B/ CCA-38(13)/ ID-24521/525661, dated 25/10/2019 is amended and shall now be read as under.
a. Domestic: 429 KL/Day (Existing 429 KLD + Proposed NIL)
b. Industrial: 18 769 KL/Day (Existing 16,770 KLD + Proposed 1,999 KLD)
c. Gardening: 215 KL/Day (Existing 215 KLD + Proposed NIL)
Total: 19,413 KL/Day (Existing 17,414 KLD + Proposed 1,999KLD)

3.2 The condition No 2.2 for Wastewater Generation under Water Act of the CCA order No: AWH-104607, issued vide letter no. GPCB/ BRCH-B/ CCA-38(13)/ ID-24521/525661, dated 25/10/2019 is amended and shall now be read as under.
a. Domestic: 340 KL/Day (Existing 340 KLD + Proposed NIL)
b. Industrial: 9,635 KL/Day (Existing 7,866 KLD + Proposed 1769 KLD)
Total: 9,975KL/Day (Existing 8206 KLD + Proposed 1769KLD)

3.3 Mode of disposal of wastewater:

a) The quantity of industrial effluent from manufacturing process and other ancillary industrial operations shall not exceed 9635 KLD and the quantity of domestic wastewater (sewage) shall not exceed 340 KL/day.
b) 4024 KLD of process steam condensate shall be collected in separate collection tank and reused in cooling tower/process.
c) 3884 KLD of industrial effluent from Softener/ DM Plant Reject + Boiler Blow Down + Cooling Tower Bleed Off (including of Captive Power Plant) shall be sent to separate ETP consists of Primary Treatment + UF+RO. After treatment, 3301 KLD treated effluent shall be

205 C

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

GPCB

reused in cooling tower/process and 583 KLD RO reject after confirming discharge norms shall be sent to GIDC sewer line – Dahej Vilayat pipeline / common disposal system.

d) 1727 KLD of industrial effluent (Process Effluent + Washing) shall be sent to ETP consists of Primary, Secondary and Tertiary Treatment units and Multi Effect Evaporated plant (MEE) followed by Agitated Thin Film Dryer. After treatment, treated effluent after confirming discharge norms shall be sent to GIDC sewer line – Dahej Vilayat pipeline / common disposal system.

e) Total 2310 KLD effluent (1727 KLD treated effluent + 583 KLD RO reject) shall be sent to GIDC sewer line – Dahej Vilayat pipeline / common disposal system up to the sea for final disposal at NIO designated point after conforming discharge norms as per previous CCA.

f) 340 KLD of sewage shall be treated separately in STP and treated sewage after conforming following standards shall be reused in development of greenbelt / plantation within premises. In monsoon season, it shall be reused in cooling tower/process.

Parameters	Norms
pH	6.5 to 9
TSS	< 100 mg/l
Fecal Coliform (Most Probable Number per 100 milliliter , MPN/100ml)	<1000 MPN/100ml
BOD (3 days 27 degree C)	<30 mg/l

CONDITIONS UNDER THE AIR ACT:

4.1 The condition No. 4.1 for Fuel Consumption under Air Act of the CCA order No: AWH-104607, issued vide letter no. GPCB/ BRCH-B/ CCA-38(13)/ ID-24521/525661, dated 25/10/2019 is amended and shall now be read as under.

Sr. No.	Name of fuel	Quantity per day		
		Existing	Proposed	Total
1	Coal	600 MT/day	0	600 MT/day
2	HSD	139 KL/day	76 KL/day	215 KL/day
3	Natural Gas [Alternative fuel instead of coal]	45000 Nm3/day	0	45000 Nm3/day
4	Furnace Oil	142.5 KL/day	--	142.5 KL/day
5	LSHS / LDO	--	110 KL/day	110 KL/day

Unit shall phase out Furnace Oil before 31.12.2024 as per submission of unit.

4.2 The condition No. 4.2 for Flue gas stacks under Air Act of the CCA order No: AWH-104607, issued vide letter no. GPCB/ BRCH-B/ CCA-38(13)/ ID-24521/525661, dated 25/10/2019 is amended and shall now be read as under.

Stack	Stack Attached To	Stack Height in Meter	Air Pollution Control Measures	Parameter	Permissible Limit
1	Boiler 15 TPH (To be removed)	40	Multi Cyclone Separator	PM SO2 NOx	150mg/Nm3 100 ppm 50 ppm
2	Boiler 35 TPH	94 (Common Stack)	Electrostatic Precipitator + Scrubber		
3	Boiler 35 TPH				
4	Boiler 60 TPH				
5	DG Set 500 KW	11	-		
6	DG Set 500 KW	11	-		
7	DG Set 840 KW	30	-		
8	DG Set 840 KW	30	-		

Clean Gujarat Green Gujarat
ISO - 9001 - 2008 & ISO - 14001 - 2004 Certified Organisation

2071 C

9	TCE/PCE Plant Thermic Fluid/Fire Heaters No. 1	50	Efficient Burner		
10	TCE/PCE Plant Thermic Fluid /FireHeaters No. 2	50.2	Efficient Burner		
11	HFC 134a Plant Thermic Fluid/Fire Heaters	50	Efficient Burner		
12	AHF Plant Heater No. 1 (Thermic Fluid/ Fire Heaters)	46	Efficient Burner		
13	AHF Plant Drying System No. 1	35	Cyclone Separator / Bag Filter		
14	AHF Plant Heaters No. 2 (Thermic Fluid/Fire Heaters)	46	Efficient Burner		
15	AHF Plant Drying System No. 2 (Thermic Fluid /Fire Heaters)	35	Cyclone Separator / Bag Filter		
16	Difluoromethan (HFC 32) Plant Hot Oil Furnace (Thermic Fluid /Fire Heater)	55	Efficient Burner		
Additional Stack					
17	Boiler 30 TPH	63	--	PM SO2 NOx	150 mg/Nm3 100 ppm 50 ppm
18	Boiler 30 TPH	63	--		
19	DG Set 4200kVA	30	--		
20	DG Set 4200 kVA	30	--		
21	DG Set 4200 kVA	30	--		
22	Dust Collector	11	Bag filter	Particulate Matter	150 mg/Nm3
23	Boiler 17 TPH	53	--	PM SO2 NOx	150 mg/Nm3 100 ppm 50 ppm

209/C

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

4.3 The condition No. 4.3 for Process gas stacks under Air Act of the CCA order No: AWH-104607, issued vide letter no. GPCB/ BRCH-B/ CCA-38(13)ID-24521/525661, dated 25/10/2019 is amended and shall now be read as under.

Stack	Stack Attach To	Stack height in Meter	Air Pollution Control System	AIR EMISSION	
				POLLUTANT	LIMIT
Existing Process Stack					
HF Plant Stack					
1	HF Plant Central Absorption System	30	Continuous water Circulation	HF	6mg/NM3
TCE/PCE Plant Stack					
2	TCE/PCE Plant (Central Absorption System)	20	Continuous Alkali Circulation	Cl2	9mg/NM3
3	TCE/PCE Plant (Central Absorption System)	30	Continuous Water Circulation	HCl	20mg/Nm3
HFC Plant Stack					
4	R134a Plant (Central Absorption System)	30	Continuous Water Circulation	HCl HF	20mg/NM3 6mg/NM3
Flouro Specialty plant Stacks					
5	Reactor / Vessel (10 Nos.) Central Absorption System	30	Continuous Water Circulation	HF HCl	6mg/NM3 20mg/NM3
6	Reactor / Vessel (10 Nos.) Central Absorption System	30	Continuous Water Circulation	HCl	20mg/NM3
7	Reactor / Vessel (04 Nos.) Central Absorption System	20	Continuous Alkali Circulation	Cl2	9mg/NM3
8	Reactor / Vessel (02 Nos.) Central Absorption System	20	Continuous Alkali Circulation	Br2	2mg/NM3
9	Trifluoro Acetic Acid Central Absorption System	30	Continuous Water + Alkali Circulation	HF HCl	6 mg/NM3 20 mg/NM3
10	Ethyldifluoroacetate Central	30	Continuous Water + Alkali	HF	6 mg/NM3

Clean Gujarat Green Gujarat
ISO - 9001 - 2008 & ISO - 14001 - 2004 Certified Organisation

211 C

Stack	Stack Attach To	Stack height in Meter	Air Pollution Control System	AIR EMISSION	
				POLLUTANT	LIMIT
	Absorption System		Circulation	HCl	20 mg/NM3
11	Ethyltrifluroacetate Central Absorption System	30	Continuous Water + Alkali Circulation	HF	6 mg/NM3
12	Ethyltrifluoroacetoacetate Central Absorption System	30	Continuous Water + Alkali Circulation	HCl	20 mg/NM3
13	Pentafluorobenzoic Acid Central Absorpt on System	30	Continuous Water + Alkali Circulation	HCl	20 mg/NM3
				Cl2	9 mg/NM3
14	Pyrazole Acid Central Absorpt on System	30	Continuous Water + Alkali Circulation	HCl	20 mg/NM3
15	2-methyl-4-(1,1,1,2,3,3,3-heptafluoro-2-propyl aniline Central Absorption System	30	Continuous Water + Alkali Circulation	HCl	20 mg/NM3
				Br2	2 mg/NM3
16	Tetrafluoropropene - 1234yf Central Absorption System	30	Continuous Water + Alkali Circulation	HF	6 mg/NM3
				HCl	20 mg/NM3
17	1,1,2,2-Tetrafluoroethyl Methyl Ether Central Absorption System	30	Continuous Water + Alkali Circulation	HCl	20 mg/NM3
18	Hexafluoropropylene Central Absorption System	30	Continuous Water + Alkali Circulation	HCl	20 mg/NM3
19	Difluoromethanesulphonylchloride Central Absorption System	30	Continuous Water + Alkali Circulation	HCl	20 mg/NM3
				Cl2	9 mg/NM3

213/C

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

GPCB

Stack	Stack Attach To	Stack height in Meter	Air Pollution Control System	AIR EMISSION	
				POLLUTANT	LIMIT
20	Trifluoromethylbenzamide Central Absorption System	30	Continuous Water + Alkali Circulation	HCl	20 mg/NM3
				Cl2	9 mg/NM3
20	Bromopentafluorobenzene Central Absorption System	30	Continuous Water + Alkali Circulation	Br2	2 mg/NM3
22	235-Bromo-2-2-difluoro-1-3-benzodioxide Central Absorption System	30	Continuous Water + Alkali Circulation	HCl	20 mg/NM3
				Br2	2 mg/NM3
				HF	6 mg/NM3
23	Difluorobenzodioxole methyl ester Central Absorption System	30	Continuous Water + Alkali Circulation	HCl	20 mg/NM3
				Br2	2 mg/NM3
24	Methyl-2-Fluoroacrylate Central Absorption System	30	Continuous Water + Alkali Circulation	HF	6 mg/NM3
HFC plant stack					
25	CMS plant (Methylene dichloride, Chloroform, Carbon tetrachloride) Central Absorption System	30	Continuous Water + Alkali Circulation	HCl	20mg/NM3
				Cl2	9 mg/NM3
26	Chlorotrifluoroethane (HCFC 133a) Central Absorption System	30	Continuous Water + Alkali Circulation	HCl	20 mg/NM3
				HF	6 mg/NM3
27	Pentafluoroethane (HFC 125) Central Absorption System	30	Continuous Water + Alkali Circulation	HCl	20 mg/NM3
				HF	6 mg/NM3
28	Difluoromethane	30	Continuous	HCl	20

Clean Gujarat Green Gujarat
ISO - 9001 - 2008 & ISO - 14001 - 2004 Certified Organisation

215/c

Stack	Stack Attach To	Stack height in Meter	Air Pollution Control System	AIR EMISSION	
				POLLUTANT	LIMIT
	(HFC - 32) Central Absorption System		Water + Alkali Circulation		mg/NM3
				HF	6 mg/NM3
Flourospeciality Plant Stacks					
29	HCl Storage Tank Farm	30	Continuous Water + Alkali Circulation	HCl	20 mg/NM3
30	[3-(4,5-dihydro-1,2-oxazol-3-yl)-4-mesyl-o-tolyl](5-hydroxy-1-methy pyrazol-4-yl)methanone (Topramezone) Central Absorption System	30	Continuous Water + Alkali Circulation	HCl	20 mg/NM3
31	Flare Stack attached to Topramezone Plant	30	--	PM SO2 NOx	150 mg/Nm3 100 ppm 50 ppm
Additional Stack					
32	Chlorodifluoromethane (R22) Plant Central Absorption System	30	Continuous Water + Alkali Circulation	HF	6mg/NM3
				HCl	20 mg/NM3
33	Calcium Chloride Plant Scrubber	30	Continuous Water + Sodium Carbonate Solutions	CO2 HCl	- 20 mg/Nm3
34	Methyl Hydroxy Pyrazole Central Absorption System	30	Continuous Water + Alkali Circulation	HCl	20 mg/NM3
35	TCE/PCE Acid tank farm area scrubber vent	20	Continuous Water + Alkali Circulation	HCl	20 mg/NM3
36	HFC134a Acid tank farm area scrubber vent	30	Continuous Water + Alkali Circulation	HCl	20 mg/NM3
37	DHF Scrubber	30	Continuous Water Circulation	HF	6 mg/NM3

4.4 The concentration of the following parameters in the ambient air within the premises of the industry shall not exceed the limits specified hereunder.

21 8 1 C

GPCB

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

Sr. No.	Parameters	Permissible Limit (microgram /M³)	
		Annual	24 Hours Average
1.	Particulate Matter (PM_{10})	60	100
2.	Particulate Matter ($PM_{2.5}$)	40	60
3.	Oxides of Sulphur (SO_x)	50	80
4.	Oxides of Nitrogen (NO_x)	40	80

- **Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.**
- **24 hourly or 08 hourly or 01 hourly monitored values, as applicable, shall be complied with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.**

4.6 Unit shall operate industrial plant / air pollution control equipment very efficiently and continuously so that the gaseous emission always conforms to the standards specified in condition as above.

5 **CONDITIONS UNDER HAZARDOUS & OTHER WASTES (MANAGEMENT & TRANSBOUNDARY MOVEMENT) RULES, 2016**

5.1 Unit shall comply with provisions of Hazardous & Other Wastes (Management & Transboundary Movement) Rules-2016.

5.2 The condition No. 5 under authorization for Hazardous & other wastes of the CCA order No: AWH-104607, issued vide letter no. GPCB/ BRCH-B/ CCA-38(13)/ ID-24521/525661, dated 25/10/2019 is amended and shall now be read as under.

Sr. No.	Name of Haz. Waste	Category Number	Quantity in MT/ Year			Facility
			Exi.	Pro.	Total	
1	Chemical sludge from wastewater treatment	35.3	2,340	925	3265	Collection, Storage, Transportation and Disposal at approved TSDF or co-processing facility
2	Spent Oil	5.1	600	0	600	Collection, Storage, Reuse, Transportation and Disposal by sending to authorized recyclers/refiners
3	Discarded containers / barrels / liners used for hazardous wastes/chemicals	33.1	5,296	132	5,428	Collection, Storage, Decontamination/Detoxification, Reuse, Transportation and Disposal by sending to authorized Decontamination Facility
4	Spent Catalyst	28.2	1229	1534	2763	Collection, Storage, Transportation and

Clean Gujarat Green Gujarat
ISO - 9001 - 2008 & ISO - 14001 - 2004 Certified Organisation

219/c

						Disposal at approved TSDF/CHWIF or co-processing or pre-processing facility
5	Spent Carbon	28.3	468	--	468	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing facility
6	Off-Specification Product	28.4	600	--	600	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing facility
7	Process Residue & Waste	36.1	15,125	--	15,125	Collection, Storage, Transportation and Disposal at approved TSDF/CHWIF or co-processing or pre-processing facility
8	Spent Organic Solvent	20.2	27,166	20,420	47,586	Collection, Storage, Transportation and Disposal at approved
9	Spent Solvent (Mix of Trichloroethylene & Perchloroethylene)	20.2	18,553	--	18,553	CHWIF or co-processing or pre-processing facility or sent to authorized actual end-user having rule-9 permission & valid CCA after making MOU
10	Chemical sludge from waste water treatment (MEE / ATFD Salt)	35.3	18,250	19,254	37,504	Collection, Storage, Transportation and Disposal at approved TSDF or co-processing facility
11	CuCl Cake	8.2	52	--	52	Collection, Storage, Transportation and Disposal at approved TSDF or co-processing or pre-

221/C

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

						processing facility
12	Ammonium Salt	A-10	119	1,598	1,717	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing facility
13	Potassium Salt	B-36	2,572	-2127	445	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing facility
14	Sodium Salt	B-36	2047	2355	4402	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing facility
15	Zinc Compound	6.1	44	--	44	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU or Disposal at approved

Clean Gujarat Green Gujarat
ISO - 9001 - 2008 & ISO - 14001 - 2004 Certified Organisation

223/C

						TSDF or co-processing or pre-processing facility
16	Hydrofluoricsilic acid (15-40%)	Sch II - Class C - C2	23,999	-19999	4000	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU
17	Sulphuric acid (70-95%)	B-15	54,122	36,260	90382	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU
18	Hydrochloric Acid (10 - 33%)	B-15	5,23,960	- 1,12,407	4,11,553	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU or converted in to the Calcium Chloride and then send to actual end users
19	Sodium Hypochlorite	B-7	51,051	- 37,176	13,875	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU
20	Hydrogen / Sodium bromide Solution (10-50%)	B-10	2,542	51	2,593	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after

225/c

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

						making MOU
21	Calcium Fluoride	B-10	5,844	--	5,844	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing facility
22	Calcium Chloride	B-10	165	--	165	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing facility
23	Sodium methoxide Solution	C7	120	--	120	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF/CHWIF or co-processing or pre-processing facility
24	Phosphorus trichloride	B-35	934	--	934	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU or Disposal at approved

Clean Gujarat Green Gujarat
ISO - 9001 - 2008 & ISO - 14001 - 2004 Certified Organisation

227/C

						TSDF or co-processing or pre-processing facility
25	Gypsum (CaSO4)	38.1	1,62,400	--	1,62,400	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU or co-processing or pre-processing facility
26	Aluminium trifluoride	36.1	1,000	--	1,000	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing facility
27	Liquor Ammonia Solution (10-25%)	A10	1,500	--	1,500	Collection, Storage, Transportation and Disposal by sending to authorized actual end users having rule-9 permission & valid CCA after making MOU
28	Spent Solvent Mix of Ethane + nButane + Iso butene (R600a) + Propane (R290)	20.2	841	1,961	2,802	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU or Disposal at approved TSDF or co-processing or pre-processing facility
29	Fluoroform	28.1	--	240	240	Collection, Storage,

229/c

GUJARAT POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN
Sector-10-A, Gandhinagar-382 010
Phone : (079) 23226295
Fax : (079) 23232156
Website : www.gpcb.gov.in

	(R23)					In-house treatment through Thermal Oxidizer or Transportation and Disposal at approved CHWIF.
30	Inorganic Sludge	35.3	--	234	234	Collection, Storage, Transportation and Disposal at approved TSDF.
31	Caustic lye	Sch II - Class C - C2	--	36	36	Collection, Storage, Transportation and Disposal by sending to authorized actual end-users having rule-9 permission & valid CCA after making MOU

Unit shall ensure transportation of hazardous wastes through GPS mounted authorized vehicles with recording facility and online manifest system of the Board.

6 All other conditions of the CCA order No: AWH-104607, issued vide letter no. GPCB/ BRCH-B/ CCA-38(13)/ ID-24521/525661, dated 25/10/2019 shall remain same.

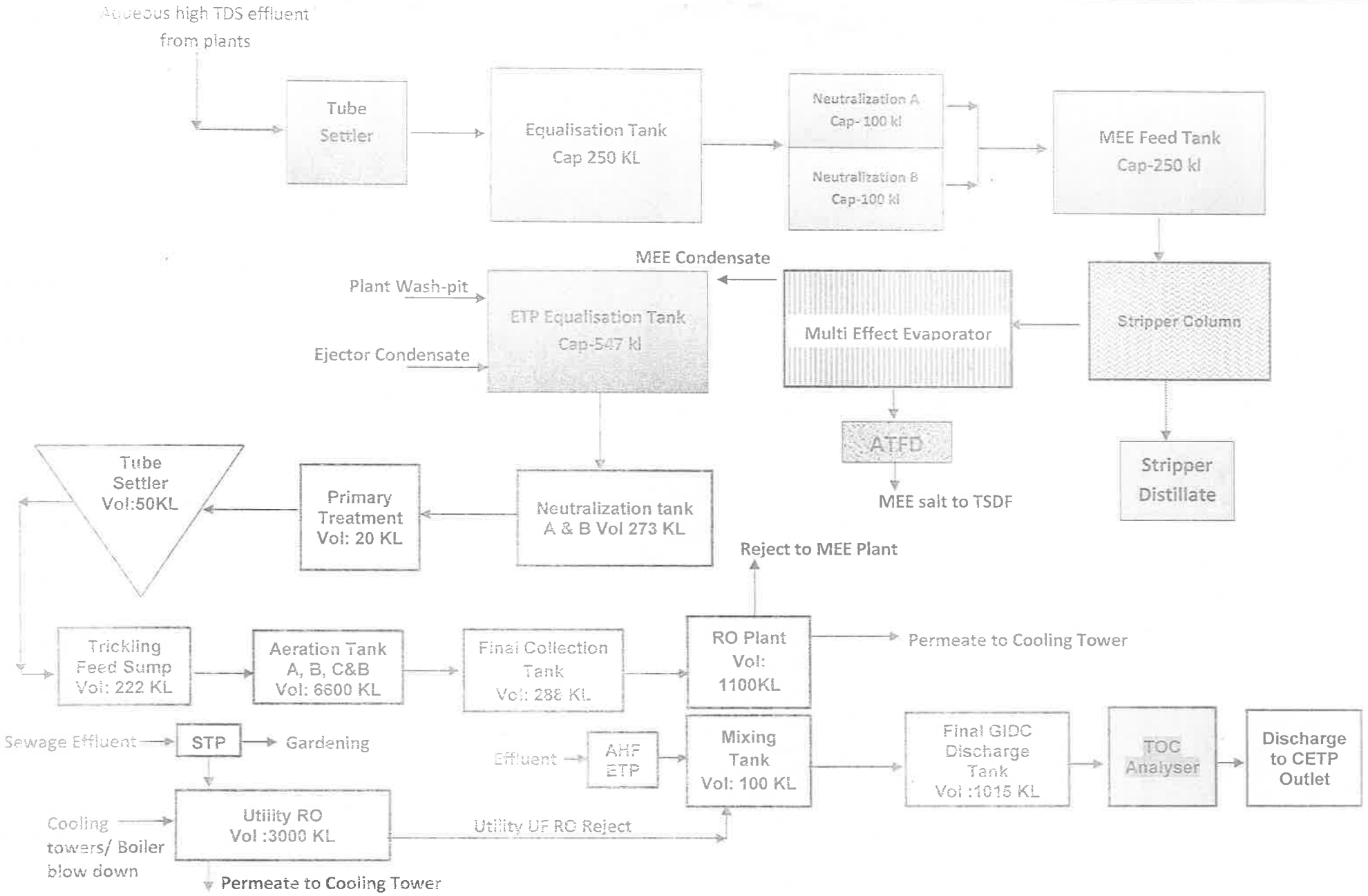
FOR AND ON BEHALF OF
GUJARAT POLLUTION CONTROL BOARD

(DIPAK KAGZI)
DY. ENVIRONMENT ENGINEER

Clean Gujarat Green Gujarat
ISO - 9001 - 2008 & ISO - 14001 - 2004 Certified Organisation

Annexure - R - 2

Treatment Process Flow Diagram of ETP



SRF - General [Restricted use] - This mail, document can be used by recipients for its intended purpose only.

6809

231/c

Annexure 6090

233/C

GUJARAT INDUSTRIAL DEVELOPMENT CORPORATION
(Government Undertaking)
Office of the Deputy Executive Engineer (Drainage),
First floor, Narmada Commercial Complex, Panchbatti, GIDC,
Bharuch-392001
Phone No.:(02642)242432, Fax No.: (02642)241902

No.: DEE/Drg/GIDC/BRC/ 293 Dtd: 10-09-2020

To,
M/S. SRF Ltd.
Plot No. D2/1,Dahej-II,
At: Dahej, Tal- Vagra,
Dist: Bharuch.

Sub: Release of Drainage connection to Plot No. D2/1, Dahej-II

Ref: 1. Your application dated no. SRF/Liaison/2019-20/10 dated 02/11/2019.
2. GPCB consent No. GPCB/BRC-B/CCA-38(ID)/ID-24521/525661, dated 25/02/2019.

Dear Sir,

With reference to the above, the drainage connection of 300.00 mm dia. size for 2399.00 KLPD (Drainage Contribution Charges paid for the quantity is 2399.00 KLPD) is hereby released subject to discharge Treated Industrial Effluent as per GPCB Consent given vide letter No. GPCB consent No. GPCB/BRC-B/CCA-38(ID)/ID-24521/525661, dated 25/02/2019.

This order is subject to the conditions as under:

1. That you have provided automation for return arrangement that on finding deviation in parameters fixed by GPCB, the effluent should go to collection pit of industry instead of GIDC Sewer Line. The quantity and quality of effluent shall be restricted to approved quantity and quality by GPCB as per order under reference.
2. Any other instruction whatever received from GoG/GPCB/GIDC shall be followed.
3. GIDC's decision shall be binding to you in case of the drainage connection point is to be changed in future as per requirement of GIDC. All the expenditure shall have to be borne by you.

Thanking You,

Yours faithfully,

Deputy Executive Engineer (Drg)
GIDC Bharuch

Copy S.W.Rs. to:
1) The Executive Engineer (W/D), GIDC, Bharuch. For information please.
2) The Regional Officer, GPCB, Bharuch. For information please.

Copy to:
1) Unistar Environment & Research Labs Pvt. Ltd., Dahej. For Information.
2) The Dev Infotech, Bharuch. For information and necessary action please.

Scanned with CamScanner

6091

Annexure - R - 4

235/c

SRF LTD.
D-2/1, Dahej II Industrial Estate,Dahej-392130,Dist:Bharuch
Category : Chemical
Industry code : 24GJ050

Data Report

Duration: 01-04-2019 00:00 To 22-06-2022 23:59 Interval Time: 1 Day

Station Name		ETP_1_SRF1					
No	Date_Time	bod (mg/l)	cod (mg/l)	flow (m3/hr)	pH (pH)	toc (mg/l)	tss (mg/l)
1	01-04-2019 00:00	-	160.84	54.5	8	80.42	2.9
2	02-04-2019 00:00	-	123.56	53.7	7.9	61.78	2.7
3	03-04-2019 00:00	-	19.12	55.9	7.7	9.56	2.6
4	04-04-2019 00:00	-	160.2	55.8	7.8	80.1	2.5
5	05-04-2019 00:00	-	153.3	0	8.2	76.65	2.1
6	06-04-2019 00:00	-	161.5	54.5	7.9	80.75	1.9
7	07-04-2019 00:00	-	153.26	55.5	7.8	76.63	1.9
8	08-04-2019 00:00	-	114.48	55.7	8	57.24	1.7
9	09-04-2019 00:00	-	167.1	0	8.2	83.55	2.5
10	10-04-2019 00:00	-	185.72	56	8.1	92.86	2.6
11	11-04-2019 00:00	-	164.34	65.5	7.6	82.17	2.7
12	12-04-2019 00:00	-	168.16	65.1	7.8	84.08	3.5
13	13-04-2019 00:00	-	134	75.3	8.1	67	4.2
14	14-04-2019 00:00	-	141.64	81.2	8	70.82	3.7
15	15-04-2019 00:00	-	147.06	52.6	7.8	73.53	3.2
16	16-04-2019 00:00	-	176.62	71.3	7.7	88.31	2.9
17	17-04-2019 00:00	-	165.14	70.9	7.8	82.57	3.4
18	18-04-2019 00:00	-	158.34	92.3	7.8	79.17	2.7
19	19-04-2019 00:00	-	166.46	0	7.9	83.23	2.9
20	20-04-2019 00:00	-	162.26	85.6	7.8	81.13	2.9
21	21-04-2019 00:00	-	132.86	72.3	8.1	66.43	3
22	22-04-2019 00:00	-	118.36	80.9	8.1	59.18	2.9
23	23-04-2019 00:00	-	137.78	78.6	8	68.89	2.6
24	24-04-2019 00:00	-	147	76.3	8	73.5	2.3
25	25-04-2019 00:00	-	153.06	74.1	7.5	76.53	1.9
26	26-04-2019 00:00	-	162	81.9	7.7	81	1.6
27	27-04-2019 00:00	-	134.92	84.2	7.7	67.46	1.5
28	28-04-2019 00:00	-	153.92	83.2	7.7	76.96	1.4
29	29-04-2019 00:00	-	164.06	84.8	7.5	82.03	1.3
30	30-04-2019 00:00	-	169.34	82.6	7.9	84.67	1.3
31	01-05-2019 00:00	-	154.4	85.1	7.8	77.2	1.3
32	02-05-2019 00:00	-	165.82	84	8	82.91	1.3
33	03-05-2019 00:00	-	177.74	86.8	8	88.87	1.3
34	04-05-2019 00:00	-	174.02	86.8	7.9	87.01	1.4
35	05-05-2019 00:00	-	18	85.9	7.9	9	1.4
36	06-05-2019 00:00	-	166.86	81.4	8.1	83.43	1.3
37	07-05-2019 00:00	-	176.84	82.2	7.7	88.42	1.5
38	08-05-2019 00:00	-	182.26	82	7.6	91.13	1.3
39	09-05-2019 00:00	-	175.9	80.5	7.9	87.95	1.5

237/c

40	10-05-2019 00:00	-	175.9	80.5	7.7	87.95	1.2
41	11-05-2019 00:00	-	175.9	80.2	7.9	87.95	1.2
42	12-05-2019 00:00	-	175.9	78.2	7.7	87.95	1.2
43	13-05-2019 00:00	-	175.9	76.7	7.8	87.95	1.2
44	14-05-2019 00:00	-	175.9	0	7.6	87.95	1.2
45	15-05-2019 00:00	-	175.9	77.9	7.9	87.95	1.2
46	16-05-2019 00:00	-	175.9	76.2	7.7	87.95	1.3
47	17-05-2019 00:00	-	175.9	77.4	7.7	87.95	1.2
48	18-05-2019 00:00	-	175.9	76.5	7.8	87.95	1.3
49	19-05-2019 00:00	-	175.9	77.4	8.1	87.95	1.3
50	20-05-2019 00:00	-	175.9	79	8	87.95	1.3
51	21-05-2019 00:00	-	175.9	75.4	7.7	87.95	1.5
52	22-05-2019 00:00	-	175.9	78.8	7.7	87.95	1.7
53	23-05-2019 00:00	-	175.9	75.5	7.9	87.95	1.8
54	24-05-2019 00:00	-	175.9	79.4	7.9	87.95	2
55	25-05-2019 00:00	-	169.38	72.8	7.9	84.69	1.9
56	26-05-2019 00:00	-	-	-	-	-	-
57	27-05-2019 00:00	-	-	-	-	-	-
58	28-05-2019 00:00	-	-	-	-	-	-
59	29-05-2019 00:00	-	-	-	-	-	-
60	30-05-2019 00:00	-	169.66	75.5	7.7	84.83	1.9
61	31-05-2019 00:00	-	178.88	76.1	7.8	89.44	2.1
62	01-06-2019 00:00	-	185.92	76.1	7.9	92.96	0
63	02-06-2019 00:00	-	147.94	74.5	7.8	73.97	0
64	03-06-2019 00:00	-	171.22	78.8	7.7	85.61	0
65	04-06-2019 00:00	-	179.12	76.5	7.4	89.56	0
66	05-06-2019 00:00	-	178.64	77.4	7.6	89.32	0
67	06-06-2019 00:00	-	188.78	75.8	7.7	94.39	0
68	07-06-2019 00:00	-	208.62	77.6	7.7	104.31	5.3
69	08-06-2019 00:00	-	167.72	75.3	7.6	83.86	8.4
70	09-06-2019 00:00	-	95.5	0	7.4	47.75	9.3
71	10-06-2019 00:00	-	63.56	0	7.5	31.78	12.2
72	11-06-2019 00:00	-	152.84	76.7	7.6	76.42	11
73	12-06-2019 00:00	-	132	73.3	7.4	66	2.5
74	13-06-2019 00:00	-	159.38	75.3	7.6	79.69	1.8
75	14-06-2019 00:00	-	136.16	75.8	8	68.08	2.9
76	15-06-2019 00:00	-	152.1	75.2	7.9	76.05	6.1
77	16-06-2019 00:00	-	146.62	74.2	7.4	73.31	5.5
78	17-06-2019 00:00	-	167.38	75	7.5	83.69	3.8
79	18-06-2019 00:00	-	-	-	-	-	-
80	19-06-2019 00:00	-	-	-	-	-	-
81	20-06-2019 00:00	-	184.58	0	7.4	92.29	6.1
82	21-06-2019 00:00	-	149.22	76.1	7.7	74.61	9.3
83	22-06-2019 00:00	-	157.2	72.5	7.5	78.6	9.3
84	23-06-2019 00:00	-	148.28	73.7	7.5	74.14	5.5
85	24-06-2019 00:00	-	146.94	74.5	7.7	73.47	25
86	25-06-2019 00:00	-	160.42	76.2	7.4	80.21	52.2

239/c

87	26-06-2019 00:00	-	113.68	76	7.7	56.84	17.5
88	27-06-2019 00:00	-	178.5	0	8	89.25	15.5
89	28-06-2019 00:00	-	137.08	75.8	7.6	68.54	39.6
90	29-06-2019 00:00	-	191.32	0	7.5	95.66	103.5
91	30-06-2019 00:00	-	147.7	78.8	7.1	73.85	22.7
92	01-07-2019 00:00	-	129.44	79.3	7.9	64.72	20
93	02-07-2019 00:00	-	115.94	78.7	7.2	57.97	16.6
94	03-07-2019 00:00	-	-	-	-	-	-
95	04-07-2019 00:00	-	225.1	0	7.2	112.55	72.4
96	05-07-2019 00:00	-	134.84	76.4	7.6	67.42	33.3
97	06-07-2019 00:00	-	-	-	-	-	-
98	07-07-2019 00:00	-	157.54	77	7.5	78.77	62.5
99	08-07-2019 00:00	-	160.12	74	7.7	80.06	45.6
100	09-07-2019 00:00	-	250.5	0	6.7	125.25	63.3
101	10-07-2019 00:00	-	127.62	75.9	7.5	63.81	37
102	11-07-2019 00:00	-	148.6	75	7.6	74.3	86.6
103	12-07-2019 00:00	-	112.08	75.4	7.6	56.04	47
104	13-07-2019 00:00	-	148.3	76.4	7.5	74.15	51.1
105	14-07-2019 00:00	-	142.96	77.4	7.8	71.48	49.2
106	15-07-2019 00:00	-	148.38	76.7	7.5	74.19	53.6
107	16-07-2019 00:00	-	168.86	75.8	7.5	84.43	25
108	17-07-2019 00:00	-	127.34	72.4	7.5	63.67	36.3
109	18-07-2019 00:00	-	151.8	73.7	7.5	75.9	43.6
110	19-07-2019 00:00	-	172.04	76.3	7.6	86.02	34.4
111	20-07-2019 00:00	-	164.16	73	7.9	82.08	47
112	21-07-2019 00:00	-	164.3	73.5	7.6	82.15	84.7
113	22-07-2019 00:00	-	-	-	-	-	-
114	23-07-2019 00:00	-	-	-	-	-	-
115	24-07-2019 00:00	-	-	-	-	-	-
116	25-07-2019 00:00	-	-	-	-	-	-
117	26-07-2019 00:00	-	-	-	-	-	-
118	27-07-2019 00:00	-	148.36	78.5	7.7	74.18	46.1
119	28-07-2019 00:00	-	125.64	76.8	7.8	62.82	37.5
120	29-07-2019 00:00	-	144.68	72.9	7.9	72.34	28.3
121	30-07-2019 00:00	-	130.88	74.6	7.6	65.44	24.2
122	31-07-2019 00:00	-	141.92	77.8	7.9	70.96	23.1
123	01-08-2019 00:00	-	150.32	75.2	7.5	75.16	23.1
124	02-08-2019 00:00	-	67.68	0	8	33.84	22.3
125	03-08-2019 00:00	-	144.84	75.3	7.9	72.42	17.6
126	04-08-2019 00:00	-	114.16	77	7.3	57.08	9.6
127	05-08-2019 00:00	-	104.72	77.1	7.1	52.36	6.9
128	06-08-2019 00:00	-	130.44	0	7.8	65.22	36.3
129	07-08-2019 00:00	-	124.84	0	7.8	62.42	22.4
130	08-08-2019 00:00	-	122.24	78.4	7.1	61.12	19.7
131	09-08-2019 00:00	-	126.54	70.7	7.5	63.27	33.6
132	10-08-2019 00:00	-	127.06	79.5	7.7	63.53	36
133	11-08-2019 00:00	-	127.62	78.7	7.7	63.81	34.1

6094

2nd c

134	12-08-2019 00:00	-	123.5	79.6	7.6	61.75	29.9
135	13-08-2019 00:00	-	127.28	80.1	7.7	63.64	19
136	14-08-2019 00:00	-	158.94	79.4	7.6	79.47	19.9
137	15-08-2019 00:00	-	145.36	79.1	7.4	72.68	24
138	16-08-2019 00:00	-	148.3	73.2	7.5	74.15	24.4
139	17-08-2019 00:00	-	126.26	78.5	7.8	63.13	79.6
140	18-08-2019 00:00	-	151.56	74.6	8	75.78	21.7
141	19-08-2019 00:00	-	144.38	70.7	7.5	72.19	32.7
142	20-08-2019 00:00	-	144.62	74.1	7.6	72.31	32.7
143	21-08-2019 00:00	-	147.08	74.2	7.6	73.54	16.5
144	22-08-2019 00:00	-	151.02	71.4	7.6	75.51	11.6
145	23-08-2019 00:00	-	145.68	77.4	7.8	72.84	11.6
146	24-08-2019 00:00	-	126.5	0	7.9	63.25	15.1
147	25-08-2019 00:00	-	143.5	79.1	7.8	71.75	20.7
148	26-08-2019 00:00	-	143.24	77.3	7.7	71.62	19.4
149	27-08-2019 00:00	-	108.84	82.5	7.7	54.42	13.2
150	28-08-2019 00:00	-	107.8	78.1	7.7	53.9	8.8
151	29-08-2019 00:00	-	135.58	80	7.8	67.79	11.7
152	30-08-2019 00:00	-	140.12	81.6	7.7	70.06	14.9
153	31-08-2019 00:00	-	160.4	83.7	8.2	80.2	11.7
154	01-09-2019 00:00	-	160.86	69.8	7.7	80.43	14.1
155	02-09-2019 00:00	-	-	-	-	-	-
156	03-09-2019 00:00	-	-	-	-	-	-
157	04-09-2019 00:00	-	-	-	-	-	-
158	05-09-2019 00:00	-	-	-	-	-	-
159	06-09-2019 00:00	-	179.02	83.3	6.9	89.51	19.6
160	07-09-2019 00:00	-	105.08	79.1	7.3	52.54	16.6
161	08-09-2019 00:00	-	172.26	83.7	7.6	86.13	13.2
162	09-09-2019 00:00	-	149.12	82.1	7.1	74.56	23.7
163	10-09-2019 00:00	-	141.94	82.1	7.5	70.97	13.8
164	11-09-2019 00:00	-	134.52	82	6.8	67.26	18
165	12-09-2019 00:00	-	149.3	80.9	7.4	74.65	11.3
166	13-09-2019 00:00	-	147.52	81.5	7.6	73.76	23.3
167	14-09-2019 00:00	-	148.3	81	7.8	74.15	20.6
168	15-09-2019 00:00	-	154.88	87.8	7.7	77.44	22.1
169	16-09-2019 00:00	-	165.48	87.5	7.3	82.74	23.5
170	17-09-2019 00:00	-	143.36	86.1	8	71.68	21.7
171	18-09-2019 00:00	-	174.04	85.9	7.7	87.02	19.1
172	19-09-2019 00:00	-	162.98	85.9	7.9	81.49	15
173	20-09-2019 00:00	-	150.98	66.9	7.9	75.49	15.4
174	21-09-2019 00:00	-	139.36	83	7.9	69.68	12.9
175	22-09-2019 00:00	-	150.72	82.6	7.9	75.36	13.5
176	23-09-2019 00:00	-	106.44	83.2	7.8	53.22	9.3
177	24-09-2019 00:00	-	162.16	82.4	7.5	81.08	10.7
178	25-09-2019 00:00	-	141.82	0	7.6	70.91	11
179	26-09-2019 00:00	-	194.44	0	7.6	97.22	9.6
180	27-09-2019 00:00	-	154.12	84.9	7.4	77.06	9.6

243/c

181	28-09-2019 00:00	-	150.76	85	7.8	75.38	9.6
182	29-09-2019 00:00	-	163.28	76.7	7.8	81.64	9.6
183	30-09-2019 00:00	-	155.06	83.3	7.8	77.53	9.6
184	01-10-2019 00:00	-	147.8	84.5	7.2	73.9	9.6
185	02-10-2019 00:00	-	149.32	79.8	7.6	74.66	9.6
186	03-10-2019 00:00	-	159.2	84.9	7.6	79.6	9.6
187	04-10-2019 00:00	-	152.16	87.4	7.8	76.08	11.2
188	05-10-2019 00:00	-	-	-	-	-	-
189	06-10-2019 00:00	-	-	-	-	-	-
190	07-10-2019 00:00	-	-	-	-	-	-
191	08-10-2019 00:00	-	-	-	-	-	-
192	09-10-2019 00:00	-	-	-	-	-	-
193	10-10-2019 00:00	-	172.92	73.3	7.2	86.46	11
194	11-10-2019 00:00	-	117.72	86.4	7.8	58.86	55.4
195	12-10-2019 00:00	-	170.66	88.6	7.6	85.33	17.3
196	13-10-2019 00:00	-	143.42	78.1	7.8	71.71	17.4
197	14-10-2019 00:00	-	163.46	83.6	7.4	81.73	15.7
198	15-10-2019 00:00	-	147.82	74.1	7.9	73.91	16.8
199	16-10-2019 00:00	-	117.32	87.1	7.6	58.66	20.2
200	17-10-2019 00:00	-	169.12	0	8	84.56	24.6
201	18-10-2019 00:00	-	174.66	83.8	7.9	87.33	23.4
202	19-10-2019 00:00	-	101.96	81	7.8	50.98	17.8
203	20-10-2019 00:00	-	139	78.9	7.8	69.5	16.5
204	21-10-2019 00:00	-	120.12	70.3	8	60.06	15.1
205	22-10-2019 00:00	-	152.4	75.6	7.8	76.2	10.1
206	23-10-2019 00:00	-	179.34	89.6	7.7	89.67	10.3
207	24-10-2019 00:00	-	162.78	100.2	8.1	81.39	23.4
208	25-10-2019 00:00	-	159.02	60.9	8.1	79.51	9
209	26-10-2019 00:00	-	131.58	64.6	8.1	65.79	12.8
210	27-10-2019 00:00	-	155.3	102.6	7.9	77.65	17.4
211	28-10-2019 00:00	-	172.32	0	8.1	86.16	17.4
212	29-10-2019 00:00	-	134.58	76.5	7.9	67.29	11.8
213	30-10-2019 00:00	-	153.28	79.8	7.9	76.64	15.1
214	31-10-2019 00:00	-	155.12	95.9	8.2	77.56	18.5
215	01-11-2019 00:00	-	184.5	0	8.2	92.25	21.1
216	02-11-2019 00:00	-	139.14	87.5	8	69.57	29.4
217	03-11-2019 00:00	-	175.7	90.8	7.9	87.85	32.9
218	04-11-2019 00:00	-	184.88	0	8.1	92.44	39.9
219	05-11-2019 00:00	-	129.06	77.4	7.4	64.53	35.2
220	06-11-2019 00:00	-	108.8	88.1	7.9	54.4	26.4
221	07-11-2019 00:00	-	136.48	81.1	7.8	68.24	27.9
222	08-11-2019 00:00	-	117.06	91	7.8	58.53	66.5
223	09-11-2019 00:00	-	172.5	93.6	7.9	86.25	64.9
224	10-11-2019 00:00	-	188.62	0	8	94.31	18.3
225	11-11-2019 00:00	-	141.84	78.3	7.6	70.92	21.2
226	12-11-2019 00:00	-	146.52	73.7	7.7	73.26	72.5
227	13-11-2019 00:00	-	142.2	73.2	7.9	71.1	15.2

2451 C

228	14-11-2019 00:00	-	126.22	72.2	7.7	63.11	12.2
229	15-11-2019 00:00	-	191	0	7.8	95.5	18
230	16-11-2019 00:00	-	-	-	-	-	-
231	17-11-2019 00:00	-	-	-	-	-	-
232	18-11-2019 00:00	-	-	-	-	-	-
233	19-11-2019 00:00	-	-	-	-	-	-
234	20-11-2019 00:00	-	-	-	-	-	-
235	21-11-2019 00:00	-	125.96	98.2	7.7	62.98	48.7
236	22-11-2019 00:00	-	165.04	89.4	7.8	82.52	63.9
237	23-11-2019 00:00	-	158.86	0	8	79.43	60.5
238	24-11-2019 00:00	-	137.96	96.6	7.9	68.98	72.3
239	25-11-2019 00:00	-	121.76	83.2	7.9	60.88	59.1
240	26-11-2019 00:00	-	165.12	96.7	7.5	82.56	55
241	27-11-2019 00:00	-	148.26	65.7	8	74.13	70
242	28-11-2019 00:00	-	171.72	0	8	85.86	96.1
243	29-11-2019 00:00	-	142.94	0	7.7	71.47	18.6
244	30-11-2019 00:00	-	112.92	93.6	7.5	56.46	8.7
245	01-12-2019 00:00	-	131.24	85.6	8	65.62	42.8
246	02-12-2019 00:00	-	131.08	70.4	7.9	65.54	32
247	03-12-2019 00:00	-	147.86	80.3	8.1	73.93	41.1
248	04-12-2019 00:00	-	116.28	93.8	7.7	58.14	51.4
249	05-12-2019 00:00	-	145.1	99	8	72.55	52.4
250	06-12-2019 00:00	-	40.22	71.7	8.1	20.11	36.8
251	07-12-2019 00:00	-	29.58	66.3	8.2	14.79	62.9
252	08-12-2019 00:00	-	36.1	78.5	8.1	18.05	47.4
253	09-12-2019 00:00	-	30.8	74.6	7.8	15.4	76.2
254	10-12-2019 00:00	-	121.2	88.5	7.9	60.6	46.8
255	11-12-2019 00:00	-	102.54	90.5	8	51.27	45.3
256	12-12-2019 00:00	-	91.14	89.3	7.9	45.57	9.1
257	13-12-2019 00:00	-	98.08	89	7.6	49.04	44.9
258	14-12-2019 00:00	-	68.96	84.4	7.9	34.48	75.4
259	15-12-2019 00:00	-	82.64	69.4	8.2	41.32	63.2
260	16-12-2019 00:00	-	61.14	71.5	7.9	30.57	40.6
261	17-12-2019 00:00	-	79.9	81.1	8	39.95	46
262	18-12-2019 00:00	-	74.4	0	3.7	37.2	37.2
263	19-12-2019 00:00	-	70.72	67.4	7.8	35.36	27.7
264	20-12-2019 00:00	-	74.86	80.9	8.1	37.43	48.9
265	21-12-2019 00:00		75.76	79.6	7.9	37.88	38.5
266	22-12-2019 00:00	-	-	-	-	-	-
267	23-12-2019 00:00	-	-	-	-	-	-
268	24-12-2019 00:00	-	-	-	-	-	-
269	25-12-2019 00:00	-	-	-	-	-	-
270	26-12-2019 00:00	-	-	-	-	-	-
271	27-12-2019 00:00	-	73.36	83.5	8	36.68	29.9
272	28-12-2019 00:00	-	75.14	87.1	8.2	37.57	67.6
273	29-12-2019 00:00	-	92.88	88.7	7.9	46.44	38
274	30-12-2019 00:00	-	86.06	78.2	7.8	43.03	49.7

247/c

275	31-12-2019 00:00	-	104.32	72.6	8	52.16	53.8
276	01-01-2020 00:00	-	92.84	84.1	6.5	46.42	57.2
277	02-01-2020 00:00	-	94.14	85.2	8.1	47.07	55.8
278	03-01-2020 00:00	-	111.12	69.6	8.2	55.56	59.9
279	04-01-2020 00:00	-	79.94	0	8.4	39.97	70.8
280	05-01-2020 00:00	-	37.06	0	7.2	18.53	27.9
281	06-01-2020 00:00	-	41.4	73.2	8.2	20.7	37.1
282	07-01-2020 00:00	-	79.2	74	8.1	39.6	45.1
283	08-01-2020 00:00	-	89.12	75.5	7.9	44.56	44.6
284	09-01-2020 00:00	-	88.34	75.8	8.1	44.17	85
285	10-01-2020 00:00	-	92.86	77.2	8.1	46.43	42.9
286	11-01-2020 00:00	-	112.1	75.6	8.1	56.05	68.3
287	12-01-2020 00:00	-	119.14	80.5	7.8	59.57	49.1
288	13-01-2020 00:00	-	122.74	80.9	8.1	61.37	52.1
289	14-01-2020 00:00	-	170.48	81.3	8	85.24	40.8
290	15-01-2020 00:00	-	176.8	0	8.1	88.4	56.1
291	16-01-2020 00:00	-	138.82	80.7	8.1	69.41	63.7
292	17-01-2020 00:00	-	126.74	86.4	8.1	63.37	47.3
293	18-01-2020 00:00	4.84	96.74	79.2	8	48.37	41.3
294	19-01-2020 00:00	5.98	119.68	85.6	7.9	59.84	44.5
295	20-01-2020 00:00	-	-	-	-	-	-
296	21-01-2020 00:00	-	-	-	-	-	-
297	22-01-2020 00:00	-	-	-	-	-	-
298	23-01-2020 00:00	-	-	-	-	-	-
299	24-01-2020 00:00	-	-	-	-	-	-
300	25-01-2020 00:00	-	-	-	-	-	-
301	26-01-2020 00:00	-	-	-	-	-	-
302	27-01-2020 00:00	-	-	-	-	-	-
303	28-01-2020 00:00	-	-	-	-	-	-
304	29-01-2020 00:00	-	-	-	-	-	-
305	30-01-2020 00:00	6	120	82.1	8.1	60	63.9
306	31-01-2020 00:00	4.93	98.68	82.4	8.1	49.34	59.3
307	01-02-2020 00:00	5.69	113.74	0	8.2	56.87	46
308	02-02-2020 00:00	4.61	92.14	70.1	8	46.07	39.8
309	03-02-2020 00:00	4.01	80.1	71.8	7.9	40.05	28.9
310	04-02-2020 00:00	4.53	90.6	69.4	8	45.3	38.5
311	05-02-2020 00:00	-	-	-	-	-	-
312	06-02-2020 00:00	2.06	41.18	78.3	8	20.59	27
313	07-02-2020 00:00	5.21	104.2	81.3	8	52.1	42
314	08-02-2020 00:00	5.83	116.52	79.6	8.1	58.26	25.1
315	09-02-2020 00:00	6.05	121.02	0	8	60.51	60.3
316	10-02-2020 00:00	6.32	126.38	84.6	8.2	63.19	50.7
317	11-02-2020 00:00	6.45	129	83.8	8	64.5	62.8
318	12-02-2020 00:00	6.3	126	80.6	7.8	63	59.3
319	13-02-2020 00:00	6.03	120.58	80.4	8	60.29	58.1
320	14-02-2020 00:00	5.53	110.54	79.5	8	55.27	51.9
321	15-02-2020 00:00	5.39	107.7	81.2	7.9	53.85	42.7

249/C

322	16-02-2020 00:00	5.13	102.5	82.8	8	51.25	46.4
323	17-02-2020 00:00	-	-	-	-	-	-
324	18-02-2020 00:00	3.46	69.26	84.3	7.9	34.63	35.1
325	19-02-2020 00:00	2.34	46.76	84.9	8.1	23.38	30.7
326	20-02-2020 00:00	83.05	129.76	85.5	7.1	64.88	60.5
327	21-02-2020 00:00	72.47	121.73	84.2	8.1	56.62	42.5
328	22-02-2020 00:00	79.14	132.93	83.9	8	61.83	67.8
329	23-02-2020 00:00	89.74	150.74	82.2	7.9	70.11	80.8
330	24-02-2020 00:00	69.26	116.34	86.2	7.9	54.11	58.8
331	25-02-2020 00:00	73.09	122.77	79.5	8	57.1	74.1
332	26-02-2020 00:00	69.71	117.09	83.7	7.9	54.46	52.5
333	27-02-2020 00:00	77.29	129.82	80.2	7.9	60.38	85.9
334	28-02-2020 00:00	67.69	113.69	73.1	7.9	52.88	59.8
335	29-02-2020 00:00	47.72	80.15	77.1	8.1	37.28	29
336	01-03-2020 00:00	32.74	55	0	8	25.58	23.7
337	02-03-2020 00:00	62.92	105.69	75.4	8	49.16	35.8
338	03-03-2020 00:00	68.68	115.37	75.3	8	53.66	38.6
339	04-03-2020 00:00	73.54	123.52	85.6	8	57.45	29
340	05-03-2020 00:00	-	-	-	-	-	-
341	06-03-2020 00:00	-	-	-	-	-	-
342	07-03-2020 00:00	-	-	-	-	-	-
343	08-03-2020 00:00	71.69	120.42	85.6	8.1	56.01	46.4
344	09-03-2020 00:00	40.08	67.32	76.4	7.8	31.31	80.2
345	10-03-2020 00:00	53.32	89.57	75.5	8	41.66	41.2
346	11-03-2020 00:00	42.21	70.91	78.6	7.8	32.98	37.2
347	12-03-2020 00:00	54.73	91.93	76.3	7.9	42.76	66.4
348	13-03-2020 00:00	50.01	84	77	7.8	39.07	55.9
349	14-03-2020 00:00	48.92	82.17	76.2	8.1	38.22	47.6
350	15-03-2020 00:00	43.62	73.27	77.4	7.7	34.08	67.5
351	16-03-2020 00:00	51.7	86.84	73.3	8	40.39	39.3
352	17-03-2020 00:00	69.02	115.93	75.1	7.9	53.92	29.6
353	18-03-2020 00:00	71.42	119.97	76.3	8	55.8	43.1
354	19-03-2020 00:00	82	137.73	74.6	8	64.06	28.7
355	20-03-2020 00:00	-	-	-	-	-	-
356	21-03-2020 00:00	59.06	99.2	76.5	8	46.14	37.7
357	22-03-2020 00:00	32.13	53.97	73.8	8	25.1	52.9
358	23-03-2020 00:00	56.68	95.2	71	8	44.28	59.8
359	24-03-2020 00:00	38.69	64.99	73.9	8.1	30.23	34.6
360	25-03-2020 00:00	45.06	75.68	73.3	8	35.2	50.4
361	26-03-2020 00:00	22.07	37.07	70.5	8.2	17.24	43.1
362	27-03-2020 00:00	45.2	75.92	73.2	7.9	35.31	24.6
363	28-03-2020 00:00	42.2	70.89	71.5	7.8	32.97	21.6
364	29-03-2020 00:00	21.52	36.14	69.5	8	16.81	18.3
365	30-03-2020 00:00	42.24	70.95	71.9	7.8	33	16
366	31-03-2020 00:00	35.25	59.21	72.8	7.8	27.54	11.3
367	01-04-2020 00:00	77.75	130.59	0	8.2	60.74	36.3
368	02-04-2020 00:00	57.54	96.64	0	7.1	44.95	8.6

251 C

369	03-04-2020 00:00	45.63	76.65	70.9	7.6	35.65	66.6
370	04-04-2020 00:00	33.01	55.45	0	8.1	25.79	35.1
371	05-04-2020 00:00	18.53	31.13	0	7.1	14.48	20.1
372	06-04-2020 00:00	30.14	50.63	64.9	7.9	23.55	15.7
373	07-04-2020 00:00	37.56	63.08	0	7.5	29.34	15.3
374	08-04-2020 00:00	57.37	96.36	0	7.9	44.82	13.7
375	09-04-2020 00:00	25.52	42.87	67.8	7.7	19.94	13.1
376	10-04-2020 00:00	19.65	33	70.2	7.4	15.35	9
377	11-04-2020 00:00	40.7	68.37	70.1	7.4	31.8	9.5
378	12-04-2020 00:00	40.79	68.52	69.3	7.9	31.87	9.6
379	13-04-2020 00:00	26.47	44.46	69.2	8	20.68	9.9
380	14-04-2020 00:00	46.44	78	64.2	7	36.28	9.8
381	15-04-2020 00:00	63.8	107.16	0	7.4	49.84	9.5
382	16-04-2020 00:00	37.32	62.69	69.3	7.7	29.16	9.6
383	17-04-2020 00:00	65.32	109.71	69.4	7.8	51.03	9.6
384	18-04-2020 00:00	25.05	42.08	67.2	7.7	19.57	9.7
385	19-04-2020 00:00	75.84	127.39	0	7.8	59.25	9.7
386	20-04-2020 00:00	10.46	17.57	67.2	7.6	8.17	9.8
387	21-04-2020 00:00	0	0	0	8.1	0	29.9
388	22-04-2020 00:00	10.25	17.22	68.3	7.5	8.01	16.1
389	23-04-2020 00:00	-	-	-	-	-	-
390	24-04-2020 00:00	-	-	-	-	-	-
391	25-04-2020 00:00	-	-	-	-	-	-
392	26-04-2020 00:00	-	-	-	-	-	-
393	27-04-2020 00:00	-	-	-	-	-	-
394	28-04-2020 00:00	-	-	-	-	-	-
395	29-04-2020 00:00	-	-	-	-	-	-
396	30-04-2020 00:00	47.16	79.21	0	7.9	36.84	21.3
397	01-05-2020 00:00	36.88	61.94	66.1	7.9	28.81	19.5
398	02-05-2020 00:00	30.44	51.13	67.7	7.8	23.78	17.2
399	03-05-2020 00:00	38.6	64.84	67.1	8.1	30.16	16.1
400	04-05-2020 00:00	-	-	-	-	-	-
401	05-05-2020 00:00	-	-	-	-	-	-
402	06-05-2020 00:00	28.72	48.25	66.6	7.9	22.44	11.4
403	07-05-2020 00:00	44.83	75.29	69.7	7.1	35.02	10.9
404	08-05-2020 00:00	44.93	75.47	71.6	7.8	35.1	10.7
405	09-05-2020 00:00	33.2	55.77	68.9	7.8	25.94	42.5
406	10-05-2020 00:00	37.5	63	66.3	8	29.3	47.5
407	11-05-2020 00:00	25.33	42.55	71.7	7.9	19.79	54.1
408	12-05-2020 00:00	-	-	-	-	-	-
409	13-05-2020 00:00	49.65	83.4	72	7.3	38.79	59.1
410	14-05-2020 00:00	43.2	72.56	65.7	7.6	33.75	47.6
411	15-05-2020 00:00	45.93	77.14	66.2	7.8	35.88	45.7
412	16-05-2020 00:00	24.03	40.36	71.6	7.5	18.77	46
413	17-05-2020 00:00	-	-	-	-	-	-
414	18-05-2020 00:00	-	-	-	-	-	-
415	19-05-2020 00:00	-	-	-	-	-	-

6100

253/C

416	20-05-2020 00:00	42.47	71.34	72	7.7	33.18	45.1
417	21-05-2020 00:00	41	68.86	72	7.7	32.03	47.8
418	22-05-2020 00:00	50.34	84.56	72.5	7.6	39.33	47.7
419	23-05-2020 00:00	38.58	64.8	72.4	7.5	30.14	48.1
420	24-05-2020 00:00	-	-	-	-	-	-
421	25-05-2020 00:00	-	-	-	-	-	-
422	26-05-2020 00:00	-	-	-	-	-	-
423	27-05-2020 00:00	50.88	85.46	0	7.6	39.75	16.5
424	28-05-2020 00:00	48.65	81.72	73.1	7.4	38.01	16.7
425	29-05-2020 00:00	48.26	81.06	73.2	7.2	37.7	16.7
426	30-05-2020 00:00	44.02	73.94	75	7.2	34.39	16.6
427	31-05-2020 00:00	-	-	-	-	-	-
428	01-06-2020 00:00	57.01	95.76	60.6	8.1	44.54	16.9
429	02-06-2020 00:00	-	-	-	-	-	-
430	03-06-2020 00:00	-	-	-	-	-	-
431	04-06-2020 00:00	-	-	-	-	-	-
432	05-06-2020 00:00	-	-	-	-	-	-
433	06-06-2020 00:00	-	-	-	-	-	-
434	07-06-2020 00:00	53.47	89.81	74.5	7.8	41.77	26.5
435	08-06-2020 00:00	50.91	85.51	56.6	8.1	39.77	22.5
436	09-06-2020 00:00	55.74	93.63	73.8	8.1	43.55	18.7
437	10-06-2020 00:00	68.84	115.63	73	7.9	53.78	18.3
438	11-06-2020 00:00	66.64	111.93	73.8	7.9	52.06	15.7
439	12-06-2020 00:00	62.11	104.32	72.1	7.8	48.52	14.1
440	13-06-2020 00:00	61.53	103.35	0	8.1	48.07	14.3
441	14-06-2020 00:00	62.18	104.45	75.4	7.9	48.58	10.3
442	15-06-2020 00:00	63.23	106.21	73.6	8	49.4	71.6
443	16-06-2020 00:00	73.73	123.84	0	7.9	57.6	28.9
444	17-06-2020 00:00	-	-	-	-	-	-
445	18-06-2020 00:00	-	-	-	-	-	-
446	19-06-2020 00:00	-	-	-	-	-	-
447	20-06-2020 00:00	-	-	-	-	-	-
448	21-06-2020 00:00	75.96	127.58	79.4	7.7	59.34	8.6
449	22-06-2020 00:00	80.05	134.46	0	7.8	62.54	7.8
450	23-06-2020 00:00	94.96	159.51	0	8.3	74.19	7.5
451	24-06-2020 00:00	96.82	162.63	77.6	8	75.64	7.2
452	25-06-2020 00:00	93.15	156.46	79.8	8	72.77	48.7
453	26-06-2020 00:00	92.01	154.54	98.7	7.8	71.88	28.2
454	27-06-2020 00:00	83.57	140.37	0	8	65.29	17.8
455	28-06-2020 00:00	70.43	118.29	0	8	55.02	12.7
456	29-06-2020 00:00	60.16	101.05	0	7.7	47	8.9
457	30-06-2020 00:00	-	-	-	-	-	-
458	01-07-2020 00:00	100.44	168.71	0	7.7	78.47	33.1
459	02-07-2020 00:00	76.8	129	77.7	7.9	60	13.3
460	03-07-2020 00:00	67.35	113.13	70.2	7.7	52.62	8.2
461	04-07-2020 00:00	63.04	105.89	78.1	7.5	49.25	7.3
462	05-07-2020 00:00	72.46	121.71	80.6	7.8	56.61	6.8

6101

255/C

463	06-07-2020 00:00	77.24	129.73	77.8	7.5	60.34	8
464	07-07-2020 00:00	84.86	142.55	0	15	66.3	7.2
465	08-07-2020 00:00	83.44	140.16	83.3	8	65.19	6.9
466	09-07-2020 00:00	81.78	137.36	80.4	7.8	63.89	6.5
467	10-07-2020 00:00	77.48	130.14	83.7	8.1	60.53	6.3
468	11-07-2020 00:00	86.82	145.83	79.8	7.5	67.83	7
469	12-07-2020 00:00	62.78	105.46	79	7.6	49.05	8.6
470	13-07-2020 00:00	82.73	138.95	80.6	7.8	64.63	7.8
471	14-07-2020 00:00	75.39	126.64	80	7.8	58.9	9.3
472	15-07-2020 00:00	76.68	128.81	77.4	8	59.91	9.2
473	16-07-2020 00:00	90.12	151.38	80.5	8	70.41	10.3
474	17-07-2020 00:00	80.84	135.79	81.7	8.1	63.16	8.5
475	18-07-2020 00:00	71.31	119.78	79.8	8.1	55.71	9.2
476	19-07-2020 00:00	71.99	120.92	79.9	7.7	56.24	7.6
477	20-07-2020 00:00	77.48	130.14	80.7	7.8	60.53	7.2
478	21-07-2020 00:00	88.83	149.21	81	7.9	69.4	7
479	22-07-2020 00:00	73.82	123.99	81.8	7.9	57.67	7.3
480	23-07-2020 00:00	96.82	162.63	0	8	75.64	6.9
481	24-07-2020 00:00	70.05	117.67	78.9	8.1	54.73	6.2
482	25-07-2020 00:00	66.28	111.33	76.2	7.8	51.78	6.9
483	26-07-2020 00:00	72.82	122.31	0	8.2	56.89	6.8
484	27-07-2020 00:00	78.53	131.9	77.5	7.8	61.35	6
485	28-07-2020 00:00	109.63	184.15	0	8.1	85.65	6
486	29-07-2020 00:00	67.73	161.81	81.2	8	75.26	5.5
487	30-07-2020 00:00	71.96	171.89	77.5	7.1	79.95	5.2
488	31-07-2020 00:00	68.33	163.23	73.9	7.8	75.92	7.1
489	01-08-2020 00:00	43.88	104.81	77.9	7.3	48.75	6.7
490	02-08-2020 00:00	59.76	142.76	79.5	8.1	66.4	6.2
491	03-08-2020 00:00	72.74	173.76	0	8.2	80.82	5.3
492	04-08-2020 00:00	61.08	145.92	79.8	8.1	67.87	4.9
493	05-08-2020 00:00	62.86	150.16	79	8	69.84	6
494	06-08-2020 00:00	62.26	148.74	80	8.2	69.18	6.8
495	07-08-2020 00:00	62.79	150.01	79.3	8	69.77	6.5
496	08-08-2020 00:00	55.28	132.05	0	5.9	61.42	6.1
497	09-08-2020 00:00	61.14	146.05	79.5	7.9	67.93	6.1
498	10-08-2020 00:00	74.03	176.84	83	7.5	82.25	5.7
499	11-08-2020 00:00	62.51	149.32	80.2	7.8	69.45	6.2
500	12-08-2020 00:00	50.85	121.48	82.4	7.7	56.5	7.9
501	13-08-2020 00:00	56.3	134.48	78.5	7.9	62.55	7.8
502	14-08-2020 00:00	66.02	157.7	81.9	8.1	73.35	10.9
503	15-08-2020 00:00	70.95	169.48	86.4	6.9	78.83	9
504	16-08-2020 00:00	71.27	170.26	78.9	8	79.19	8.1
505	17-08-2020 00:00	56.02	133.82	80.5	8.2	62.24	9.7
506	18-08-2020 00:00	69.18	165.27	79.3	7.9	76.87	29.8
507	19-08-2020 00:00	62.33	148.91	80.7	7.8	69.26	31
508	20-08-2020 00:00	67.18	160.48	79.5	7.7	74.64	33.1
509	21-08-2020 00:00	66.43	158.69	79.5	8.1	73.81	23.9

6102

257/c

510	22-08-2020 00:00	-	-	-	-	-	-
511	23-08-2020 00:00	49.85	119.09	79.3	7.3	55.39	39.8
512	24-08-2020 00:00	55.51	132.61	79.3	7.5	61.68	35.3
513	25-08-2020 00:00	45.53	108.77	0	6.5	50.59	40
514	26-08-2020 00:00	43.59	104.12	76.8	7.8	48.43	51.2
515	27-08-2020 00:00	43.59	104.12	79.1	8	48.43	57.6
516	28-08-2020 00:00	58.52	139.79	76.1	8.1	65.02	74.9
517	29-08-2020 00:00	66.75	159.47	76.3	7.9	74.17	46.3
518	30-08-2020 00:00	59.33	141.73	75.4	7.8	65.92	34.6
519	31-08-2020 00:00	70.84	169.23	74.6	7.8	78.71	40.3
520	01-09-2020 00:00	52.69	125.86	74.5	7.9	58.54	51.5
521	02-09-2020 00:00	75.01	179.18	74.9	7.8	83.34	67.6
522	03-09-2020 00:00	53.8	128.53	75.9	8	59.78	55.1
523	04-09-2020 00:00	66.04	157.77	100.7	7.8	73.38	55.3
524	05-09-2020 00:00	82.8	197.8	0	8.1	92	56.2
525	06-09-2020 00:00	77.24	184.51	104.1	8.1	85.82	63.2
526	07-09-2020 00:00	61.43	146.74	107.1	8.1	68.25	70.9
527	08-09-2020 00:00	-	-	-	-	-	-
528	09-09-2020 00:00	73.8	176.3	0	7.8	82	85.7
529	10-09-2020 00:00	3.91	9.33	93.6	6.6	4.34	7.1
530	11-09-2020 00:00	64.74	154.65	0	8	71.93	8
531	12-09-2020 00:00	64.25	153.49	0	8.2	71.39	48.8
532	13-09-2020 00:00	68.68	164.07	101.1	7.9	76.31	51.8
533	14-09-2020 00:00	68.76	164.26	82.5	7	76.4	51.9
534	15-09-2020 00:00	74.67	178.39	102.4	7.2	82.97	41.8
535	16-09-2020 00:00	66.12	157.96	101.2	8	73.47	42.8
536	17-09-2020 00:00	58.77	140.4	92.1	7.9	65.3	41.6
537	18-09-2020 00:00	51.18	122.27	103.6	8.1	56.87	43
538	19-09-2020 00:00	56.14	134.12	122.1	7.2	62.38	9.3
539	20-09-2020 00:00	44.8	107.03	86	8	49.78	31.7
540	21-09-2020 00:00	3.25	7.76	98.3	7.8	3.61	32.2
541	22-09-2020 00:00	38.43	91.81	99.5	8	42.7	34.4
542	23-09-2020 00:00	48.79	116.55	149.3	8	54.21	34.3
543	24-09-2020 00:00	53.92	128.81	129.1	8	59.91	45.8
544	25-09-2020 00:00	48.27	115.3	88.2	8	53.63	43.4
545	26-09-2020 00:00	51.35	122.68	94.5	8	57.06	44.1
546	27-09-2020 00:00	51.65	123.39	88.7	8.1	57.39	44.5
547	28-09-2020 00:00	49.28	117.71	85.2	7.9	54.75	49.6
548	29-09-2020 00:00	39.06	93.31	95.8	7.9	43.4	48.9
549	30-09-2020 00:00	46.95	112.17	90.1	7.6	52.17	9.2
550	01-10-2020 00:00	63.37	151.38	94.2	8	70.41	15.3
551	02-10-2020 00:00	48.83	116.66	88.3	6.7	54.26	20.9
552	03-10-2020 00:00	62.24	148.69	82.1	7	69.16	47.1
553	04-10-2020 00:00	48.22	115.2	130.2	7.7	53.58	35.3
554	05-10-2020 00:00	36.14	86.32	103.7	7.9	40.15	49.7
555	06-10-2020 00:00	40.66	97.14	104.8	7.3	45.18	63.9
556	07-10-2020 00:00	39.09	93.37	114.2	7.6	43.43	8.2

6103

259/C

557	08-10-2020 00:00	45.99	109.87	100.5	7.9	51.1	27.8
558	09-10-2020 00:00	44.71	106.81	90.4	7.1	49.68	19.1
559	10-10-2020 00:00	47.75	114.06	93.4	8	53.05	16.5
560	11-10-2020 00:00	49.51	118.27	104.5	7	55.01	7.6
561	12-10-2020 00:00	47.39	113.22	99	7.9	52.66	8
562	13-10-2020 00:00	45.31	108.23	66.4	7	50.34	8.7
563	14-10-2020 00:00	46.49	111.07	99.1	7.1	51.66	9.5
564	15-10-2020 00:00	43.39	103.65	101.2	7.9	48.21	10.1
565	16-10-2020 00:00	45.6	108.94	106.7	7.3	50.67	10.1
566	17-10-2020 00:00	40.16	95.93	95.3	8	44.62	9
567	18-10-2020 00:00	63.2	150.97	96.7	7.2	70.22	9.5
568	19-10-2020 00:00	57.17	136.57	118.6	8.1	63.52	10.4
569	20-10-2020 00:00	61.44	146.78	99	8	68.27	11.3
570	21-10-2020 00:00	58.41	139.54	74.8	7.6	64.9	12.1
571	22-10-2020 00:00	79	188.73	135.7	7.5	87.78	45.5
572	23-10-2020 00:00	70.88	169.31	99.3	7.4	78.75	64.9
573	24-10-2020 00:00	63.12	150.78	91.9	7	70.13	54.5
574	25-10-2020 00:00	72.23	172.56	85.6	7.6	80.26	49.9
575	26-10-2020 00:00	59.15	141.3	95	7.5	65.72	48.8
576	27-10-2020 00:00	68.29	163.14	100.2	7.2	75.88	45
577	28-10-2020 00:00	56.23	134.33	110.2	7.2	62.48	43.1
578	29-10-2020 00:00	51.08	122.03	0	8.3	56.76	41.5
579	30-10-2020 00:00	68.9	164.58	85	7.8	76.55	40.5
580	31-10-2020 00:00	65.08	155.47	99	7.4	72.31	40.6
581	01-11-2020 00:00	63.64	152.03	100.9	7.4	70.71	38.2
582	02-11-2020 00:00	66.1	157.9	84.4	7.4	73.44	14.1
583	03-11-2020 00:00	57.3	136.89	108.2	7.5	63.67	12.4
584	04-11-2020 00:00	61.06	145.86	74.4	7.5	67.84	12.3
585	05-11-2020 00:00	64.24	153.47	81.5	7.9	71.38	12.7
586	06-11-2020 00:00	48.46	115.76	95.3	7.6	53.84	13.7
587	07-11-2020 00:00	50.8	121.35	98.9	7.3	56.44	14
588	08-11-2020 00:00	48.71	116.36	91.5	7.9	54.12	13
589	09-11-2020 00:00	27.66	66.07	98	6.9	30.73	13
590	10-11-2020 00:00	43.44	103.78	89.6	7.8	48.27	13.2
591	11-11-2020 00:00	37.4	89.35	91	6.9	41.56	35
592	12-11-2020 00:00	19.66	46.96	87.4	7.6	21.84	22.5
593	13-11-2020 00:00	53.61	128.08	93.8	7.9	59.57	16.9
594	14-11-2020 00:00	66.64	159.19	42.4	6.9	74.04	15.3
595	15-11-2020 00:00	69.69	166.47	83.3	6.8	77.43	14.1
596	16-11-2020 00:00	59.81	142.89	135.4	6.8	66.46	10.6
597	17-11-2020 00:00	67.47	161.19	29.2	8.2	74.97	9.4
598	18-11-2020 00:00	96.21	229.84	0	8	106.9	8.9
599	19-11-2020 00:00	50.11	119.71	88	7.4	55.68	7.2
600	20-11-2020 00:00	25.66	61.3	90.9	6.9	28.51	7.1
601	21-11-2020 00:00	50.63	120.96	91.8	7.6	56.26	7.6
602	22-11-2020 00:00	51.92	124.03	97.4	7.7	57.69	8
603	23-11-2020 00:00	65.1	155.51	102	7.1	72.33	8

6104

261/C

604	24-11-2020 00:00	41.77	99.78	100.3	7.7	46.41	8.2
605	25-11-2020 00:00	72.47	173.12	87.5	7.5	80.52	8.5
606	26-11-2020 00:00	61.37	146.61	85.6	7.7	68.19	9.2
607	27-11-2020 00:00	62.3	148.82	71.6	7	69.22	12.4
608	28-11-2020 00:00	3407.4	8139.9	0	7.7	3786	8.9
609	29-11-2020 00:00	80.78	192.96	89.6	6.7	89.75	8.7
610	30-11-2020 00:00	50.26	120.06	84.9	7.5	55.84	6.8
611	01-12-2020 00:00	53.66	128.18	121.8	6.9	59.62	6.9
612	02-12-2020 00:00	75.78	181.03	70.3	7.8	84.2	7.2
613	03-12-2020 00:00	69.46	165.94	101.6	6.7	77.18	10.6
614	04-12-2020 00:00	65.54	156.56	127.4	7	72.82	7.7
615	05-12-2020 00:00	54	129	106.3	7.7	60	7.5
616	06-12-2020 00:00	51.34	122.64	88.2	7.6	57.04	6.6
617	07-12-2020 00:00	53.01	126.64	83.6	6.7	58.9	6.4
618	08-12-2020 00:00	32.3	77.16	95.4	7.6	35.89	6.7
619	09-12-2020 00:00	44.32	105.87	92.5	7.2	49.24	6.4
620	10-12-2020 00:00	40.64	97.07	97	7.8	45.15	5.6
621	11-12-2020 00:00	39.62	94.64	91.7	7.1	44.02	8.8
622	12-12-2020 00:00	47.3	112.98	76.3	6.9	52.55	9.7
623	13-12-2020 00:00	40.31	96.3	83	7.6	44.79	9.9
624	14-12-2020 00:00	45.98	109.84	82.8	7.1	51.09	9.9
625	15-12-2020 00:00	49.41	118.04	94.8	7.6	54.9	10.2
626	16-12-2020 00:00	62.78	149.96	129	7	69.75	10.2
627	17-12-2020 00:00	46.68	111.52	86	6.7	51.87	7.5
628	18-12-2020 00:00	50.67	121.05	98.3	7.9	56.3	7.6
629	19-12-2020 00:00	47.52	113.52	98.4	7.8	52.8	8.3
630	20-12-2020 00:00	51.25	122.42	15.9	8.3	56.94	6.3
631	21-12-2020 00:00	58.91	140.74	79.8	6.8	65.46	6
632	22-12-2020 00:00	74.47	177.89	106	7.1	82.74	6.3
633	23-12-2020 00:00	60.53	144.61	81	7.5	67.26	6.2
634	24-12-2020 00:00	44.96	107.39	0	8.2	49.95	6.2
635	25-12-2020 00:00	65.01	155.29	82.5	7.5	72.23	6.2
636	26-12-2020 00:00	58.31	139.3	134.2	6.7	64.79	6.2
637	27-12-2020 00:00	49.41	118.04	87.1	7.7	54.9	6.2
638	28-12-2020 00:00	41.66	99.52	91.1	7.2	46.29	6.2
639	29-12-2020 00:00	48.28	115.33	89.5	7.7	53.64	6.2
640	30-12-2020 00:00	64.31	153.64	96.9	7.2	71.46	6.2
641	31-12-2020 00:00	52.45	125.3	82	7.7	58.28	6.2
642	01-01-2021 00:00	-	-	-	-	-	-
643	02-01-2021 00:00	62.42	149.12	86.8	7.3	69.36	6.2
644	03-01-2021 00:00	57.34	136.98	83.1	7.6	63.71	6.2
645	04-01-2021 00:00	51.97	124.14	82.8	7.4	57.74	6.2
646	05-01-2021 00:00	53.51	127.84	77.1	7.3	59.46	6.2
647	06-01-2021 00:00	60.89	145.45	98.3	7.7	67.65	6.2
648	07-01-2021 00:00	61.52	146.97	94.5	7.8	68.36	6.2
649	08-01-2021 00:00	70.51	168.43	93.9	7.5	78.34	6.2
650	09-01-2021 00:00	63.95	152.76	98.5	7.8	71.05	13.4

263/c

651	10-01-2021 00:00	61.31	146.46	88.5	7.5	68.12	11.3
652	11-01-2021 00:00	78.38	187.24	76.8	7.5	87.09	10.3
653	12-01-2021 00:00	61.88	147.83	93.5	7.5	68.76	10.3
654	13-01-2021 00:00	74.84	178.77	87	7.7	83.15	8.2
655	14-01-2021 00:00	66.04	157.77	89.4	7.7	73.38	5.7
656	15-01-2021 00:00	60.63	144.85	82	7.6	67.37	5.6
657	16-01-2021 00:00	65.26	155.9	131.2	7.4	72.51	5.7
658	17-01-2021 00:00	64.21	153.38	89.6	8.1	71.34	5.6
659	18-01-2021 00:00	71.6	171.05	99.7	7.9	79.56	5.7
660	19-01-2021 00:00	67.91	162.22	118.1	7.4	75.45	6.9
661	20-01-2021 00:00	63.05	150.61	86.5	7.4	70.05	7
662	21-01-2021 00:00	64.96	155.19	83.5	7.1	72.18	6.6
663	22-01-2021 00:00	86.54	206.72	0	8.5	96.15	6.7
664	23-01-2021 00:00	59.75	142.74	88.6	7.9	66.39	7.1
665	24-01-2021 00:00	57.57	137.54	76.2	7.2	63.97	7.4
666	25-01-2021 00:00	75.2	179.63	85.3	7.6	83.55	7.6
667	26-01-2021 00:00	68.2	162.93	97.7	7.4	75.78	7.7
668	27-01-2021 00:00	59.71	142.63	84.7	7.8	66.34	7.7
669	28-01-2021 00:00	61.35	146.57	88.5	7.7	68.17	7.9
670	29-01-2021 00:00	62.31	148.84	84.2	7.5	69.23	8.5
671	30-01-2021 00:00	56.35	134.61	85.2	7.2	62.61	9.4
672	31-01-2021 00:00	45.25	108.1	125.5	7.1	50.28	11.7
673	01-02-2021 00:00	55.08	131.58	97.3	7.4	61.2	10.3
674	02-02-2021 00:00	60.71	145.04	88.1	7.8	67.46	13.3
675	03-02-2021 00:00	68.55	163.77	85.7	7.5	76.17	16.2
676	04-02-2021 00:00	44.85	107.13	84.5	7.8	49.83	10.9
677	05-02-2021 00:00	50.3	120.16	89.1	7	55.89	7.8
678	06-02-2021 00:00	47.09	112.49	113.2	7.1	52.32	9.1
679	07-02-2021 00:00	68	162.45	84	7.8	75.56	9.7
680	08-02-2021 00:00	58.96	140.85	63.9	7	65.51	9.4
681	09-02-2021 00:00	66.38	158.58	56.9	7.4	73.76	9.9
682	10-02-2021 00:00	64.93	155.1	59.1	7.5	72.14	16
683	11-02-2021 00:00	62.64	149.64	60.2	7.2	69.6	9.4
684	12-02-2021 00:00	57.74	137.94	65	7.6	64.15	15.4
685	13-02-2021 00:00	69.17	165.25	61.8	7.3	76.86	10.4
686	14-02-2021 00:00	51.89	123.95	67.6	7.9	57.65	13
687	15-02-2021 00:00	67.16	160.43	112.1	7	74.62	25.2
688	16-02-2021 00:00	69.05	164.95	114.8	7.5	76.72	21.2
689	17-02-2021 00:00	68.66	164.02	62.5	7.9	76.29	16.6
690	18-02-2021 00:00	53.56	127.95	108.2	7.4	59.51	18.3
691	19-02-2021 00:00	71.45	170.69	66.3	7.3	79.39	21.5
692	20-02-2021 00:00	-	-	-	-	-	-
693	21-02-2021 00:00	-	-	-	-	-	-
694	22-02-2021 00:00	70.73	168.97	72	8	78.59	21.8
695	23-02-2021 00:00	57.47	137.28	96.1	7.5	63.85	17.7
696	24-02-2021 00:00	58.65	140.12	91.4	7.6	65.17	14.9
697	25-02-2021 00:00	-	-	-	-	-	-

265/C

698	26-02-2021 00:00	65.98	157.62	69	7.5	73.31	10.5
699	27-02-2021 00:00	68.43	163.46	76.5	7.9	76.03	70.2
700	28-02-2021 00:00	61.39	146.65	76.3	7.6	68.21	72.3
701	01-03-2021 00:00	56.03	133.86	99.3	7.2	62.26	62.5
702	02-03-2021 00:00	65.75	157.06	75.2	6.8	73.05	62.5
703	03-03-2021 00:00	59.39	141.88	86	6.8	65.99	50.7
704	04-03-2021 00:00	46.46	110.98	77	7.2	51.62	41.4
705	05-03-2021 00:00	57.02	136.22	92	7.4	63.36	63.1
706	06-03-2021 00:00	56.87	135.86	95.1	7.4	63.19	60
707	07-03-2021 00:00	45.05	107.61	93.7	7.2	50.05	46.3
708	08-03-2021 00:00	43.35	103.57	99.1	7	48.17	18.3
709	09-03-2021 00:00	43.45	103.8	67.1	7.1	48.28	15.1
710	10-03-2021 00:00	40.44	96.6	57.8	7.3	44.93	11.1
711	11-03-2021 00:00	19.33	46.18	59.1	7.3	21.48	9
712	12-03-2021 00:00	18.49	44.16	63.5	7.2	20.54	8.2
713	13-03-2021 00:00	27.34	65.32	62.6	6.8	30.38	8.1
714	14-03-2021 00:00	-	-	-	-	-	-
715	15-03-2021 00:00	-	-	-	-	-	
716	16-03-2021 00:00	37.19	88.84	109.1	7.1	41.32	8
717	17-03-2021 00:00	16.73	39.97	62	7.5	18.59	8
718	18-03-2021 00:00	-	-	-	-	-	-
719	19-03-2021 00:00	-	-	-	-	-	-
720	20-03-2021 00:00	-	-	-	-	-	-
721	21-03-2021 00:00	-	-	-	-	-	-
722	22-03-2021 00:00	33.98	81.16	89.1	7.1	37.75	7.4
723	23-03-2021 00:00	51.34	122.64	58.1	7	57.04	30.7
724	24-03-2021 00:00	54.8	130.91	106.1	6.7	60.89	14.1
725	25-03-2021 00:00	49.52	118.29	84.7	7	55.02	10.2
726	26-03-2021 00:00	60.13	143.64	66.7	6.9	66.81	7.9
727	27-03-2021 00:00	61.69	147.36	75.6	7	68.54	6.8
728	28-03-2021 00:00	57.93	138.4	72.4	7.1	64.37	6.4
729	29-03-2021 00:00	58.01	138.59	68.7	7	64.46	6.3
730	30-03-2021 00:00	64.13	153.19	64.8	7.3	71.25	6
731	31-03-2021 00:00	60.48	144.48	112.2	7.2	67.2	5.9
732	01-04-2021 00:00	64.46	153.98	67.4	7.3	71.62	6.2
733	02-04-2021 00:00	59.2	141.43	62.6	7.1	65.78	7.1
734	03-04-2021 00:00	54.13	129.3	61.1	7.3	60.14	6
735	04-04-2021 00:00	53.01	126.64	60.4	6.9	58.9	5.9
736	05-04-2021 00:00	62.81	150.05	86.5	6.7	69.79	5.9
737	06-04-2021 00:00	57.44	137.21	69.6	7.3	63.82	6.5
738	07-04-2021 00:00	67.08	160.24	64.5	7.3	74.53	6.3
739	08-04-2021 00:00	75.23	179.72	80.5	6.9	83.59	6
740	09-04-2021 00:00	66.76	159.49	56.5	7.6	74.18	5.8
741	10-04-2021 00:00	50.14	119.78	57.3	7.3	55.71	6
742	11-04-2021 00:00	35.2	84.09	52.8	7.4	39.11	7.4
743	12-04-2021 00:00	35.37	84.5	50.4	7.2	39.3	7.4
744	13-04-2021 00:00	34.46	82.32	0	7.7	38.29	5.8

267/c

745	14-04-2021 00:00	52.61	125.67	0	8.1	58.45	5.1
746	15-04-2021 00:00	-	-	-	-	-	-
747	16-04-2021 00:00	-	-	-	-	-	-
748	17-04-2021 00:00	26.92	64.31	0	8	29.91	5
749	18-04-2021 00:00	94.77	226.4	0	8	105.3	4.9
750	19-04-2021 00:00	69.27	165.49	0	8	76.97	4.8
751	20-04-2021 00:00	64.55	154.2	41.4	7.9	71.72	4.9
752	21-04-2021 00:00	60.3	144.05	57.4	7.4	67	4.4
753	22-04-2021 00:00	51.07	121.99	0	7.9	56.74	4.6
754	23-04-2021 00:00	64.94	155.14	55.5	7.5	72.16	4.9
755	24-04-2021 00:00	50.94	121.69	53.3	7.6	56.6	4.5
756	25-04-2021 00:00	42.02	100.38	68.5	7.3	46.69	4.8
757	26-04-2021 00:00	57	136.16	62.1	6.9	63.33	4.9
758	27-04-2021 00:00	61.01	145.75	51	7.1	67.79	4.6
759	28-04-2021 00:00	57.62	137.64	57.5	8	64.02	4.9
760	29-04-2021 00:00	51.55	123.15	59.4	8	57.28	4.8
761	30-04-2021 00:00	57.61	137.62	105.9	7.6	64.01	4.3
762	01-05-2021 00:00	48.45	115.73	82	7.7	53.83	4.3
763	02-05-2021 00:00	65.15	155.64	52	7.7	72.39	4.2
764	03-05-2021 00:00	45.5	108.7	62.2	7.8	50.56	4.3
765	04-05-2021 00:00	46.73	111.63	91.6	7.4	51.92	4.3
766	05-05-2021 00:00	50.08	119.63	63.2	8.2	55.64	4.5
767	06-05-2021 00:00	73.08	174.58	24	8	81.2	4.1
768	07-05-2021 00:00	55.16	131.77	75.6	7.5	61.29	4.3
769	08-05-2021 00:00	56.6	135.21	70.7	7.1	62.89	4.2
770	09-05-2021 00:00	56.84	135.77	73	6.9	63.15	4.3
771	10-05-2021 00:00	57.61	137.62	68.7	7.2	64.01	4.6
772	11-05-2021 00:00	52.4	125.17	75.6	7	58.22	4.6
773	12-05-2021 00:00	0	0	0	6.5	0	4.8
774	13-05-2021 00:00	53.42	127.62	125	6.8	59.36	5.1
775	14-05-2021 00:00	57.38	137.08	59.6	6.8	63.76	7.3
776	15-05-2021 00:00	56.34	134.59	88.8	7.5	62.6	14.7
777	16-05-2021 00:00	50.38	120.36	67	6.9	55.98	5.7
778	17-05-2021 00:00	43.5	103.91	59.1	7.1	48.33	31.6
779	18-05-2021 00:00	54.28	129.67	81.6	7.4	60.31	6
780	19-05-2021 00:00	29.57	70.65	0	7.4	32.86	56.1
781	20-05-2021 00:00	38.28	91.44	87.9	7.6	42.53	7.3
782	21-05-2021 00:00	-	-	-	-	-	-
783	22-05-2021 00:00	76.94	183.8	110.1	7.6	85.49	6.5
784	23-05-2021 00:00	60.71	145.04	87.3	7.9	67.46	23.5
785	24-05-2021 00:00	46.25	110.49	47.8	7.9	51.39	15.1
786	25-05-2021 00:00	65.84	157.27	58.6	7.8	73.15	48.3
787	26-05-2021 00:00	59.36	141.81	84.3	7.8	65.96	19.8
788	27-05-2021 00:00	54.09	129.22	85.5	7.8	60.1	19.4
789	28-05-2021 00:00	58.39	139.49	75.5	8	64.88	28.8
790	29-05-2021 00:00	78.6	187.76	114.5	7.6	87.33	7.9
791	30-05-2021 00:00	68.26	163.06	106.2	7.8	75.84	4.5

269

792	31-05-2021 00:00	61.7	147.38	103.7	7.9	68.55	4.3
793	01-06-2021 00:00	57.07	136.33	54.7	7.8	63.41	4.2
794	02-06-2021 00:00	64.77	154.74	0	7.9	71.97	4.2
795	03-06-2021 00:00	70.69	168.86	74.8	7.7	78.54	5.1
796	04-06-2021 00:00	53.41	127.58	48.8	7.4	59.34	4.8
797	05-06-2021 00:00	50.22	119.97	47.3	7.6	55.8	9.1
798	06-06-2021 00:00	37.76	90.19	47.7	7.8	41.95	10.6
799	07-06-2021 00:00	73.13	174.69	47.9	7.8	81.25	8.1
800	08-06-2021 00:00	28.58	68.28	55.6	7.5	31.76	6.5
801	09-06-2021 00:00	32.35	77.27	78.1	7.8	35.94	6.2
802	10-06-2021 00:00	0	0	45.4	7.3	0	6.2
803	11-06-2021 00:00	29.12	69.55	69.9	7.7	32.35	5.9
804	12-06-2021 00:00	27.46	65.6	49.3	7.6	30.51	8
805	13-06-2021 00:00	40.47	96.69	52.6	7.7	44.97	7.5
806	14-06-2021 00:00	50.58	120.83	51	7.7	56.2	7.1
807	15-06-2021 00:00	64.43	153.92	49.2	7.7	71.59	7
808	16-06-2021 00:00	68.39	163.38	53.4	7.6	75.99	6.9
809	17-06-2021 00:00	66.56	158.99	50.1	7.5	73.95	6.9
810	18-06-2021 00:00	-	-	-	-	-	-
811	19-06-2021 00:00	50.18	119.86	91.2	7.2	55.75	18.1
812	20-06-2021 00:00	44.56	106.45	59	7.4	49.51	13.6
813	21-06-2021 00:00	52.95	126.48	52.2	7.9	58.83	21
814	22-06-2021 00:00	63.34	151.32	63.3	7.6	70.38	19.3
815	23-06-2021 00:00	54.8	130.91	63.1	7.7	60.89	7.2
816	24-06-2021 00:00	37.4	89.33	0	8	41.55	5.5
817	25-06-2021 00:00	71.09	169.83	0	7.5	78.99	9
818	26-06-2021 00:00	55.54	132.68	61.5	7.6	61.71	7.5
819	27-06-2021 00:00	51.62	123.3	64.8	7.9	57.35	6.9
820	28-06-2021 00:00	49.5	118.25	51.5	7.9	55	15.5
821	29-06-2021 00:00	55.65	132.93	52.8	7.6	61.83	8.1
822	30-06-2021 00:00	56.4	134.74	110.3	7.8	62.67	8
823	01-07-2021 00:00	64.21	153.38	0	8	71.34	6.9
824	02-07-2021 00:00	56.05	133.9	0	7.9	62.28	6.4
825	03-07-2021 00:00	60.97	145.64	64	7.9	67.74	6.4
826	04-07-2021 00:00	60.93	145.56	54.3	7.4	67.7	6.8
827	05-07-2021 00:00	63.51	151.73	53	7.7	70.57	6.9
828	06-07-2021 00:00	63.72	152.22	58.8	7.7	70.8	7
829	07-07-2021 00:00	57.42	137.17	45	7.7	63.8	7.8
830	08-07-2021 00:00	75.83	181.14	46.3	7.4	84.25	8.3
831	09-07-2021 00:00	78.62	187.8	0	7.7	87.35	8.5
832	10-07-2021 00:00	78.49	187.5	54.5	8	87.21	9
833	11-07-2021 00:00	77.18	184.36	96.1	7.7	85.75	28.6
834	12-07-2021 00:00	68.16	162.82	61.5	7.9	75.73	20
835	13-07-2021 00:00	67.16	160.43	62.1	7.8	74.62	14.6
836	14-07-2021 00:00	57.11	136.42	105.6	7.4	63.45	12.3
837	15-07-2021 00:00	65.26	155.9	0	7.6	72.51	11
838	16-07-2021 00:00	65.71	156.97	107	8	73.01	9.3

6109

271/c

839	17-07-2021 00:00	68.66	164.02	117.4	7.8	76.29	9.9
840	18-07-2021 00:00	62.35	148.95	80.9	8	69.28	9.4
841	19-07-2021 00:00	58.07	138.72	65.9	7.6	64.52	11.6
842	20-07-2021 00:00	63.66	152.07	90.1	7.8	70.73	16.4
843	21-07-2021 00:00	68.61	163.89	0	8	76.23	15.6
844	22-07-2021 00:00	64.01	152.91	61.9	7.6	71.12	16
845	23-07-2021 00:00	58.28	139.23	96	7.9	64.76	11.5
846	24-07-2021 00:00	74.54	178.06	0	7.8	82.82	9.3
847	25-07-2021 00:00	61.51	146.93	0	8	68.34	13.4
848	26-07-2021 00:00	68	162.43	62.9	7.9	75.55	14.1
849	27-07-2021 00:00	53.71	128.31	57.2	7.6	59.68	11.4
850	28-07-2021 00:00	68.16	162.82	67.6	8	75.73	9.2
851	29-07-2021 00:00	67.16	160.43	61	7.6	74.62	7.4
852	30-07-2021 00:00	64.17	153.3	54.2	7.1	71.3	16.1
853	31-07-2021 00:00	41.88	100.04	111.5	7.8	46.53	11.1
854	01-08-2021 00:00	63.83	152.48	71.5	7.2	70.92	9.3
855	02-08-2021 00:00	36.13	86.3	66.8	7.1	40.14	12.5
856	03-08-2021 00:00	48.02	114.72	56.9	6.8	53.36	10
857	04-08-2021 00:00	47.38	113.18	55.1	7.6	52.64	9.1
858	05-08-2021 00:00	64.97	155.21	0	6.7	72.19	8.8
859	06-08-2021 00:00	47.62	113.76	103.7	7.5	52.91	8.8
860	07-08-2021 00:00	61.97	148.03	88	6.8	68.85	8.8
861	08-08-2021 00:00	55.61	132.85	78.1	6.8	61.79	8.9
862	09-08-2021 00:00	70.36	168.09	102.2	7.3	78.18	18
863	10-08-2021 00:00	46.65	111.43	70.6	7.7	51.83	14.2
864	11-08-2021 00:00	49.59	118.47	63.9	7.3	55.1	16.1
865	12-08-2021 00:00	57.79	138.05	88.4	7.5	64.21	18.3
866	13-08-2021 00:00	42.74	102.1	0	7.5	47.49	17.6
867	14-08-2021 00:00	53.76	128.42	71.3	7.6	59.73	15.6
868	15-08-2021 00:00	45.91	109.67	68.4	8	51.01	14.8
869	16-08-2021 00:00	52.93	126.44	95.9	8.2	58.81	16.2
870	17-08-2021 00:00	48.73	116.4	54.7	7.5	54.14	15.7
871	18-08-2021 00:00	42.17	100.73	103.9	7.9	46.85	9.9
872	19-08-2021 00:00	52.57	125.58	63	7.8	58.41	11.2
873	20-08-2021 00:00	43.63	104.23	64.9	7.8	48.48	9.9
874	21-08-2021 00:00	51.04	121.93	73.3	7.8	56.71	7.9
875	22-08-2021 00:00	42.38	101.24	81.3	7.8	47.09	6
876	23-08-2021 00:00	37.32	89.16	75.6	8	41.47	7.7
877	24-08-2021 00:00	36.13	86.3	70.8	7	40.14	6.3
878	25-08-2021 00:00	62.44	149.17	69.8	7.4	69.38	5.4
879	26-08-2021 00:00	46.4	110.85	73.8	7.3	51.56	7.6
880	27-08-2021 00:00	44.23	105.65	77.5	7	49.14	5.9
881	28-08-2021 00:00	54.98	131.34	78.1	7.3	61.09	5.1
882	29-08-2021 00:00	58.17	138.95	100.6	7.4	64.63	4.7
883	30-08-2021 00:00	61.91	147.9	97	7.5	68.79	4.4
884	31-08-2021 00:00	37.22	88.9	108.9	7.7	41.35	7.6
885	01-09-2021 00:00	-	-	-	-		

6110

273/C

886	02-09-2021 00:00	62.69	149.75	0	7.7	69.65	4.8
887	03-09-2021 00:00	62.69	149.75	0	7.7	69.65	4.6
888	04-09-2021 00:00	60.42	144.33	99.5	7.8	67.13	4.7
889	05-09-2021 00:00	64.57	154.24	61.8	8	71.74	5.5
890	06-09-2021 00:00	47.76	114.1	62.2	7.7	53.07	4.7
891	07-09-2021 00:00	84.22	201.2	0	7.8	93.58	4.4
892	08-09-2021 00:00	64.41	153.88	0	7.8	71.57	6.4
893	09-09-2021 00:00	68.36	163.31	96.3	7.6	75.96	7.1
894	10-09-2021 00:00	58.15	138.91	63.8	7.8	64.61	5.9
895	11-09-2021 00:00	51.71	123.54	55.5	7.9	57.46	9.2
896	12-09-2021 00:00	71.15	169.96	89.6	7.9	79.05	10.2
897	13-09-2021 00:00	61.34	146.52	57.5	8	68.15	7.2
898	14-09-2021 00:00	75.4	180.13	0	7.8	83.78	6.9
899	15-09-2021 00:00	39.42	94.17	0	7.8	43.8	6.4
900	16-09-2021 00:00	70.27	167.87	0	7.5	78.08	7.2
901	17-09-2021 00:00	70.27	167.87	0	7.5	78.08	6.6
902	18-09-2021 00:00	68.39	163.38	86.3	7.7	75.99	7
903	19-09-2021 00:00	66.78	159.53	101.3	7.8	74.2	5.4
904	20-09-2021 00:00	31.83	76.05	64.2	7.6	35.37	5.2
905	21-09-2021 00:00	72.79	173.89	62.3	7.7	80.88	4.1
906	22-09-2021 00:00	73.84	176.39	57.3	7.7	82.04	6.3
907	23-09-2021 00:00	64.52	154.13	61.1	7.6	71.69	5.4
908	24-09-2021 00:00	64.84	154.89	80.2	7.5	72.04	5.2
909	25-09-2021 00:00	43.07	102.9	64.4	7.9	47.86	5
910	26-09-2021 00:00	65.21	155.77	59.1	8	72.45	5
911	27-09-2021 00:00	45.66	109.07	56.1	7.6	50.73	11.8
912	28-09-2021 00:00	40.06	95.7	58.8	7.6	44.51	8.6
913	29-09-2021 00:00	76.01	181.59	72.3	6.9	84.46	7
914	30-09-2021 00:00	47.42	113.28	0	7.6	52.69	5.2
915	01-10-2021 00:00	60.05	143.45	74	7.7	66.72	4.9
916	02-10-2021 00:00	60.5	144.52	69.1	7.9	67.22	4.8
917	03-10-2021 00:00	55.22	131.92	51	7.9	61.36	4.8
918	04-10-2021 00:00	55.8	133.3	100.9	7.9	62	5.5
919	05-10-2021 00:00	61.38	146.63	56.8	7.6	68.2	5.4
920	06-10-2021 00:00	52.07	124.4	0	7.7	57.86	5.2
921	07-10-2021 00:00	63.62	151.98	0	7.6	70.69	5
922	08-10-2021 00:00	72.71	173.7	0	7.9	80.79	5
923	09-10-2021 00:00	60.35	144.16	47.5	8	67.05	5.1
924	10-10-2021 00:00	45.77	109.35	107.4	7.5	50.86	5.2
925	11-10-2021 00:00	72.25	172.6	80.9	7.8	80.28	5.2
926	12-10-2021 00:00	84.84	202.68	0	7.7	94.27	5.3
927	13-10-2021 00:00	87.39	208.77	0	7.7	97.1	5.4
928	14-10-2021 00:00	81.68	195.13	0	7.2	90.76	5.3
929	15-10-2021 00:00	64.64	154.41	51.9	7.2	71.82	5.4
930	16-10-2021 00:00	55.64	132.91	45.9	7.2	61.82	5.5
931	17-10-2021 00:00	78.53	187.59	55.7	7.4	87.25	8
932	18-10-2021 00:00	80.13	191.41	43.9	7.3	89.03	6.9

275 C

933	19-10-2021 00:00	64.02	152.93	0	7.5	71.13	6.4
934	20-10-2021 00:00	31.19	74.5	0	7.7	34.65	5.9
935	21-10-2021 00:00	36.15	86.37	45.6	7.9	40.17	5.7
936	22-10-2021 00:00	27.98	66.84	56.3	7.7	31.09	5.7
937	23-10-2021 00:00	4.24	10.13	66.7	7.5	4.71	5.8
938	24-10-2021 00:00	26.72	63.83	50.3	7.6	29.69	5.8
939	25-10-2021 00:00	47.6	113.71	0	7.8	52.89	5.8
940	26-10-2021 00:00	31.55	75.38	51.6	7.8	35.06	13.8
941	27-10-2021 00:00	20.99	50.14	51.4	8	23.32	11.2
942	28-10-2021 00:00	18.31	43.73	62.4	8	20.34	9
943	29-10-2021 00:00	23.21	55.45	58	7.9	25.79	7.4
944	30-10-2021 00:00	21.19	50.61	0	7.8	23.54	6.3
945	31-10-2021 00:00	17.07	40.79	42.4	7.7	18.97	5.7
946	01-11-2021 00:00	22.16	52.93	38.1	7.8	24.62	6.1
947	02-11-2021 00:00	24.65	58.89	37.4	7.7	27.39	6
948	03-11-2021 00:00	22.06	52.7	36.6	7.5	24.51	6.1
949	04-11-2021 00:00	23.03	55.02	68.2	7.6	25.59	5.7
950	05-11-2021 00:00	19.64	46.91	0	7.4	21.82	5.4
951	06-11-2021 00:00	31.19	74.52	0	7.4	34.66	5.1
952	07-11-2021 00:00	57.99	138.52	0	7.5	64.43	5
953	08-11-2021 00:00	41.05	98.06	41.3	7.2	45.61	5
954	09-11-2021 00:00	43.29	103.42	38.5	7.7	48.1	4.9
955	10-11-2021 00:00	47.65	113.82	39.4	7.6	52.94	4.7
956	11-11-2021 00:00	45.62	108.98	40.2	7.1	50.69	4.6
957	12-11-2021 00:00	19.94	47.62	51	7.5	22.15	4.6
958	13-11-2021 00:00	37.62	89.87	64.7	7.4	41.8	4.6
959	14-11-2021 00:00	46.22	110.42	52.3	7.3	51.36	4.6
960	15-11-2021 00:00	44.54	106.4	43.4	7.4	49.49	4.5
961	16-11-2021 00:00	-	-	-	-	-	-
962	17-11-2021 00:00	-	-	-	-	-	-
963	18-11-2021 00:00	-	-	-	-	-	-
964	19-11-2021 00:00	-	-	-	-	-	-
965	20-11-2021 00:00	43.12	103.01	55.3	7.4	47.91	14.5
966	21-11-2021 00:00	46.42	110.9	50.7	8.1	51.58	9.7
967	22-11-2021 00:00	46.37	110.77	0	7.6	51.52	8
968	23-11-2021 00:00	46.37	110.77	50.9	7.5	51.52	6.8
969	24-11-2021 00:00	46.37	110.77	0	7.8	51.52	6
970	25-11-2021 00:00	46.37	110.77	0	7.9	51.52	5.4
971	26-11-2021 00:00	46.37	110.77	0	7.7	51.52	4.9
972	27-11-2021 00:00	46.37	110.77	58.6	7.8	51.52	4.4
973	28-11-2021 00:00	51.72	123.56	0	7.7	57.47	4.2
974	29-11-2021 00:00	51.89	123.95	0	7.8	57.65	4.1
975	30-11-2021 00:00	-	-	-	-	-	-
976	01-12-2021 00:00	41.92	100.15	48.9	7.7	46.58	4.7
977	02-12-2021 00:00	53.11	126.87	0	7.8	59.01	18.4
978	03-12-2021 00:00	26.4	63.06	77.7	7.9	29.33	21
979	04-12-2021 00:00	21.59	51.58	86.1	7.7	23.99	17.3

277/c

980	05-12-2021 00:00	19.97	47.71	51.9	7.7	22.19	12.7
981	06-12-2021 00:00	16.79	40.1	0	7.5	18.65	10.3
982	07-12-2021 00:00	19.71	47.09	47.2	7.6	21.9	8.8
983	08-12-2021 00:00	21.47	51.28	42.8	7.4	23.85	7.8
984	09-12-2021 00:00	21.35	51	60	7.3	23.72	7.2
985	10-12-2021 00:00	22.25	53.15	53	7.7	24.72	6.9
986	11-12-2021 00:00	20.83	49.75	51.7	7.3	23.14	6.8
987	12-12-2021 00:00	23.74	56.72	54.1	7.6	26.38	6.7
988	13-12-2021 00:00	21.92	52.35	0	7.4	24.35	6.7
989	14-12-2021 00:00	21.39	51.11	49.8	7.3	23.77	6.7
990	15-12-2021 00:00	18.41	43.97	59.2	7.4	20.45	6.4
991	16-12-2021 00:00	30.19	72.11	83.7	7.4	33.54	6.1
992	17-12-2021 00:00	43.16	103.11	83.5	7.5	47.96	5.4
993	18-12-2021 00:00	38.31	91.53	58	7.6	42.57	4.8
994	19-12-2021 00:00	27.93	66.71	0	7.3	31.03	4.6
995	20-12-2021 00:00	27.84	66.5	54	7.5	30.93	4.4
996	21-12-2021 00:00	16.17	38.64	67.6	7.6	17.97	4.3
997	22-12-2021 00:00	15.82	37.8	45.5	7.7	17.58	3.7
998	23-12-2021 00:00	37.21	88.88	118	7.2	41.34	3.9
999	24-12-2021 00:00	32.71	78.13	75.4	7.4	36.34	3.9
1000	25-12-2021 00:00	41.65	99.5	49.7	7.1	46.28	3.9
1001	26-12-2021 00:00	28.94	69.12	49.6	7.7	32.15	3.9
1002	27-12-2021 00:00	34.65	82.78	67.1	7.4	38.5	4.6
1003	28-12-2021 00:00	28.82	68.84	67.4	7.7	32.02	35.4
1004	29-12-2021 00:00	29.84	71.29	61.1	7.2	33.16	51.2
1005	30-12-2021 00:00	49.82	119.02	73.6	7.5	55.36	32.2
1006	31-12-2021 00:00	33.1	79.08	79	7.3	36.78	45.9
1007	01-01-2022 00:00	-	-	-	-	-	-
1008	02-01-2022 00:00	19.84	47.39	70.5	7.7	22.04	6.3
1009	03-01-2022 00:00	34.85	83.25	72.3	7	38.72	5.7
1010	04-01-2022 00:00	26.64	63.64	53.2	7.2	29.6	4.9
1011	05-01-2022 00:00	28.85	68.93	52.5	7.1	32.06	4.6
1012	06-01-2022 00:00	41.69	99.59	77	7.2	46.32	4.4
1013	07-01-2022 00:00	45.62	108.98	73.3	7	50.69	4.4
1014	08-01-2022 00:00	43.31	103.46	76.2	6.8	48.12	4.3
1015	09-01-2022 00:00	37.07	88.56	100.2	7.2	41.19	4.3
1016	10-01-2022 00:00	46.39	110.81	91	7	51.54	4.4
1017	11-01-2022 00:00	48.23	115.22	103.9	7	53.59	4.4
1018	12-01-2022 00:00	48.52	115.91	68.1	7.7	53.91	4.5
1019	13-01-2022 00:00	47.46	113.37	89.4	7.3	52.73	4.5
1020	14-01-2022 00:00	51.25	122.42	95.2	7.1	56.94	4.8
1021	15-01-2022 00:00	67.06	160.2	0	7.9	74.51	4.8
1022	16-01-2022 00:00	57.7	137.84	0	6.3	64.11	4.7
1023	17-01-2022 00:00	36.55	87.31	75.3	7	40.61	49.4
1024	18-01-2022 00:00	51.63	123.35	0	6.7	57.37	35.8
1025	19-01-2022 00:00	39.26	93.78	91.8	7.2	43.62	33.7
1026	20-01-2022 00:00	47.6	113.71	55.3	7.8	52.89	29.7

6113

279/c

1027	21-01-2022 00:00	38.04	90.88	0	7.8	42.27	15.6
1028	22-01-2022 00:00	32.48	77.59	0	8.8	36.09	12.4
1029	23-01-2022 00:00	36.05	86.13	0	7.2	40.06	12.6
1030	24-01-2022 00:00	41.71	99.63	58.6	7.4	46.34	12.6
1031	25-01-2022 00:00	33.94	81.08	65.3	7.4	37.71	12.2
1032	26-01-2022 00:00	51.92	124.03	77.9	7	57.69	12.1
1033	27-01-2022 00:00	44.07	105.29	71	6.9	48.97	11.8
1034	28-01-2022 00:00	50.85	121.48	68.1	6.9	56.5	11.6
1035	29-01-2022 00:00	40.57	96.92	52.6	7.2	45.08	11.6
1036	30-01-2022 00:00	28.76	68.71	125.3	7.7	31.96	10.6
1037	31-01-2022 00:00	29.55	70.58	87.6	7.6	32.83	9.7
1038	01-02-2022 00:00	39.99	95.52	97.2	7.8	44.43	8.6
1039	02-02-2022 00:00	43.07	102.88	83.7	7.4	47.85	8.4
1040	03-02-2022 00:00	28.39	67.81	105.2	7.2	31.54	8.2
1041	04-02-2022 00:00	22.81	54.48	75.2	7.8	25.34	8.3
1042	05-02-2022 00:00	46.99	112.25	103.5	7.2	52.21	8.2
1043	06-02-2022 00:00	40.52	96.79	103.4	7.2	45.02	7.9
1044	07-02-2022 00:00	77.3	184.66	0	7.4	85.89	7.8
1045	08-02-2022 00:00	38.65	92.32	105.4	7.3	42.94	7.4
1046	09-02-2022 00:00	28.66	68.46	112.5	7.4	31.84	7.1
1047	10-02-2022 00:00	28.53	68.16	101.5	7.4	31.7	6.1
1048	11-02-2022 00:00	20.24	48.35	0	7.6	22.49	4.9
1049	12-02-2022 00:00	35.49	84.77	94	6.7	39.43	4.8
1050	13-02-2022 00:00	37.33	89.18	0	7.5	41.48	4.9
1051	14-02-2022 00:00	44.06	105.24	81.6	7.3	48.95	5
1052	15-02-2022 00:00	43.91	104.9	81.2	7	48.79	5.2
1053	16-02-2022 00:00	33.47	79.96	64.6	7.2	37.19	5.5
1054	17-02-2022 00:00	39.81	95.09	95	7.1	44.23	5.8
1055	18-02-2022 00:00	43.08	102.92	60.2	7.4	47.87	5.6
1056	19-02-2022 00:00	38.08	90.97	96.1	7	42.31	5.7
1057	20-02-2022 00:00	26	62.11	73.5	6.9	28.89	5.5
1058	21-02-2022 00:00	42.49	101.5	76.1	7	47.21	5.1
1059	22-02-2022 00:00	62.15	148.46	94.2	7.1	69.05	4.7
1060	23-02-2022 00:00	45.69	109.16	70.4	7	50.77	4.8
1061	24-02-2022 00:00	34.27	81.87	73	7.4	38.08	21.3
1062	25-02-2022 00:00	38.92	92.97	100.2	7.4	43.24	16.9
1063	26-02-2022 00:00	53.45	127.69	90.3	7.1	59.39	14.1
1064	27-02-2022 00:00	70.36	168.09	67.2	7	78.18	12.9
1065	28-02-2022 00:00	38.33	91.57	72.1	7.4	42.59	4.4
1066	01-03-2022 00:00	57.79	138.05	63.2	7.5	64.21	5
1067	02-03-2022 00:00	44.33	105.89	97.2	7.2	49.25	4.8
1068	03-03-2022 00:00	59.41	141.92	66.9	7.5	66.01	4.4
1069	04-03-2022 00:00	55.07	131.56	99.6	7.4	61.19	4.6
1070	05-03-2022 00:00	38.48	91.91	91.5	7.7	42.75	5
1071	06-03-2022 00:00	44.47	106.23	93.6	7.4	49.41	5.4
1072	07-03-2022 00:00	47.39	113.2	70.4	7	52.65	5.9
1073	08-03-2022 00:00	43.15	103.07	89.3	7.3	47.94	6.3

6114

281/C

1074	09-03-2022 00:00	-	-	-	-	-	-
1075	10-03-2022 00:00	-	-	-	-	-	-
1076	11-03-2022 00:00	35.34	84.43	99	7.7	39.27	6.6
1077	12-03-2022 00:00	59.76	142.76	77.9	7.5	66.4	6.6
1078	13-03-2022 00:00	40.36	96.41	87.4	7.7	44.84	6.4
1079	14-03-2022 00:00	36.42	87.01	68.4	7	40.47	6.4
1080	15-03-2022 00:00	55.44	132.44	97.8	7.2	61.6	6.4
1081	16-03-2022 00:00	55.66	132.96	58.9	7.4	61.84	6.4
1082	17-03-2022 00:00	57.1	136.4	99.3	7.2	63.44	6.4
1083	18-03-2022 00:00	55.4	132.35	85	7.4	61.56	5.9
1084	19-03-2022 00:00	31.96	76.35	0	7.8	35.51	5.8
1085	20-03-2022 00:00	35.69	85.27	0	7.4	39.66	5.9
1086	21-03-2022 00:00	61.6	147.15	0	7	68.44	5.3
1087	22-03-2022 00:00	48.17	115.07	106.8	7.2	53.52	5.2
1088	23-03-2022 00:00	45.51	108.73	78.2	6.8	50.57	4.3
1089	24-03-2022 00:00	53.75	128.4	77.2	7	59.72	4.1
1090	25-03-2022 00:00	43.69	104.36	81.2	6.9	48.54	4.1
1091	26-03-2022 00:00	32.63	77.96	78.1	6.9	36.26	4.1
1092	27-03-2022 00:00	41.03	98.02	80.3	7.1	45.59	4.1
1093	28-03-2022 00:00	-	-	-	-	-	-
1094	29-03-2022 00:00	-	-	-	-	-	-
1095	30-03-2022 00:00	-	-	-	-	-	-
1096	31-03-2022 00:00	24.4	58.29	89.5	7.4	27.11	4.1
1097	01-04-2022 00:00	38.39	91.7	105.9	7.5	42.65	6.6
1098	02-04-2022 00:00	31.75	75.85	57.3	7	35.28	6.8
1099	03-04-2022 00:00	31.81	75.98	56.6	7.6	35.34	7.4
1100	04-04-2022 00:00	26.34	62.93	83.7	7.1	29.27	6.4
1101	05-04-2022 00:00	24.69	58.97	65.4	7	27.43	5.5
1102	06-04-2022 00:00	20.7	49.45	66.8	7.1	23	5
1103	07-04-2022 00:00	53.43	127.65	61.3	7	59.37	4.6
1104	08-04-2022 00:00	48.01	114.68	61.2	7	53.34	4.5
1105	09-04-2022 00:00	35.8	85.53	96.4	7	39.78	4.5
1106	10-04-2022 00:00	-	-	-	-	-	-
1107	11-04-2022 00:00	25.87	61.79	0	7.1	28.74	4.4
1108	12-04-2022 00:00	25.24	60.29	74.7	7.4	28.04	4.4
1109	13-04-2022 00:00	22.76	54.37	69.1	6.8	25.29	4.4
1110	14-04-2022 00:00	32.29	77.14	61.3	6.9	35.88	4.3
1111	15-04-2022 00:00	28.51	68.11	0	6.8	31.68	4.4
1112	16-04-2022 00:00	22.46	53.64	0	6.9	24.95	4.4
1113	17-04-2022 00:00	22.84	54.57	102.4	6.9	25.38	5
1114	18-04-2022 00:00	20.75	49.58	76.5	6.6	23.06	5.2
1115	19-04-2022 00:00	-	-	-	-	-	-
1116	20-04-2022 00:00	17.49	41.77	71.5	7	19.43	5
1117	21-04-2022 00:00	42.95	102.6	97.6	6.7	47.72	5
1118	22-04-2022 00:00	27.24	65.08	0	6.9	30.27	5
1119	23-04-2022 00:00	21.92	52.35	82.3	7.4	24.35	5
1120	24-04-2022 00:00	-	-	-	-	-	-

6115

283/c

1121	25-04-2022 00:00	-	-	-	-	-	-
1122	26-04-2022 00:00	40.77	97.4	0	6.7	45.3	4.7
1123	27-04-2022 00:00	23.23	55.49	66.8	6.9	25.81	4.6
1124	28-04-2022 00:00	27.49	65.66	66.1	7	30.54	4.6
1125	29-04-2022 00:00	25.5	60.91	96.3	7.5	28.33	4.5
1126	30-04-2022 00:00	19.85	47.43	92.7	6.8	22.06	4.5
1127	01-05-2022 00:00	14.74	35.22	138.7	8	16.38	4.5
1128	02-05-2022 00:00	16.45	39.3	100.2	7	18.28	4.8
1129	03-05-2022 00:00	15.29	36.53	77.4	7	16.99	4.9
1130	04-05-2022 00:00	18.92	45.19	87.7	6.8	21.02	4.9
1131	05-05-2022 00:00	48.46	115.76	81.5	6.9	53.84	4.8
1132	06-05-2022 00:00	56.69	135.43	83.7	6.7	62.99	4.6
1133	07-05-2022 00:00	20.21	48.29	77.6	6.8	22.46	4.6
1134	08-05-2022 00:00	22.23	53.11	81.1	6.9	24.7	4.4
1135	09-05-2022 00:00	16.9	40.38	75.3	6.8	18.78	4.5
1136	10-05-2022 00:00	27.41	65.47	80	7	30.45	4.5
1137	11-05-2022 00:00	38	90.77	79.8	7.4	42.22	4.6
1138	12-05-2022 00:00	18.13	43.3	0	7.4	20.14	4.5
1139	13-05-2022 00:00	20.2	48.25	96.9	7.2	22.44	4.6
1140	14-05-2022 00:00	15.05	35.95	85.8	7.5	16.72	4.6
1141	15-05-2022 00:00	15.88	37.93	0	7.4	17.64	4.7
1142	16-05-2022 00:00	15.38	36.74	122.8	7.3	17.09	4.7
1143	17-05-2022 00:00	23.26	55.56	99.5	7.5	25.84	4.8
1144	18-05-2022 00:00	19.57	46.74	65.9	7.8	21.74	4.8
1145	19-05-2022 00:00	20.13	48.1	0	7.6	22.37	4.8
1146	20-05-2022 00:00	21.95	52.44	0	7.5	24.39	29.6
1147	21-05-2022 00:00	23.7	56.61	98.8	7.6	26.33	17.9
1148	22-05-2022 00:00	20.95	50.05	114.4	7.5	23.28	12.1
1149	23-05-2022 00:00	20.45	48.85	88.5	7.7	22.72	7.7
1150	24-05-2022 00:00	18.76	44.81	86.4	7.9	20.84	6.6
1151	25-05-2022 00:00	22.76	54.37	88.9	7.7	25.29	6
1152	26-05-2022 00:00	17.6	42.03	0	7.7	19.55	5.8
1153	27-05-2022 00:00	30.84	73.68	79.8	8	34.27	5.7
1154	28-05-2022 00:00	21.29	50.87	109.8	7.8	23.66	5.6
1155	29-05-2022 00:00	19.14	45.73	83.8	7.9	21.27	5.7
1156	30-05-2022 00:00	21.76	51.99	88.6	7.8	24.18	5.6
1157	31-05-2022 00:00	16.52	39.45	82.2	7.5	18.35	5.6
1158	01-06-2022 00:00	13.92	33.26	66.6	7.8	15.47	5.6
1159	02-06-2022 00:00	32.09	76.65	0	8	35.65	5.5
1160	03-06-2022 00:00	62.16	148.5	89.1	7.7	69.07	5.5
1161	04-06-2022 00:00	35.27	84.26	89.3	7.8	39.19	5.4
1162	05-06-2022 00:00	52.84	126.23	87.6	7.8	58.71	5.4
1163	06-06-2022 00:00	28.45	67.96	78.3	7.8	31.61	5.4
1164	07-06-2022 00:00	57.03	136.25	76	7.9	63.37	5.5
1165	08-06-2022 00:00	51.42	122.83	70.2	7.9	57.13	5.5
1166	09-06-2022 00:00	30.5	72.86	76.7	7.6	33.89	5.9
1167	10-06-2022 00:00	42.25	100.92	77.7	7.9	46.94	5.9

285c

1168	11-06-2022 00:00	46.42	110.9	96.1	7.9	51.58	5.8
1169	12-06-2022 00:00	22.79	54.44	95.5	8	25.32	5.9
1170	13-06-2022 00:00	57.47	137.28	96.2	7.7	63.85	7.9
1171	14-06-2022 00:00	53.19	127.07	82.5	7.9	59.1	7.4
1172	15-06-2022 00:00	32.99	78.8	85.8	8	36.65	6.7
1173	16-06-2022 00:00	47.84	114.27	96.7	7.7	53.15	7.2
1174	17-06-2022 00:00	36.53	87.27	82	7.9	40.59	7.4
1175	18-06-2022 00:00	33.08	79.03	101.4	7.9	36.76	7.3
1176	19-06-2022 00:00	41.29	98.64	98.9	7.9	45.88	7.4
1177	20-06-2022 00:00	43.19	103.18	81.7	7.8	47.99	7.4
1178	21-06-2022 00:00	37.4	89.35	104.1	8	41.56	7.4
1179	22-06-2022 00:00	21.53	51.43	98.8	7.3	23.92	6.8
-	Minimum	0	0	0	3.7	0	0
-	Maximum	3407.4	8139.9	149.3	15	3786	103.5
-	Average	53.63	128.11	68.26	7.61	60.85	17.59
-	Alarm Count	0	0	0	18	0	0
* - Alert | M - Maintenance | S - Service | D - No Discharge | C - Calibration							

287/c

Annexure - R - 5

GPCB sample analysis reports.

Sample ID & Dt. / Permissible Values	Name of	Type	BOD	COD	FLU										
			100	250	15	50	10	8.5	1	100	2				
320109-24/12/2021	Waste water sample collected from final outlet of the discharge line -	APP	26	1615	107	30		15.24	0.4	7.56	0.3	46		422	3480	28
313154-21/09/2021	## Final Outlet of the ETP - From final treated w/w holding tank	APP	17	1440	66	30		BDL	BDL	7.73	0.02	26		177	3784	30
300715-04/03/2021	Final treated waste water collection tank	APP		398	121	30	7.35	17.36		7.59		26			830	28
288818-15/09/2020	## Final Outlet of the ETP - From Treated waste water holding cum discharge tank	APP		1328	155	10	2.38	20.16		7.93		22			4016	0
280869-09/03/2020	## Final Outlet of the ETP - ----------	APP		736	79	20	10.3	18.09		7.54		6			2123	28
272080-11/12/2019	## Final Outlet of the ETP - From treated waste water collection tank	APP	14	369	70	10	3.6	31.02		7.23		24	BDL		1946	28
264839-22/03/2019	## Final Outlet of the ETP - Final outlet of ETP	APP	25	245	120	20	13.5	17.52		7.3		24	1.2		850	27
260794-15/06/2019	## Final Outlet of the ETP - --	COM	24	585	184	85	28.5	17.92		7.21		10	BDL		2638	28
248055-15/03/2019	## Final Outlet of the ETP - --	APP		779	115	85	4.45	16.02		7.55		20	BDL		2158	28

289/c

SRF LTD.
D-2/1, Dahej II Industrial Estate,Dahej-392130,Dist:Bharuch
Category : Chemical
Industry code : 24GJ050

Data Report

Duration: 01-12-2021 00:00 To 31-05-2022 23:59 Interval Time: 6 Hour

Station Name		ETP_1_SRF1					
No	Date_Time	bod (mg/l)	cod (mg/l)	flow (m3/hr)	pH (pH)	toc (mg/l)	tss (mg/l)
1	01-12-2021 00:00	41.92	100.15	48.9	7.7	46.58	4.7
2	01-12-2021 06:00	113.67	271.55	0	7.8	126.3	12.8
3	01-12-2021 12:00	-	-	0	7.6	-	12.7
4	01-12-2021 18:00	63.62	151.98	76.4	7.7	70.69	18.8
5	02-12-2021 00:00	53.11	126.87	0	7.8	59.01	18.4
6	02-12-2021 06:00	47.86	114.34	0	7.9	53.18	17.6
7	02-12-2021 12:00	38.42	91.78	0	7.4	42.69	22.5
8	02-12-2021 18:00	29.01	69.29	0	7.4	32.23	22
9	03-12-2021 00:00	26.4	63.06	77.7	7.9	29.33	21
10	03-12-2021 06:00	26.71	63.81	0	7.9	29.68	20.2
11	03-12-2021 12:00	21.43	51.19	0	7.4	23.81	18.4
12	03-12-2021 18:00	16.95	40.48	87.1	7.5	18.83	17.5
13	04-12-2021 00:00	21.59	51.58	86.1	7.7	23.99	17.3
14	04-12-2021 06:00	22.32	53.32	83.3	7.7	24.8	15.7
15	04-12-2021 12:00	23.23	55.49	0	8	25.81	15.2
16	04-12-2021 18:00	21.75	51.97	45	7.6	24.17	13.1
17	05-12-2021 00:00	19.97	47.71	51.9	7.7	22.19	12.7
18	05-12-2021 06:00	17.44	41.67	87.6	7.9	19.38	12.2
19	05-12-2021 12:00	17.94	42.85	81.7	7.9	19.93	11.3
20	05-12-2021 18:00	14.66	35.02	60	7.4	16.29	10.7
21	06-12-2021 00:00	16.79	40.1	0	7.5	18.65	10.3
22	06-12-2021 06:00	17.94	42.85	0	7.5	19.93	9.9
23	06-12-2021 12:00	19.87	47.47	104.6	7.8	22.08	9.2
24	06-12-2021 18:00	20.88	49.88	0	7.8	23.2	8.9
25	07-12-2021 00:00	19.71	47.09	47.2	7.6	21.9	8.8
26	07-12-2021 06:00	20.17	48.18	0	7.6	22.41	8.5
27	07-12-2021 12:00	21.66	51.75	49.2	7.9	24.07	8.1
28	07-12-2021 18:00	21.19	50.61	45.4	7.8	23.54	8
29	08-12-2021 00:00	21.47	51.28	42.8	7.4	23.85	7.8
30	08-12-2021 06:00	19.84	47.39	43.7	7.5	22.04	7.6
31	08-12-2021 12:00	21.15	50.53	107.4	8	23.5	7.4
32	08-12-2021 18:00	23.01	54.98	73	7.7	25.57	7.2
33	09-12-2021 00:00	21.35	51	60	7.3	23.72	7.2
34	09-12-2021 06:00	22.21	53.06	0	7.7	24.68	7.1
35	09-12-2021 12:00	23.37	55.84	59.9	7.7	25.97	7.3
36	09-12-2021 18:00	21.19	50.61	53	7.8	23.54	6.8
37	10-12-2021 00:00	22.25	53.15	53	7.7	24.72	6.9
38	10-12-2021 06:00	23.76	56.76	55.9	7.7	26.4	6.9

This e-mail document can be used by complete form attached [illegible]

291/c

39	10-12-2021 12:00	21.99	52.52	66.2	7.9	24.43	7
40	10-12-2021 18:00	20.6	49.21	66.4	7.5	22.89	6.7
41	11-12-2021 00:00	20.83	49.75	51.7	7.3	23.14	6.8
42	11-12-2021 06:00	25.05	59.83	54.7	7.8	27.83	6.9
43	11-12-2021 12:00	25.29	60.42	54.8	7.7	28.1	6.9
44	11-12-2021 18:00	24.17	57.75	50.2	7.5	26.86	6.6
45	12-12-2021 00:00	23.74	56.72	54.1	7.6	26.38	6.7
46	12-12-2021 06:00	19.84	47.39	78.7	7.9	22.04	6.8
47	12-12-2021 12:00	18.64	44.53	79.9	7.7	20.71	6.8
48	12-12-2021 18:00	19.67	47	56	7.7	21.86	6.7
49	13-12-2021 00:00	21.92	52.35	0	7.4	24.35	6.7
50	13-12-2021 06:00	20.24	48.35	56.7	7.2	22.49	7.1
51	13-12-2021 12:00	20.55	49.08	55.6	7.5	22.83	7.6
52	13-12-2021 18:00	20.33	48.57	54	7.5	22.59	6.8
53	14-12-2021 00:00	21.39	51.11	49.8	7.3	23.77	6.7
54	14-12-2021 06:00	18.86	45.04	51.5	7.4	20.95	6.7
55	14-12-2021 12:00	19.39	46.31	61.7	7.4	21.54	6.8
56	14-12-2021 18:00	18.95	45.26	58.7	7.4	21.05	6.5
57	15-12-2021 00:00	18.41	43.97	59.2	7.4	20.45	6.4
58	15-12-2021 06:00	18.8	44.91	0	7.5	20.89	6.5
59	15-12-2021 12:00	18.25	43.6	55.1	7.6	20.28	6.7
60	15-12-2021 18:00	20.72	49.49	60.5	7.5	23.02	6.1
61	16-12-2021 00:00	30.19	72.11	83.7	7.4	33.54	6.1
62	16-12-2021 06:00	34.74	82.99	114.7	7.4	38.6	5.8
63	16-12-2021 12:00	32.21	76.95	60.8	7.7	35.79	6.1
64	16-12-2021 18:00	30.74	73.42	84	7.6	34.15	5.3
65	17-12-2021 00:00	43.16	103.11	83.5	7.5	47.96	5.4
66	17-12-2021 06:00	44.29	105.8	0	7.4	49.21	5.7
67	17-12-2021 12:00	37.85	90.43	64.3	7.6	42.06	5.4
68	17-12-2021 18:00	39.13	93.48	58	7.4	43.48	4.8
69	18-12-2021 00:00	38.31	91.53	58	7.6	42.57	4.8
70	18-12-2021 06:00	28.57	68.24	95.9	7.5	31.74	4.8
71	18-12-2021 12:00	24.87	59.4	63.5	7.6	27.63	5
72	18-12-2021 18:00	20.24	48.35	63.4	7.6	22.49	4.5
73	19-12-2021 00:00	27.93	66.71	0	7.3	31.03	4.6
74	19-12-2021 06:00	42.83	102.32	68	7.1	47.59	4.5
75	19-12-2021 12:00	48.65	116.21	69.4	7.1	54.05	4.5
76	19-12-2021 18:00	36.86	88.04	70.9	7.3	40.95	4.3
77	20-12-2021 00:00	27.84	66.5	54	7.5	30.93	4.4
78	20-12-2021 06:00	22.77	54.4	58.9	7.5	25.3	5.2
79	20-12-2021 12:00	20.88	49.88	57.8	7.8	23.2	4.3
80	20-12-2021 18:00	16.79	40.1	115.3	7.6	18.65	4.2
81	21-12-2021 00:00	16.17	38.64	67.6	7.6	17.97	4.3
82	21-12-2021 06:00	14.46	34.55	68.8	7.8	16.07	4.3
83	21-12-2021 12:00	14.23	33.99	100.8	7.8	15.81	3.7
84	21-12-2021 18:00	14.79	35.32	58.7	7.7	16.43	3.7
85	22-12-2021 00:00	15.82	37.8	45.5	7.7	17.58	3.7
86	22-12-2021 06:00	16.05	38.33	47	7.6	17.83	3.8

293/C

87	22-12-2021 12:00	21.24	50.74	83.2	7.5	23.6	3.9
88	22-12-2021 18:00	37.07	88.56	91	7.2	41.19	3.8
89	23-12-2021 00:00	37.21	88.88	118	7.2	41.34	3.9
90	23-12-2021 06:00	28.6	68.33	87.4	7.5	31.78	3.9
91	23-12-2021 12:00	33.71	80.52	105.5	7.5	37.45	3.9
92	23-12-2021 18:00	28.4	67.85	87.3	7.6	31.56	3.8
93	24-12-2021 00:00	32.71	78.13	75.4	7.4	36.34	3.9
94	24-12-2021 06:00	27.32	65.27	73.7	7.4	30.36	3.9
95	24-12-2021 12:00	34.91	83.4	64.2	7.6	38.79	3.9
96	24-12-2021 18:00	39.77	95.01	98.6	7.4	44.19	3.8
97	25-12-2021 00:00	41.65	99.5	49.7	7.1	46.28	3.9
98	25-12-2021 06:00	29.26	69.9	75.7	6.9	32.51	3.9
99	25-12-2021 12:00	24.19	57.79	78.1	7.6	26.88	3.9
100	25-12-2021 18:00	32.96	78.73	80.5	7.8	36.62	3.9
101	26-12-2021 00:00	28.94	69.12	49.6	7.7	32.15	3.9
102	26-12-2021 06:00	23.34	55.75	54.5	7.7	25.93	4
103	26-12-2021 12:00	21.48	51.32	59.8	7.9	23.87	4.3
104	26-12-2021 18:00	27.36	65.36	50.7	7.6	30.4	4.3
105	27-12-2021 00:00	34.65	82.78	67.1	7.4	38.5	4.6
106	27-12-2021 06:00	26.4	63.06	72	7.4	29.33	4.6
107	27-12-2021 12:00	24.92	59.53	114.2	7.9	27.69	5.2
108	27-12-2021 18:00	31.23	74.61	71.9	7.7	34.7	37.8
109	28-12-2021 00:00	28.82	68.84	67.4	7.7	32.02	35.4
110	28-12-2021 06:00	23.41	55.92	67	7.5	26.01	36.2
111	28-12-2021 12:00	33.99	81.21	108.6	7.7	37.77	60
112	28-12-2021 18:00	39.35	94	74.7	7.3	43.72	42.3
113	29-12-2021 00:00	29.84	71.29	61.1	7.2	33.16	51.2
114	29-12-2021 06:00	41.71	99.63	78.9	6.9	46.34	43.3
115	29-12-2021 12:00	43.16	103.11	77.1	7.5	47.96	35.5
116	29-12-2021 18:00	50.83	121.43	78.5	7.6	56.48	31.9
117	30-12-2021 00:00	49.82	119.02	73.6	7.5	55.36	32.2
118	30-12-2021 06:00	42.28	101.01	60.5	7.3	46.98	35.1
119	30-12-2021 12:00	42.78	102.19	82.8	7.6	47.53	37.1
120	30-12-2021 18:00	36.8	87.91	77.2	7.6	40.89	32.4
121	31-12-2021 00:00	33.1	79.08	79	7.3	36.78	45.9
122	31-12-2021 06:00	31.79	75.94	75.1	7.4	35.32	15.9
123	31-12-2021 12:00	26.69	63.77	71.6	7.7	29.66	31.6
124	31-12-2021 18:00	33.49	80	67.7	7.4	37.21	46.5
125	01-01-2022 00:00	40.28	96.23	75.5	7.3	44.76	63.5
126	01-01-2022 06:00	30.95	73.94	68.6	7.2	34.39	37.7
127	01-01-2022 12:00	29.33	70.07	0	7.3	32.59	62.5
128	01-01-2022 18:00	21.2	50.65	101.6	7.7	23.56	6.7
129	02-01-2022 00:00	19.84	47.39	70.5	7.7	22.04	6.3
130	02-01-2022 06:00	25.49	60.89	67.9	7.5	28.32	6.2
131	02-01-2022 12:00	22.3	53.28	69.7	7.5	24.78	6
132	02-01-2022 18:00	33.28	79.51	64	7.1	36.98	5.9
133	03-01-2022 00:00	34.85	83.25	72.3	7	38.72	5.7
134	03-01-2022 06:00	28.76	68.71	66.1	7.1	31.96	5.7

295/C

135	03-01-2022 12:00	44.66	106.68	71.5	7	49.62	6.2
136	03-01-2022 18:00	32.48	77.59	73	7.2	36.09	5.2
137	04-01-2022 00:00	26.64	63.64	53.2	7.2	29.6	4.9
138	04-01-2022 06:00	28.35	67.73	68.2	7.1	31.5	4.9
139	04-01-2022 12:00	31.36	74.91	97.8	7.1	34.84	4.7
140	04-01-2022 18:00	32.27	77.08	76.5	7	35.85	4.6
141	05-01-2022 00:00	28.85	68.93	52.5	7.1	32.06	4.6
142	05-01-2022 06:00	51.08	122.03	94.3	7.2	56.76	4.6
143	05-01-2022 12:00	33.87	80.9	104.4	7.3	37.63	4.5
144	05-01-2022 18:00	51.98	124.16	76.8	7.3	57.75	4.5
145	06-01-2022 00:00	41.69	99.59	77	7.2	46.32	4.4
146	06-01-2022 06:00	40.63	97.05	0	7.1	45.14	4.4
147	06-01-2022 12:00	34.47	82.35	85.2	7.2	38.3	4.4
148	06-01-2022 18:00	40.3	96.28	106.3	7	44.78	4.4
149	07-01-2022 00:00	45.62	108.98	73.3	7	50.69	4.4
150	07-01-2022 06:00	56.74	135.54	0	6.9	63.04	4.4
151	07-01-2022 12:00	44.84	107.11	75.8	6.9	49.82	4.6
152	07-01-2022 18:00	41.72	99.67	99	6.8	46.36	4.3
153	08-01-2022 00:00	43.31	103.46	76.2	6.8	48.12	4.3
154	08-01-2022 06:00	48.1	114.9	73.5	6.9	53.44	4.4
155	08-01-2022 12:00	39.95	95.44	0	7.3	44.39	4.4
156	08-01-2022 18:00	35.8	85.53	103.9	7.3	39.78	4.4
157	09-01-2022 00:00	37.07	88.56	100.2	7.2	41.19	4.3
158	09-01-2022 06:00	45.09	107.72	97.9	7.3	50.1	4.5
159	09-01-2022 12:00	44.07	105.29	57.6	7.3	48.97	4.5
160	09-01-2022 18:00	39.81	95.09	85.9	7.2	44.23	4.4
161	10-01-2022 00:00	46.39	110.81	91	7	51.54	4.4
162	10-01-2022 06:00	37.71	90.09	87.5	7.1	41.9	4.5
163	10-01-2022 12:00	42.35	101.18	88.2	7.1	47.06	4.5
164	10-01-2022 18:00	47.6	113.71	63.9	7.1	52.89	4.4
165	11-01-2022 00:00	48.23	115.22	103.9	7	53.59	4.4
166	11-01-2022 06:00	50.14	119.78	105.4	7.9	55.71	4.6
167	11-01-2022 12:00	42	100.34	100.2	7.9	46.67	4.5
168	11-01-2022 18:00	51.26	122.46	70.8	7.7	56.96	4.4
169	12-01-2022 00:00	48.52	115.91	68.1	7.7	53.91	4.5
170	12-01-2022 06:00	38.91	92.94	64.5	7.6	43.23	4.6
171	12-01-2022 12:00	34.05	81.33	107.9	7.6	37.83	4.5
172	12-01-2022 18:00	42.37	101.22	95.7	7.3	47.08	4.5
173	13-01-2022 00:00	47.46	113.37	89.4	7.3	52.73	4.5
174	13-01-2022 06:00	33.85	80.86	61.7	7.2	37.61	4.8
175	13-01-2022 12:00	40.11	95.83	66.7	7.2	44.57	4.8
176	13-01-2022 18:00	47.33	113.07	103.9	7.1	52.59	4.7
177	14-01-2022 00:00	51.25	122.42	95.2	7.1	56.94	4.8
178	14-01-2022 06:00	46.69	111.54	100.8	7.4	51.88	4.9
179	14-01-2022 12:00	66.15	158.03	0	7.6	73.5	4.9
180	14-01-2022 18:00	58.61	140.01	137.7	7.9	65.12	4.7
181	15-01-2022 00:00	67.06	160.2	0	7.9	74.51	4.8
182	15-01-2022 06:00	51.72	123.56	98.6	7.7	57.47	4.9

297 C

183	15-01-2022 12:00	44.43	106.15	65.3	7.4	49.37	4.8
184	15-01-2022 18:00	56.6	135.21	67	7.7	62.89	4.6
185	16-01-2022 00:00	57.7	137.84	0	6.3	64.11	4.7
186	16-01-2022 12:00	65.6	156.71	0	9.2	72.89	4.8
187	16-01-2022 18:00	44.38	106.02	102.7	8	49.31	4.6
188	17-01-2022 00:00	36.55	87.31	75.3	7	40.61	49.4
189	17-01-2022 06:00	43.31	103.46	67.7	7.9	48.12	35.1
190	17-01-2022 12:00	65.99	157.64	0	6.8	73.32	41.6
191	17-01-2022 18:00	53.24	127.17	98.8	7.6	59.15	35.8
192	18-01-2022 00:00	51.63	123.35	0	6.7	57.37	35.8
193	18-01-2022 06:00	43.61	104.19	0	6.7	48.46	36.2
194	18-01-2022 12:00	48.59	116.08	0	6.9	53.99	35.5
195	18-01-2022 18:00	56.03	133.84	97.2	7.6	62.25	33.4
196	19-01-2022 00:00	39.26	93.78	91.8	7.2	43.62	33.7
197	19-01-2022 06:00	44.66	106.68	94.9	7.6	49.62	33.8
198	19-01-2022 12:00	42.89	102.45	68	7.6	47.65	33
199	19-01-2022 18:00	62.52	149.36	63.6	7.9	69.47	30.3
200	20-01-2022 00:00	47.6	113.71	55.3	7.8	52.89	29.7
201	20-01-2022 06:00	51.72	123.56	60	7.8	57.47	29.5
202	20-01-2022 12:00	51.62	123.3	0	8.6	57.35	27.4
203	20-01-2022 18:00	40.54	96.84	0	8.4	45.04	23.4
204	21-01-2022 00:00	38.04	90.88	0	7.8	42.27	15.6
205	21-01-2022 06:00	34.67	82.82	47.7	8	38.52	13.7
206	21-01-2022 12:00	41.1	98.19	0	9.2	45.67	12.9
207	21-01-2022 18:00	33.08	79.03	93.9	6.6	36.76	12.5
208	22-01-2022 00:00	32.48	77.59	0	8.8	36.09	12.4
209	22-01-2022 06:00	26.64	63.64	99.6	6.8	29.6	12.9
210	22-01-2022 12:00	27.36	65.36	95	7.4	30.4	12.9
211	22-01-2022 18:00	38.55	92.08	63.5	7.6	42.83	12.3
212	23-01-2022 00:00	36.05	86.13	0	7.2	40.06	12.6
213	23-01-2022 06:00	30.95	73.94	64.5	7.3	34.39	13.1
214	23-01-2022 12:00	26.47	63.23	62.4	7.6	29.41	12.9
215	23-01-2022 18:00	37.17	88.8	62.1	8	41.3	12.5
216	24-01-2022 00:00	41.71	99.63	58.6	7.4	46.34	12.6
217	24-01-2022 06:00	40.02	95.61	60.8	7.5	44.47	12.7
218	24-01-2022 12:00	47.3	112.98	59.9	7.6	52.55	12.5
219	24-01-2022 18:00	40.68	97.18	97.1	7.5	45.2	12.3
220	25-01-2022 00:00	33.94	81.08	65.3	7.4	37.71	12.2
221	25-01-2022 06:00	34.87	83.29	0	7.3	38.74	12.4
222	25-01-2022 12:00	31.48	75.21	64.6	7.4	34.98	12.4
223	25-01-2022 18:00	53.51	127.82	74.8	6.8	59.45	11.8
224	26-01-2022 00:00	51.92	124.03	77.9	7	57.69	12.1
225	26-01-2022 06:00	36.55	87.31	72.5	7.2	40.61	12.5
226	26-01-2022 12:00	27.11	64.76	73.4	7.7	30.12	12.3
227	26-01-2022 18:00	41.87	100.02	73	7.4	46.52	11.8
228	27-01-2022 00:00	44.07	105.29	71	6.9	48.97	11.8
229	27-01-2022 06:00	41.36	98.79	77	7	45.95	12.2
230	27-01-2022 12:00	28.33	67.68	71.6	7.5	31.48	12.4

299/C

231	27-01-2022 18:00	29.49	70.46	71.7	7.4	32.77	11.7
232	28-01-2022 00:00	50.85	121.48	68.1	6.9	56.5	11.6
233	28-01-2022 06:00	32.16	76.82	69.7	7.1	35.73	12.3
234	28-01-2022 12:00	25.6	61.15	110.4	7.3	28.44	12.4
235	28-01-2022 18:00	26.8	64.03	75.2	7.3	29.78	11.5
236	29-01-2022 00:00	40.57	96.92	52.6	7.2	45.08	11.6
237	29-01-2022 06:00	36.22	86.52	50.5	7.1	40.24	11.9
238	29-01-2022 12:00	29.44	70.33	79.6	7.6	32.71	11.8
239	29-01-2022 18:00	29.55	70.58	0	7.8	32.83	10.6
240	30-01-2022 00:00	28.76	68.71	125.3	7.7	31.96	10.6
241	30-01-2022 06:00	46.9	112.04	118	7.3	52.11	10.8
242	30-01-2022 12:00	39.99	95.52	120.4	7.5	44.43	11
243	30-01-2022 18:00	33.35	79.68	0	7.5	37.06	9.9
244	31-01-2022 00:00	29.55	70.58	87.6	7.6	32.83	9.7
245	31-01-2022 06:00	39.35	94	88.2	7.6	43.72	9.7
246	31-01-2022 12:00	29.65	70.82	90	7.8	32.94	9.7
247	31-01-2022 18:00	37.87	90.47	0	7.5	42.08	8.8
248	01-02-2022 00:00	39.99	95.52	97.2	7.8	44.43	8.6
249	01-02-2022 06:00	31.25	74.65	55.1	7.7	34.72	8.8
250	01-02-2022 12:00	49.73	118.81	108.1	7.5	55.26	9
251	01-02-2022 18:00	36.95	88.26	0	7.5	41.05	8.5
252	02-02-2022 00:00	43.07	102.88	83.7	7.4	47.85	8.4
253	02-02-2022 06:00	34.42	82.22	95.4	7.3	38.24	8.4
254	02-02-2022 12:00	65.68	156.91	0	7.2	72.98	8.5
255	02-02-2022 18:00	35.06	83.74	0	7.3	38.95	8.1
256	03-02-2022 00:00	28.39	67.81	105.2	7.2	31.54	8.2
257	03-02-2022 06:00	50.74	121.22	99.1	6.8	56.38	8.5
258	03-02-2022 12:00	33.21	79.34	135.4	7.3	36.9	8.7
259	03-02-2022 18:00	23.8	56.85	0	7.8	26.44	8.3
260	04-02-2022 00:00	22.81	54.48	75.2	7.8	25.34	8.3
261	04-02-2022 06:00	21.5	51.36	90.8	7.8	23.89	8.6
262	04-02-2022 12:00	20.12	48.05	106.5	7.8	22.35	9
263	04-02-2022 18:00	49.7	118.72	0	7.5	55.22	8.2
264	05-02-2022 00:00	46.99	112.25	103.5	7.2	52.21	8.2
265	05-02-2022 06:00	28.73	68.63	99.9	7.2	31.92	8.6
266	05-02-2022 12:00	26.77	63.94	93.8	7.4	29.74	8.7
267	05-02-2022 18:00	56.04	133.88	0	7.3	62.27	8
268	06-02-2022 00:00	40.52	96.79	103.4	7.2	45.02	7.9
269	06-02-2022 06:00	26.91	64.29	108.6	7.3	29.9	8.1
270	06-02-2022 12:00	36.05	86.13	105.2	7.6	40.06	8.8
271	06-02-2022 18:00	71.45	170.69	0	7.5	79.39	7.8
272	07-02-2022 00:00	77.3	184.66	0	7.4	85.89	7.8
273	07-02-2022 06:00	55.46	132.48	130.2	7.4	61.62	8
274	07-02-2022 12:00	36.89	88.13	104.9	7.5	40.99	8.1
275	07-02-2022 18:00	41.5	99.14	0	7.4	46.11	7.5
276	08-02-2022 00:00	38.65	92.32	105.4	7.3	42.94	7.4
277	08-02-2022 06:00	27.22	65.02	66.5	7	30.24	7.7
278	08-02-2022 12:00	28.67	68.5	107.7	7.1	31.86	7.7

Note: Content of this record shall not be copied by recipients for its intended purpose only

301/c

279	08-02-2022 18:00	33.4	79.79	0	7.1	37.11	7.2
280	09-02-2022 00:00	28.66	68.46	112.5	7.4	31.84	7.1
281	09-02-2022 06:00	25.89	61.86	68.5	7.6	28.77	6.9
282	09-02-2022 12:00	27.46	65.6	102.3	7.6	30.51	6.9
283	09-02-2022 18:00	27.09	64.72	0	7.5	30.1	5.9
284	10-02-2022 00:00	28.53	68.16	101.5	7.4	31.7	6.1
285	10-02-2022 06:00	28.19	67.34	102.9	7.4	31.32	4.9
286	10-02-2022 12:00	32.21	76.95	131.9	7.6	35.79	5
287	10-02-2022 18:00	24.23	57.88	82.6	7.6	26.92	4.8
288	11-02-2022 00:00	20.24	48.35	0	7.6	22.49	4.9
289	11-02-2022 06:00	21.99	52.52	0	7.6	24.43	5
290	11-02-2022 12:00	32.43	77.46	114.1	7.2	36.03	5
291	11-02-2022 18:00	42.96	102.62	109.9	7	47.73	4.7
292	12-02-2022 00:00	35.49	84.77	94	6.7	39.43	4.8
293	12-02-2022 06:00	46.17	110.3	87.6	6.6	51.3	5
294	12-02-2022 12:00	32.12	76.73	120.4	7.2	35.69	4.9
295	12-02-2022 18:00	50.57	120.81	99.2	7.6	56.19	4.7
296	13-02-2022 00:00	37.33	89.18	0	7.5	41.48	4.9
297	13-02-2022 06:00	29.24	69.85	56.6	7.5	32.49	4.9
298	13-02-2022 12:00	48.04	114.77	102	7.7	53.38	4.9
299	13-02-2022 18:00	37.67	90	106	7.5	41.86	4.8
300	14-02-2022 00:00	44.06	105.24	81.6	7.3	48.95	5
301	14-02-2022 06:00	51.37	122.72	0	7.3	57.08	5.1
302	14-02-2022 12:00	35.06	83.74	76.8	7.8	38.95	5.2
303	14-02-2022 18:00	43.91	104.9	83.7	7.2	48.79	5
304	15-02-2022 00:00	43.91	104.9	81.2	7	48.79	5.2
305	15-02-2022 06:00	45.22	108.02	83.8	7.2	50.24	5.3
306	15-02-2022 12:00	67.59	161.47	129.1	7.5	75.1	5.5
307	15-02-2022 18:00	36.34	86.82	124.4	7.6	40.38	5.3
308	16-02-2022 00:00	33.47	79.96	64.6	7.2	37.19	5.5
309	16-02-2022 06:00	38.68	92.41	67.3	7.4	42.98	5.6
310	16-02-2022 12:00	38.92	92.97	96.3	7.5	43.24	5.7
311	16-02-2022 18:00	57.7	137.84	92	7.3	64.11	5.5
312	17-02-2022 00:00	39.81	95.09	95	7.1	44.23	5.8
313	17-02-2022 06:00	45.73	109.24	0	7.1	50.81	5.7
314	17-02-2022 12:00	46.42	110.9	91.4	7.2	51.58	5.8
315	17-02-2022 18:00	49.54	118.34	87.6	7.7	55.04	5.4
316	18-02-2022 00:00	43.08	102.92	60.2	7.4	47.87	5.6
317	18-02-2022 06:00	47.72	113.99	0	7.1	53.02	5.6
318	18-02-2022 12:00	51.69	123.47	84.3	6.9	57.43	5.6
319	18-02-2022 18:00	53.84	128.61	94.7	6.9	59.82	5.5
320	19-02-2022 00:00	38.08	90.97	96.1	7	42.31	5.7
321	19-02-2022 06:00	45.78	109.37	0	7	50.87	5.8
322	19-02-2022 12:00	70.01	167.25	97.9	7.1	77.79	5.8
323	19-02-2022 18:00	41.74	99.72	96.5	6.8	46.38	5.5
324	20-02-2022 00:00	26	62.11	73.5	6.9	28.89	5.5
325	20-02-2022 06:00	45.5	108.68	0	6.9	50.55	5.4
326	20-02-2022 12:00	30.61	73.12	76.9	7.2	34.01	5.3

303/c

327	20-02-2022 18:00	57.48	137.32	79.1	7.1	63.87	5.1
328	21-02-2022 00:00	42.49	101.5	76.1	7	47.21	5.1
329	21-02-2022 06:00	66.65	159.21	78.8	7	74.05	4.7
330	21-02-2022 12:00	43.29	103.42	74	7.1	48.1	4.7
331	21-02-2022 18:00	49.59	118.47	82.7	6.9	55.1	4.6
332	22-02-2022 00:00	62.15	148.46	94.2	7.1	69.05	4.7
333	22-02-2022 06:00	40.27	96.19	99.9	7.3	44.74	4.8
334	22-02-2022 12:00	35.22	84.13	97.2	7.4	39.13	4.7
335	22-02-2022 18:00	68.03	162.52	96.2	7.1	75.59	4.6
336	23-02-2022 00:00	45.69	109.16	70.4	7	50.77	4.8
337	23-02-2022 06:00	2.52	6.02	95.3	7	2.8	9.6
338	23-02-2022 12:00	54.39	129.92	97.4	7.3	60.43	21.3
339	23-02-2022 18:00	47.4	113.24	97.4	7.5	52.67	21.2
340	24-02-2022 00:00	34.27	81.87	73	7.4	38.08	21.3
341	24-02-2022 06:00	65.37	156.15	0	7.3	72.63	20.9
342	24-02-2022 12:00	61.34	146.54	0	7.5	68.16	19.4
343	24-02-2022 18:00	54.42	130.01	97.1	7.4	60.47	17.7
344	25-02-2022 00:00	38.92	92.97	100.2	7.4	43.24	16.9
345	25-02-2022 06:00	41.89	100.06	96	7.1	46.54	15.7
346	25-02-2022 12:00	64.49	154.07	70.9	7.3	71.66	14.7
347	25-02-2022 18:00	46.15	110.25	69.2	7.2	51.28	14.1
348	26-02-2022 00:00	53.45	127.69	90.3	7.1	59.39	14.1
349	26-02-2022 06:00	41.41	98.92	89.9	7.2	46.01	13.9
350	26-02-2022 12:00	53.42	127.6	89.1	7.2	59.35	13.5
351	26-02-2022 18:00	55.33	132.18	85	6.9	61.48	12.9
352	27-02-2022 00:00	70.36	168.09	67.2	7	78.18	12.9
353	27-02-2022 06:00	50.14	119.78	0	7.3	55.71	12.7
354	27-02-2022 12:00	50.69	121.09	71.5	7.5	56.32	4.7
355	27-02-2022 18:00	73.11	174.64	70.2	7.5	81.23	4.2
356	28-02-2022 00:00	38.33	91.57	72.1	7.4	42.59	4.4
357	28-02-2022 06:00	45.95	109.76	102.6	7.7	51.05	4.6
358	28-02-2022 12:00	51.83	123.82	75.3	7.8	57.59	4.7
359	28-02-2022 18:00	34.27	81.87	0	7.8	38.08	4.7
360	01-03-2022 00:00	57.79	138.05	63.2	7.5	64.21	5
361	01-03-2022 06:00	58.36	139.41	67.8	7.4	64.84	5.1
362	01-03-2022 12:00	55.75	133.17	101.9	7.6	61.94	5.1
363	01-03-2022 18:00	50.74	121.22	98.9	7.6	56.38	5
364	02-03-2022 00:00	44.33	105.89	97.2	7.2	49.25	4.8
365	02-03-2022 06:00	41.07	98.1	73	7.1	45.63	4.7
366	02-03-2022 12:00	56.9	135.92	102.9	7.3	63.22	4.8
367	02-03-2022 18:00	41.5	99.14	100.4	7.4	46.11	4.6
368	03-03-2022 00:00	59.41	141.92	66.9	7.5	66.01	4.4
369	03-03-2022 06:00	57.75	137.97	0	7.5	64.17	4.4
370	03-03-2022 12:00	43.1	102.96	74.1	7.7	47.89	4.4
371	03-03-2022 18:00	38.49	91.96	77	7.6	42.77	4.4
372	04-03-2022 00:00	55.07	131.56	99.6	7.4	61.19	4.6
373	04-03-2022 06:00	44.73	106.86	90.4	7.6	49.7	4.7
374	04-03-2022 12:00	53.54	127.9	86	7.8	59.49	4.8

Generated [redacted] This data document was prepared by readiness for its intended purpose only

305/C

375	04-03-2022 18:00	32.89	78.56	91.1	7.6	36.54	4.9
376	05-03-2022 00:00	38.48	91.91	91.5	7.7	42.75	5
377	05-03-2022 06:00	47.12	112.55	0	7.6	52.35	5.1
378	05-03-2022 12:00	42.1	100.58	88.7	7.8	46.78	5.1
379	05-03-2022 18:00	60.3	144.05	92.4	7.2	67	5.2
380	06-03-2022 00:00	44.47	106.23	93.6	7.4	49.41	5.4
381	06-03-2022 06:00	48.9	116.81	90.3	7.5	54.33	5.4
382	06-03-2022 12:00	49.28	117.73	91	7.4	54.76	5.5
383	06-03-2022 18:00	49.64	118.59	92.9	7.1	55.16	5.7
384	07-03-2022 00:00	47.39	113.2	70.4	7	52.65	5.9
385	07-03-2022 06:00	32.65	78	67	7.1	36.28	6.1
386	07-03-2022 12:00	30.72	73.38	70.4	7.3	34.13	5.9
387	07-03-2022 18:00	49.68	118.68	89.7	7.6	55.2	6.2
388	08-03-2022 00:00	43.15	103.07	89.3	7.3	47.94	6.3
389	08-03-2022 06:00	45.13	107.8	89.6	7.3	50.14	6.4
390	10-03-2022 12:00	53.78	128.48	85.1	7.8	59.76	6.6
391	10-03-2022 18:00	45.46	108.6	100.2	7.7	50.51	6.6
392	11-03-2022 00:00	35.34	84.43	99	7.7	39.27	6.6
393	11-03-2022 06:00	36.87	88.09	0	7.4	40.97	6.6
394	11-03-2022 12:00	31.55	75.38	77.2	7.6	35.06	6.8
395	11-03-2022 18:00	45.78	109.37	77.6	7.4	50.87	6.6
396	12-03-2022 00:00	59.76	142.76	77.9	7.5	66.4	6.6
397	12-03-2022 06:00	38.3	91.48	78.6	7.5	42.55	6.6
398	12-03-2022 12:00	36.41	86.97	103.9	7.9	40.45	6.5
399	12-03-2022 18:00	56.51	135	103.6	7.7	62.79	6.3
400	13-03-2022 00:00	40.36	96.41	87.4	7.7	44.84	6.4
401	13-03-2022 06:00	61.36	146.59	0	7.7	68.18	6.5
402	13-03-2022 12:00	41.1	98.19	86.3	7.5	45.67	6.5
403	13-03-2022 18:00	53.49	127.77	130.9	7.1	59.43	6.3
404	14-03-2022 00:00	36.42	87.01	68.4	7	40.47	6.4
405	14-03-2022 06:00	34.12	81.51	70.7	6.9	37.91	6.5
406	14-03-2022 12:00	27.68	66.11	67.3	7	30.75	6.4
407	14-03-2022 18:00	40.59	96.97	67.7	7.1	45.1	6.2
408	15-03-2022 00:00	55.44	132.44	97.8	7.2	61.6	6.4
409	15-03-2022 06:00	41.41	98.92	96.3	7.1	46.01	6.4
410	15-03-2022 12:00	64.11	153.14	105.6	7.5	71.23	6.3
411	15-03-2022 18:00	47.24	112.85	85.4	7.5	52.49	6.2
412	16-03-2022 00:00	55.66	132.96	58.9	7.4	61.84	6.4
413	16-03-2022 06:00	36.02	86.04	59.6	7.2	40.02	6.5
414	16-03-2022 12:00	58.27	139.19	102.6	7.4	64.74	6.4
415	16-03-2022 18:00	67.3	160.78	0	7.5	74.78	6.3
416	17-03-2022 00:00	57.1	136.4	99.3	7.2	63.44	6.4
417	17-03-2022 06:00	32.54	77.72	0	7.2	36.15	6.4
418	17-03-2022 12:00	51.42	122.83	86.3	7.5	57.13	6.5
419	17-03-2022 18:00	51.37	122.72	89	7.4	57.08	5.9
420	18-03-2022 00:00	55.4	132.35	85	7.4	61.56	5.9
421	18-03-2022 06:00	24.89	59.45	88.2	7.3	27.65	5.9
422	18-03-2022 12:00	44.93	107.33	84.6	7.5	49.92	5.9

307/c

423	18-03-2022 18:00	43.29	103.42	0	7.7	48.1	5.8
424	19-03-2022 00:00	31.96	76.35	0	7.8	35.51	5.8
425	19-03-2022 06:00	66.81	159.59	91.3	7.4	74.23	5.9
426	19-03-2022 12:00	71.33	170.39	0	7.4	79.25	5.9
427	19-03-2022 18:00	61.61	147.19	114	7.3	68.46	5.8
428	20-03-2022 00:00	35.69	85.27	0	7.4	39.66	5.9
429	20-03-2022 06:00	41.18	98.36	92.9	6.9	45.75	6
430	20-03-2022 12:00	59.74	142.72	90.1	7	66.38	5.4
431	20-03-2022 18:00	44.47	106.23	61.1	7.1	49.41	5.3
432	21-03-2022 00:00	61.6	147.15	0	7	68.44	5.3
433	21-03-2022 06:00	52.34	125.04	76.5	7	58.16	5.4
434	21-03-2022 12:00	47.31	113.03	0	7.2	52.57	5.1
435	21-03-2022 18:00	47.65	113.82	106.5	7.3	52.94	5
436	22-03-2022 00:00	48.17	115.07	106.8	7.2	53.52	5.2
437	22-03-2022 06:00	49.77	118.9	104.6	7	55.3	5.1
438	22-03-2022 18:00	43.1	102.96	82.3	6.9	47.89	4.2
439	23-03-2022 00:00	45.51	108.73	78.2	6.8	50.57	4.3
440	23-03-2022 06:00	39.47	94.28	78.3	6.8	43.85	4.3
441	23-03-2022 12:00	43.15	103.07	0	7	47.94	4.2
442	23-03-2022 18:00	61.18	146.16	80.1	7	67.98	4.1
443	24-03-2022 00:00	53.75	128.4	77.2	7	59.72	4.1
444	24-03-2022 06:00	40.08	95.74	0	7	44.53	4.1
445	24-03-2022 12:00	53.75	128.4	81	6.9	59.72	4.1
446	24-03-2022 18:00	50.76	121.26	79.2	6.9	56.4	4
447	25-03-2022 00:00	43.69	104.36	81.2	6.9	48.54	4.1
448	25-03-2022 06:00	56.42	134.78	0	7	62.69	4.2
449	25-03-2022 12:00	52.2	124.7	78.1	7	58	4.1
450	25-03-2022 18:00	40.3	96.28	0	7	44.78	4.1
451	26-03-2022 00:00	32.63	77.96	78.1	6.9	36.26	4.1
452	26-03-2022 06:00	23.63	56.46	0	7.1	26.26	4.1
453	26-03-2022 12:00	30.79	73.55	81.9	7.4	34.21	4.1
454	26-03-2022 18:00	35.15	83.96	0	7.1	39.05	4.1
455	27-03-2022 00:00	41.03	98.02	80.3	7.1	45.59	4.1
456	27-03-2022 06:00	40.96	97.85	81.5	7.1	45.51	4.2
457	29-03-2022 12:00	30.79	73.55	69.6	7.2	34.21	4
458	30-03-2022 12:00	27.14	64.84	68.5	7.3	30.16	4
459	30-03-2022 18:00	25.93	61.94	85.4	7.2	28.81	4.1
460	31-03-2022 00:00	24.4	58.29	89.5	7.4	27.11	4.1
461	31-03-2022 06:00	24.54	58.63	64.5	7.6	27.27	6.7
462	31-03-2022 12:00	26.29	62.8	72.5	7.8	29.21	6
463	31-03-2022 18:00	33.1	79.08	75.4	7.7	36.78	6.3
464	01-04-2022 00:00	38.39	91.7	105.9	7.5	42.65	6.6
465	01-04-2022 06:00	28.28	67.55	96.4	7.3	31.42	6.7
466	01-04-2022 12:00	27.04	64.59	58.7	7.3	30.04	6.9
467	01-04-2022 18:00	44.34	105.93	59.5	7.2	49.27	6.7
468	02-04-2022 00:00	31.75	75.85	57.3	7	35.28	6.8
469	02-04-2022 06:00	51.37	122.72	58.2	7.1	57.08	7
470	02-04-2022 12:00	45.5	108.68	54.5	7.1	50.55	7.6

309/C

471	02-04-2022 18:00	42.96	102.62	55.7	7.4	47.73	7.4
472	03-04-2022 00:00	31.81	75.98	56.6	7.6	35.34	7.4
473	03-04-2022 06:00	32.89	78.56	58.3	7.2	36.54	7.2
474	03-04-2022 12:00	27.05	64.63	57.2	7.3	30.06	7.1
475	03-04-2022 18:00	23.27	55.58	57.9	7.2	25.85	6.6
476	04-04-2022 00:00	26.34	62.93	83.7	7.1	29.27	6.4
477	04-04-2022 06:00	22.18	52.98	80.7	6.9	24.64	6.3
478	04-04-2022 12:00	51.34	122.64	0	7	57.04	5.9
479	04-04-2022 18:00	32.1	76.69	62.3	7	35.67	5.6
480	05-04-2022 00:00	24.69	58.97	65.4	7	27.43	5.5
481	05-04-2022 06:00	23.83	56.93	63.7	6.9	26.48	5.4
482	05-04-2022 12:00	32.98	78.78	67.2	7	36.64	5.2
483	05-04-2022 18:00	26.78	63.98	64.2	7	29.76	5
484	06-04-2022 00:00	20.7	49.45	66.8	7.1	23	5
485	06-04-2022 06:00	20.15	48.14	67.6	7.1	22.39	4.9
486	06-04-2022 12:00	24.32	58.09	66.8	7	27.02	4.7
487	06-04-2022 18:00	26.66	63.68	63.2	7	29.62	4.5
488	07-04-2022 00:00	53.43	127.65	61.3	7	59.37	4.6
489	07-04-2022 06:00	43.34	103.54	66.4	6.9	48.16	4.6
490	07-04-2022 12:00	45.25	108.1	0	7	50.28	4.5
491	07-04-2022 18:00	42.23	100.88	62.5	7	46.92	4.4
492	08-04-2022 00:00	48.01	114.68	61.2	7	53.34	4.5
493	08-04-2022 06:00	59.98	143.28	0	7	66.64	4.5
494	08-04-2022 12:00	48.5	115.86	59.8	7.1	53.89	4.4
495	08-04-2022 18:00	31.73	75.81	95.9	6.7	35.26	4.4
496	09-04-2022 00:00	35.8	85.53	96.4	7	39.78	4.5
497	09-04-2022 06:00	26.93	64.33	96.7	7.1	29.92	4.5
498	09-04-2022 12:00	36.75	87.78	0	7.1	40.83	4.5
499	09-04-2022 18:00	33.81	80.78	0	7.1	37.57	4.4
500	10-04-2022 12:00	31.7	75.72	0	7.2	35.22	4.4
501	10-04-2022 18:00	26.31	62.84	102	7.2	29.23	4.4
502	11-04-2022 00:00	25.87	61.79	0	7.1	28.74	4.4
503	11-04-2022 06:00	20.97	50.1	103.1	7.7	23.3	4.4
504	11-04-2022 12:00	24.14	57.66	0	7.6	26.82	4.4
505	11-04-2022 18:00	28.13	67.21	75.3	7.1	31.26	4.4
506	12-04-2022 00:00	25.24	60.29	74.7	7.4	28.04	4.4
507	12-04-2022 06:00	24.98	59.66	74.6	7.4	27.75	4.4
508	12-04-2022 12:00	24.3	58.05	72.9	7.3	27	4.4
509	12-04-2022 18:00	22.05	52.68	75.8	7	24.5	4.4
510	13-04-2022 00:00	22.76	54.37	69.1	6.8	25.29	4.4
511	13-04-2022 06:00	26.93	64.33	0	6.7	29.92	4.4
512	13-04-2022 12:00	23.86	57	71.2	6.8	26.51	4.3
513	13-04-2022 18:00	34.17	81.64	70.1	6.8	37.97	4.3
514	14-04-2022 00:00	32.29	77.14	61.3	6.9	35.88	4.3
515	14-04-2022 06:00	32.07	76.6	65.5	6.9	35.63	4.4
516	14-04-2022 12:00	25.15	60.07	68.8	6.7	27.94	4.4
517	14-04-2022 18:00	33.17	79.23	95.4	6.8	36.85	4.3
518	15-04-2022 00:00	28.51	68.11	0	6.8	31.68	4.4

311c

519	15-04-2022 06:00	27.42	65.51	0	6.8	30.47	4.4
520	15-04-2022 12:00	22.84	54.57	0	7	25.38	4.3
521	15-04-2022 18:00	26.41	63.08	0	6.9	29.34	4.3
522	16-04-2022 00:00	22.46	53.64	0	6.9	24.95	4.4
523	16-04-2022 06:00	23.48	56.09	0	6.9	26.09	4.4
524	16-04-2022 12:00	22.7	54.22	75.3	7.1	25.22	5.2
525	16-04-2022 18:00	20.95	50.05	106.3	6.9	23.28	5.1
526	17-04-2022 00:00	22.84	54.57	102.4	6.9	25.38	5
527	17-04-2022 06:00	26.74	63.88	0	6.8	29.71	4.9
528	17-04-2022 12:00	23.01	54.98	80.7	6.9	25.57	5.2
529	17-04-2022 18:00	24.01	57.36	79.2	6.7	26.68	5.2
530	18-04-2022 00:00	20.75	49.58	76.5	6.6	23.06	5.2
531	18-04-2022 06:00	19.85	47.43	74.3	6.8	22.06	5.2
532	18-04-2022 12:00	21	50.16	72	6.7	23.33	5.3
533	19-04-2022 12:00	24.13	57.64	103.8	7.1	26.81	5.2
534	19-04-2022 18:00	18.86	45.04	98.9	7	20.95	5.1
535	20-04-2022 00:00	17.49	41.77	71.5	7	19.43	5
536	20-04-2022 06:00	16.97	40.53	77.3	7.1	18.85	5.1
537	20-04-2022 12:00	2.51	6	104.9	7	2.79	5
538	20-04-2022 18:00	36.24	86.58	103	7.2	40.27	5
539	21-04-2022 00:00	42.95	102.6	97.6	6.7	47.72	5
540	21-04-2022 06:00	35.63	85.12	101.8	7	39.59	5
541	21-04-2022 12:00	32.34	77.25	0	7	35.93	5.1
542	21-04-2022 18:00	27.79	66.39	0	6.8	30.88	5
543	22-04-2022 00:00	27.24	65.08	0	6.9	30.27	5
544	22-04-2022 06:00	22.84	54.57	0	7	25.38	5
545	22-04-2022 12:00	22.76	54.37	0	7	25.29	5
546	22-04-2022 18:00	24.09	57.56	115.6	6.8	26.77	5
547	23-04-2022 00:00	21.92	52.35	82.3	7.4	24.35	5
548	23-04-2022 06:00	21.52	51.41	73.8	6.9	23.91	5
549	25-04-2022 12:00	18.06	43.15	39.2	7.3	20.07	4.6
550	25-04-2022 18:00	45.1	107.74	75.1	7.2	50.11	4.8
551	26-04-2022 00:00	40.77	97.4	0	6.7	45.3	4.7
552	26-04-2022 06:00	25.21	60.22	79.9	6.8	28.01	4.8
553	26-04-2022 12:00	19.81	47.32	99	6.9	22.01	4.6
554	26-04-2022 18:00	20.65	49.32	92.7	6.8	22.94	4.6
555	27-04-2022 00:00	23.23	55.49	66.8	6.9	25.81	4.6
556	27-04-2022 06:00	24.11	57.6	70.6	6.9	26.79	4.7
557	27-04-2022 12:00	23.84	56.95	120	7.1	26.49	4.6
558	27-04-2022 18:00	23.89	57.06	113.5	7.1	26.54	4.6
559	28-04-2022 00:00	27.49	65.66	66.1	7	30.54	4.6
560	28-04-2022 06:00	20.75	49.56	0	7	23.05	4.5
561	28-04-2022 12:00	17.55	41.93	94.2	7.1	19.5	4.5
562	28-04-2022 18:00	19.12	45.67	97.3	7	21.24	4.5
563	29-04-2022 00:00	25.5	60.91	96.3	7.5	28.33	4.5
564	29-04-2022 06:00	35.29	84.3	97.7	7.4	39.21	4.5
565	29-04-2022 12:00	47.29	112.96	95.7	7.3	52.54	4.5
566	29-04-2022 18:00	26.5	63.3	94.5	7	29.44	4.5

313/c

567	30-04-2022 00:00	19.85	47.43	92.7	6.8	22.06	4.5
568	30-04-2022 06:00	17.88	42.72	100	6.8	19.87	4.5
569	30-04-2022 12:00	17.87	42.7	0	6.8	19.86	4.5
570	30-04-2022 18:00	18.43	44.03	131.9	7.3	20.48	4.5
571	01-05-2022 00:00	14.74	35.22	138.7	8	16.38	4.5
572	01-05-2022 06:00	13.12	31.35	118.7	8	14.58	4.6
573	01-05-2022 12:00	10.98	26.23	73.2	6.6	12.2	4.6
574	01-05-2022 18:00	13.92	33.26	80.7	8.1	15.47	4.7
575	02-05-2022 00:00	16.45	39.3	100.2	7	18.28	4.8
576	02-05-2022 06:00	12.8	30.57	97.4	7.1	14.22	4.8
577	02-05-2022 12:00	16.02	38.27	98.3	7	17.8	5
578	02-05-2022 18:00	15.64	37.37	72.4	7.2	17.38	5
579	03-05-2022 00:00	15.29	36.53	77.4	7	16.99	4.9
580	03-05-2022 06:00	16.53	39.5	0	7	18.37	4.8
581	03-05-2022 12:00	15.58	37.22	88.4	7	17.31	4.8
582	03-05-2022 18:00	17.98	42.96	91	6.9	19.98	4.8
583	04-05-2022 00:00	18.92	45.19	87.7	6.8	21.02	4.9
584	04-05-2022 06:00	23.5	56.14	85.2	7	26.11	4.8
585	04-05-2022 12:00	18.31	43.73	81.3	6.8	20.34	4.8
586	04-05-2022 18:00	30.32	72.43	0	6.4	33.69	4.8
587	05-05-2022 00:00	48.46	115.76	81.5	6.9	53.84	4.8
588	05-05-2022 06:00	54.27	129.65	82.5	6.7	60.3	4.8
589	05-05-2022 12:00	34.15	81.57	81.3	6.7	37.94	4.6
590	05-05-2022 18:00	43.82	104.68	82.5	6.6	48.69	4.6
591	06-05-2022 00:00	56.69	135.43	83.7	6.7	62.99	4.6
592	06-05-2022 06:00	40.63	97.05	74.8	6.9	45.14	4.6
593	06-05-2022 12:00	30.47	72.78	78.8	6.8	33.85	4.6
594	06-05-2022 18:00	24.7	59	79.6	6.9	27.44	4.5
595	07-05-2022 00:00	20.21	48.29	77.6	6.8	22.46	4.6
596	07-05-2022 06:00	17.03	40.68	80	6.7	18.92	4.6
597	07-05-2022 12:00	16.82	40.18	80.1	6.8	18.69	4.5
598	07-05-2022 18:00	23.37	55.84	80.4	6.9	25.97	4.5
599	08-05-2022 00:00	22.23	53.11	81.1	6.9	24.7	4.4
600	08-05-2022 06:00	19.84	47.39	75.9	6.7	22.04	4.5
601	08-05-2022 12:00	17.33	41.39	79.1	6.9	19.25	4.5
602	08-05-2022 18:00	17.42	41.6	78.6	6.9	19.35	4.4
603	09-05-2022 00:00	16.9	40.38	75.3	6.8	18.78	4.5
604	09-05-2022 06:00	17.19	41.07	76.5	6.8	19.1	4.6
605	09-05-2022 12:00	17.21	41.11	77	6.9	19.12	4.5
606	09-05-2022 18:00	16.96	40.51	79.5	7	18.84	4.5
607	10-05-2022 00:00	27.41	65.47	80	7	30.45	4.5
608	10-05-2022 06:00	41.95	100.21	100.4	7.1	46.61	4.5
609	10-05-2022 12:00	38.36	91.63	123.4	7.3	42.62	4.5
610	10-05-2022 18:00	39.38	94.08	82.3	7.3	43.76	4.5
611	11-05-2022 00:00	38	90.77	79.8	7.4	42.22	4.6
612	11-05-2022 06:00	34.76	83.03	75.5	7.2	38.62	4.6
613	11-05-2022 12:00	26.23	62.65	0	7.3	29.14	4.5
614	11-05-2022 18:00	23.05	55.06	0	7.4	25.61	4.5

315/c

615	12-05-2022 00:00	18.13	43.3	0	7.4	20.14	4.5
616	12-05-2022 06:00	20.2	48.25	95.3	7.3	22.44	4.6
617	12-05-2022 12:00	21.92	52.35	96.8	7.2	24.35	4.6
618	12-05-2022 18:00	21.85	52.2	96.9	7.2	24.28	4.6
619	13-05-2022 00:00	20.2	48.25	96.9	7.2	22.44	4.6
620	13-05-2022 06:00	18.55	44.31	0	7.4	20.61	4.6
621	13-05-2022 12:00	15.45	36.92	95.4	7.5	17.17	4.6
622	13-05-2022 18:00	14.18	33.88	110	7.4	15.76	4.6
623	14-05-2022 00:00	15.05	35.95	85.8	7.5	16.72	4.6
624	14-05-2022 06:00	14.67	35.05	0	7.5	16.3	4.6
625	14-05-2022 12:00	17.84	42.61	0	7.3	19.82	4.6
626	14-05-2022 18:00	14.9	35.6	112	7.4	16.56	4.7
627	15-05-2022 00:00	15.88	37.93	0	7.4	17.64	4.7
628	15-05-2022 06:00	15.36	36.7	106.9	7.3	17.07	4.7
629	15-05-2022 12:00	14.3	34.16	105.1	7.3	15.89	4.7
630	15-05-2022 18:00	14.72	35.15	104.7	7.5	16.35	4.7
631	16-05-2022 00:00	15.38	36.74	122.8	7.3	17.09	4.7
632	16-05-2022 06:00	21.18	50.59	0	7.5	23.53	4.8
633	16-05-2022 12:00	24.42	58.33	71	7.8	27.13	4.7
634	16-05-2022 18:00	28.51	68.11	0	7.7	31.68	4.7
635	17-05-2022 00:00	23.26	55.56	99.5	7.5	25.84	4.8
636	17-05-2022 06:00	19.02	45.43	99.5	7.9	21.13	4.8
637	17-05-2022 12:00	18.5	44.2	99.8	7.9	20.56	4.7
638	17-05-2022 18:00	20.63	49.28	100.9	7.4	22.92	4.7
639	18-05-2022 00:00	19.57	46.74	65.9	7.8	21.74	4.8
640	18-05-2022 06:00	22.95	54.83	68.8	6.8	25.5	4.8
641	18-05-2022 12:00	22.3	53.28	60.4	7.6	24.78	4.8
642	18-05-2022 18:00	20.34	48.59	61.6	7.5	22.6	4.8
643	19-05-2022 00:00	20.13	48.1	0	7.6	22.37	4.8
644	19-05-2022 06:00	17.53	41.88	83.7	7.9	19.48	4.8
645	19-05-2022 12:00	42.37	101.22	84.9	7.5	47.08	4.7
646	19-05-2022 18:00	22.28	53.21	73.7	7.4	24.75	31.5
647	20-05-2022 00:00	21.95	52.44	0	7.5	24.39	29.6
648	20-05-2022 06:00	22.97	54.87	0	7.4	25.52	27.1
649	20-05-2022 12:00	23.54	56.24	44.4	7.7	26.16	20.8
650	20-05-2022 18:00	26.68	63.73	72.9	7.8	29.64	19.5
651	21-05-2022 00:00	23.7	56.61	98.8	7.6	26.33	17.9
652	21-05-2022 06:00	24.52	58.57	100.4	7.3	27.24	16.7
653	21-05-2022 12:00	26.43	63.15	0	7.3	29.37	14.3
654	21-05-2022 18:00	25.84	61.73	0	7.9	28.71	13.7
655	22-05-2022 00:00	20.95	50.05	114.4	7.5	23.28	12.1
656	22-05-2022 06:00	24.94	59.58	117.1	7.6	27.71	10.6
657	22-05-2022 12:00	21.42	51.17	86.9	7.8	23.8	8.9
658	22-05-2022 18:00	20.47	48.89	85.7	7.5	22.74	8.4
659	23-05-2022 00:00	20.45	48.85	88.5	7.7	22.72	7.7
660	23-05-2022 06:00	19.49	46.55	87.7	7.7	21.65	7.4
661	23-05-2022 12:00	21.66	51.75	81.7	8	24.07	6.9
662	23-05-2022 18:00	20.14	48.12	0	8	22.38	6.8

317/c

663	24-05 2022 00:00	18.76	44.81	86.4	7.9	20.84	6.6
664	24-05-2022 06:00	22.44	53.6	84	7.8	24.93	6.4
665	24-05-2022 12:00	23.52	56.18	86.7	7.7	26.13	6.1
666	24-05-2022 18:00	26.49	63.27	0	8.3	29.43	6
667	25-05-2022 00:00	22.76	54.37	88.9	7.7	25.29	6
668	25-05-2022 06:00	19.39	46.31	87.8	7.3	21.54	6
669	25-05-2022 12:00	19.24	45.97	84.1	7.7	21.38	5.8
670	25-05-2022 18:00	20.4	48.74	88.2	7.8	22.67	5.8
671	26-05-2022 00:00	17.6	42.03	0	7.7	19.55	5.8
672	26-05-2022 06:00	18.69	44.66	74.2	7.5	20.77	5.8
673	26-05-2022 12:00	19.32	46.16	73.7	7.7	21.47	5.7
674	26-05-2022 18:00	20.14	48.12	77.4	7.9	22.38	5.7
675	27-05 2022 00:00	30.84	73.68	79.8	8	34.27	5.7
676	27-05-2022 06:00	60.35	144.18	0	7.7	67.06	5.7
677	27-05-2022 12:00	47.22	112.81	109	7.9	52.47	5.7
678	27-05-2022 18:00	27.81	66.44	113.5	7.8	30.9	5.6
679	28-05-2022 00:00	21.29	50.87	109.8	7.8	23.66	5.6
680	28-05-2022 06:00	28.81	68.82	81.9	7.7	32.01	5.7
681	28-05-2022 12:00	23.03	55.02	80.2	7.8	25.59	5.6
682	28-05-2022 18:00	22.32	53.32	82.1	7.8	24.8	5.6
683	29-05-2022 00:00	19.14	45.73	83.8	7.9	21.27	5.7
684	29-05-2022 06:00	42.64	101.87	81.3	7.9	47.38	5.7
685	29-05-2022 12:00	42.72	102.06	79.2	8	47.47	5.6
686	29-05-2022 18:00	25.92	61.92	81.3	8	28.8	5.6
687	30-05 2022 00:00	21.76	51.99	88.6	7.8	24.18	5.6
688	30-05-2022 06:00	17.45	41.69	89.2	7.8	19.39	5.6
689	30 05 2022 12:00	18.71	44.7	88.8	7.7	20.79	5.6
690	30-05-2022 18:00	16.15	38.57	114.1	7.6	17.94	5.6
691	31-05 2022 00:00	16.52	39.45	82.2	7.5	18.35	5.6
692	31 05-2022 06:00	15.91	38.01	0	7.4	17.68	5.6
693	31 05-2022 12:00	15.89	37.95	120.2	7.8	17.65	5.5
694	31 05-2022 18:00	13.1	31.3	86.7	7.7	14.56	5.7
	Minimum	2.51	6	0	6.3	2.79	3.7
	Maximum	113.67	271.55	138.7	9.2	126.3	6.5
	Average	34.45	82.31	67.32	7.34	38.28	8.2

Ref.: SRF/ENV/GPCB/2025-26/13

PCB ID: 24521

By Hand Delivery / Courier / R.P.A.D

Date: 11/07/2025

To,
The Regional Office,
Gujarat Pollution Control Board,
Shed No. C - 1/119/3,
GIDC Estate Phase II,
Narmada Nagar, Bharuch - 392 015

Subject: Objections to Environment Damage Compensation charges

Reference: i. Joint Committee report (May-2022) in the Hon'ble NGT Matter OA no. 60/2021(WZ)
ii. Our reply letter submitted to the Board (SRF/ENV/GPCB/2022-23/30 dated 25/07/2022)
iii. Industries representation meeting at GPCB, Gandhinagar on 09/07/2025

Dear Sir,

This has reference to the Joint Committee report (May-2022) in the Hon'ble NGT Matter OA no. 60/2021(WZ), wherein we have been levied with Environment Compensation. We have already submitted our response to the GPCB with our letter SRF/ENV/GPCB/2022-23/30 dated 25/07/2022.

Board has also asked for our representation in the meeting invited in this case at Gandhinagar on 09/07/2025. We have already shared our grievances during the meeting. We are also submitting our grievances again through this letter.

As per the joint report of May-2022, formula for calculation of Environmental Compensation is

EC1(New) for individual non-complying industry in i^{th} station = Station wise EC x Dfj, Where Dfj is "Deterrent Factor" which was calculated based on below formula.

Deterrent Factor (Dfj) =NCj/$\sum$NCj where NCj is non-compliance factor of individual industry.

To calculate non-compliance factor below formula was used.

Non-compliance factor of individual industry (j) NCj = Rvj x Rfj, where Rvj is Ratio of Failed Samples of individual industry. This factor is critical for calculating the EC and for us Rvj i.e. ratio of failed samples provided in the report is 0.25 which mean 1 sample was failed out of 4 samples was failed which is not right for us as we are maintaining very high SRF standard wrt environment compliance.

SRF LIMITED
Plot No. - D-2/1, GIDC Phase II,
PCPIR, Taluka - Vagra, Village -
Dahej, Dist - Bharuch - 392130,
Gujarat, India.

Regd. Office :
The Galleria, DLF Mayur Vihar
Unit No. 236 & 237, Second Floor,
Mayur Place, Noida Link Road,
Mayur Vihar Phase I Extn., Delhi - 110 091
CIN No. L18101DL1970PLC005197
http://www.srf.com/
E-mail : info@srf.com

As far as sampling by GPCB is concerned during the study period (from 01/01/2017 to 31/12/2021), there were total 17 samplings done and out of which only 2 sample found failed on COD parameter. Complied analysis report by GPCB is attached as *Annexure 1*. If we consider this fact, the value of Rvj i.e. Ratio of Failed Samples will be 0.1176 which is lower than what is reported in the joint report. On the other hand, considering the three-way valve provided which is connected with online TOC meter at discharge point, treated wastewater with higher COD values never transferred into the GIDC discharge line and the ecosystem was not polluted.

Also, Ratio of Wastewater discharge by individual industry (Rvj) calculated for SRF is 0.096876683. We discharge total 2082592 KL of treated effluent into GIDC drainage. As per your joint report (May-2022), total volume of wastewater discharged through GIDC disposal pipeline in CRZ area (Vt) is 56007016.81 KL. Considering both these numbers and the fact that we are discharging our treated effluent in separate collection system of CETP, ratio of Wastewater discharge by individual industry (Rvj) cannot be 0.096876683 because at this value total effluent discharged at point we are discharging will be 38% of total effluent discharged to GIDC which is not feasible.

Also, while calculating the EDC, the number of days for violation has been considered for last 5 years. There is absolutely no justification given for the same. Online monitoring installed for monitoring of quality of treated effluent connected to the servers of the CPCB and GPCB is also a final check to ensure compliance. The report is completely silent on the inefficiency of the GIDC, in fact the GIDC has been directed to comply with certain conditions and has also been proposed to be levied with EC and EC is also proposed to be levied on CETP. There is absolutely no progress on the same. There is no mention of these factors in the report, and it proceeds on the footing that the Company is a polluter and liable to pay the EC.

As per above best treatment practices available at site and, analysis results and our commitment towards environment, we request you to waive off environment damage compensation levied to us.

Thanking You,

Yours faithfully,

For **SRF Limited, Dahej**

Authorized Signatory

CC to: 1. **The Scientist D, CPCB, Vadodara**

2. **Unit Head-Bharuch, GPCB, Gandhinagar**

Annexure 1

Sr.no.	Sample Collection Date	Report Published date	COD (mg/L)	Sampling Point
1	21/02/2017	08-04-2017	210	Final Outlet of the ETP ~ final outlet of ETP
2	12-10-2017	16/11/2017	40	Final Outlet of the ETP ~ From the final outlet of ETP
3	28/02/2018	26/03/2018	264	Final Outlet of the ETP ~ sample collected from treated w/w holding tank
4	19/04/2018	08-05-2018	118	Final Outlet of the ETP
5	16/07/2018	09-08-2018	170	From Final treated w/w storage tank
6	26/10/2018	19/11/2018	263	Final Outlet of the ETP
7	15/11/2018	28/11/2018	164	Final Outlet of the ETP ~ From treated waste water collection tank
8	25/03/2019	28/03/2019	156	Final Outlet of the ETP ~ From final outlet of ETP
9	15/05/2019	29/05/2019	115	Final Outlet of the ETP
10	15/06/2019	28/06/2019	184	Final Outlet of the ETP
11	22/08/2019	03-09-2019	120	Final Outlet of the ETP ~ Final outlet of ETP
12	11-12-2019	26/12/2019	70	Final Outlet of the ETP ~ From treated waste water collection tank
13	09-05-2020	16/05/2020	79	Final Outlet of the ETP
14	15/09/2020	05-10-2020	155	Final Outlet of the ETP ~ From Treated waste water holding cum discharge tank
15	04-03-2021	23/03/2021	121	Final treated waste water collection tank
16	21/09/2021	08-10-2021	66	Final Outlet of the ETP ~ From final treated w/w holding tank
17	24/12/2021	06-01-2022	107	Waste water sample collected from final outlet of the discharge line

Factor	0.1176

6135

6136

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:205871 - Analysis Completion:07/04/2017

Organic Chemicals manufacturing / LAB Inward : 30487

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 30487 Date: 08/04/2017

1. Name of the Customer : Srf Limited - 24521
2. Address : D-II/I ,Dahej,Dahej
   Dahej-392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej2
3. Nature of Sample : REP-Representative/Grab, (Insp Type : ROU-Routine Visit)
4. Sample Collected By : F.M.Modi, DEE
5. Quantity of Sample Received : 5lt
6. Code No. of the Sample : 205871
7. Date & Time of Collection & Inwarding : 21/02/2017 , (1700 to 1700) & 22/02/2017
8. Date of Start & Completion of Analysis : 22/02/2017 & 07/04/2017
9. Sampling Point : ## Final Outlet of the ETP ~ final outlet of ETP
10. Flow Details (Remarks) : -
11. Mode of Disposal : u/g GIDC drain to Pumping station A
12. Ultimate Receiving Body : Deep Sea through GIDC Sewer line.
13. Temperature on Collection : 27 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for : barcode & Color & Appearance :light yellow
    : Ind :49678.000 , Dom :818.000 & Ind :30231.000 , Dom :650.000
15. Water Consumption & W.W.G (KLPD) : 14 ,Cap No & Weight :

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	27
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.51
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	70
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	1928
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	26
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	11.76
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	1133
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	390
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	210
10	Oil & Grease	mg/l	Liquid – Liquid Partition Gravimetric method. (5520 B	01 – 1000 mg/l	0.8
11	Phenolic Compounds	mg/l	4 Amino Antlpyrene method without Chloroform Extra	0.1 – 50 mg/l	1.93
12	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	37
13	Sulphide	mg/l	APHA (23rd Edi.)4500-s2-F –iodometric Method	1-500.0 mg/l	2.0
14	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	60

Laboratory Remarks : FREEZE By:436-lab_436 Dt.: 08/04/2017

H.C. Solanki, Lab Head

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

6137

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:220081 - Analysis Completion:16/11/2017

Organic Chemicals manufacturing / LAB Inward : 32338

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 32338 Date: 16/11/2017

1. Name of the Customer : Srf Limited - 24521
2. Address : D-II/I ,Dahej,Dahej
   Dahej-392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej2
3. Nature of Sample : REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By : Vijay K. Patel, AEE
5. Quantity of Sample Received : 5lit
6. Code No. of the Sample : 220081
7. Date & Time of Collection & Inwarding : 12/10/2017 , (1700 to 1700) & 13/10/2017
8. Date of Start & Completion of Analysis : 16/10/2017 & 16/11/2017
9. Sampling Point : ## Final Outlet of the ETP ~ From the final outlet of ETP
10. Flow Details (Remarks) : --
11. Mode of Disposal : into GIDC Pumping station 'A' through GIDC drainage system
12. Ultimate Receiving Body : Deep Sea through GIDC Sewer line.
13. Temperature on Collection : 32 & pH Range on pH Strip :7-8
14. Carboys Nos for : & Color & Appearance :light yellow & slight turbid
    : Ind :49678.000 , Dom :818.000 & Ind :30231.000 , Dom :650.000
15. Water Consumption & W.W.G (KLPD) : 14 ,Cap No & Weight :

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	32
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.35
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	50
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	1362
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	20
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	1.68
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	137
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	133
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	40
10	Oil & Grease	mg/l	Liquid – Liquid Partition Gravimetric method. (5520 B	01 – 1000 mg/l	BDL
11	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	BDL
12	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	1.72
13	Sulphide	mg/l	APHA (23rd Edi.)4500-s2-F –iodometric Method	1-500.0 mg/l	BDL
14	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirmed	05–50000 mg/l	11

Laboratory Remarks : Freezed By:210-vig_210 Dt.: 16/11/2017

K. I. Karelia,SO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

6138

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:228598 Analysis Completion:23/03/2018

Organic Chemicals manufacturing / LAB Inward : 33493

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 33493 Date: 26/03/2018

1. Name of the Customer	: Srf Limited - 24521
2. Address	: D-II/I ,Dahej,Dahej Dahej-392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej2
3. Nature of Sample	: REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By	: Vijay K. Patel, AEE
5. Quantity of Sample Received	: 5lit
6. Code No. of the Sample	: 228598
7. Date & Time of Collection & Inwarding	: 28/02/2018 , (1500 to 1500) & 01/03/2018
8. Date of Start & Completion of Analysis	: 01/03/2018 & 23/03/2018
9. Sampling Point	: ## Final Outlet of the ETP ~ sample collected from treated w/w holding
10. Flow Details (Remarks)	tank
11. Mode of Disposal	: --
12. Ultimate Receiving Body	: in to GIDC U/G Drain
13. Temperature on Collection	: Deep Sea through GIDC Sewer line.
14. Carboys Nos for	: 29 & pH Range on pH Strip :7-8 on pH Strip
	: Barcode & Color & Appearance :Tinge Yellowish
15. Water Consumption & W.W.G (KLPD)	: Ind :49678.000 , Dom :818.000 & Ind :30231.000 , Dom :650.000

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	29
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.13
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	350
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	2634
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	38
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	25.76
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	891
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	693
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	264
10	Oil & Grease	mg/l	Liquid – Liquid Partition Gravimetric method. (5520 B	01 – 1000 mg/l	0.8
11	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	0.89
12	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	17.8
13	Sulphide	mg/l	APHA (23rd Edi.)4500-s2-F –iodometric Method	1-500.0 mg/l	1.2
14	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	73

Laboratory Remarks : freezed By:210-vig_210 Dt.: 26/03/2018

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except In full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

6139

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:231934 - Analysis Completion:08/05/2018

Organic Chemicals manufacturing / LAB Inward : 34068

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 34068 Date: 08/05/2018

1. Name of the Customer : Srf Limited - 24521
2. Address : D-II/I ,Dahej,Dahej
   Dahej-392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej2
3. Nature of Sample : REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By : Vijay K. Patel, AEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 231934
7. Date & Time of Collection & Inwarding : 19/04/2018 , (1720 to 1720) & 20/04/2018
8. Date of Start & Completion of Analysis : 20/04/2018 & 08/05/2018
9. Sampling Point : ## Final Outlet of the ETP ~ _--------
10. Flow Details (Remarks) :
11. Mode of Disposal : In to Pumping station A
12. Ultimate Receiving Body : Deep Sea through GIDC Sewer line.
13. Temperature on Collection : 27 & pH Range on pH Strip :@7-8 on pH Strip
14. Carboys Nos for : & Color & Appearance :Light Orange
    : Ind :49678.000 , Dom :818.000 & Ind :30231.000 , Dom :650.000
15. Water Consumption & W.W.G (KLPD) : 14 ,Cap No & Weight :

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	27
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.78
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	250
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	2676
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	34
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	15.68
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	856
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	270
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	173
10	Oil & Grease	mg/l	Liquid – Liquid Partition Gravimetric method. (5520 B	01 – 1000 mg/l	0.4
11	Phenolic Compounds	mg/l	4 Amino Antipyrene method without Chloroform Extra	0.1 – 50 mg/l	BDL
12	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	1.1
13	Sulphide	mg/l	APHA (23rd Edi.)4500-s2-F –iodometric Method	1-500.0 mg/l	0.8
14	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	33

Laboratory Remarks : freezed By:210-vig_210 Dt.: 08/05/2018

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

6140

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:238534 - Analysis Completion:09/08/2018

Organic Chemicals manufacturing / LAB Inward : 35207

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 35207 Date: 09/08/2018

1. Name of the Customer : Srf Limited - 24521
2. Address : D-II/I ,Dahej,Dahej
   Dahej-392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej2
3. Nature of Sample : REP-Representative/Grab, (Insp Type : COM-On Complaint)
4. Sample Collected By : R.R.Vyas, R.O Head
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 238534
7. Date & Time of Collection & Inwarding : 16/07/2018 , (1105 to 1105) & 17/07/2018
8. Date of Start & Completion of Analysis : 17/07/2018 & 09/08/2018
9. Sampling Point : From Final treated w/w storage tank. ~ ---
10. Flow Details (Remarks) : ----
11. Mode of Disposal : GIDC effluent pipeline
12. Ultimate Receiving Body : Deep Sea through GIDC Sewer line.
13. Temperature on Collection : 28 & pH Range on pH Strip :7 to 8 on pH strip
14. Carboys Nos for : barcode & Color & Appearance :light brown
    : Ind :49678.000 , Dom :818.000 & Ind :30231.000 , Dom :650.000
15. Water Consumption & W.W.G (KLPD) : 12 ,Cap No & Weight : ----

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	28
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 p-H value As or	6.76
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	85
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	1710
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	68
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	11.76
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	656
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	341
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	170
10	Oil & Grease	mg/l	Liquid – Liquid Partition Gravimetric method. (5520 B	01 – 1000 mg/l	0.4
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	4.3
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	55

Laboratory Remarks : Freezed By:210-vig_210 Dt.: 09/08/2018

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

6141

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:245654 - Analysis Completion:19/11/2018

Organic Chemicals manufacturing / LAB Inward : 36118

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 36118 **Date: 19/11/2018**

1. Name of the Customer : Srf Limited - 24521
2. Address : D-II/I ,Dahej,Dahej
   Dahej-392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej2
3. Nature of Sample : REP-Representative/Grab, (Insp Type : HOR-H.O.Reference)
4. Sample Collected By : Shri B.D.Prasad,DEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 245654
7. Date & Time of Collection & Inwarding : 26/10/2018 , (1610 to 1610) & 29/10/2018
8. Date of Start & Completion of Analysis : 29/10/2018 & 19/11/2018
9. Sampling Point : ## Final Outlet of the ETP ~ ----------
10. Flow Details (Remarks) :
11. Mode of Disposal : Into GIDC drainage line
12. Ultimate Receiving Body : Deep Sea through GIDC Sewer line.
13. Temperature on Collection : 27 & pH Range on pH Strip :7-8 on PH strip.
14. Carboys Nos for : Barcode & Color & Appearance :brownish tinge
    : Ind :49678.000 , Dom :818.000 & Ind :30231.000 , Dom :650.000
15. Water Consumption & W.W.G (KLPD) : 12 ,Cap No & Weight :

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	27
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 p-I value As or	7.18
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	125
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	3864
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	12
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	31.36
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	1008
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40:mg/l	1391
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	263
10	Oil & Grease	mg/l	Liquid – Liquid Partition Gravimetric method. (5520 B	01 – 1000 mg/l	0.8
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	21.25
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	82

Laboratory Remarks : Freezed By:210-vig_210 Dt.: 19/11/2018

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

6142

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:246690 - Analysis Completion:28/11/2018

Organic Chemicals manufacturing / LAB Inward : 36271

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 36271 Date: 28/11/2018

1. Name of the Customer : Srf Limited - 24521
2. Address : D-II/I ,Dahej,Dahej
   Dahej-392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej2
3. Nature of Sample : REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By : L. M. Ahir, AEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 246690
7. Date & Time of Collection & Inwarding : 15/11/2018 , (1420 to 1420) & 16/11/2018
8. Date of Start & Completion of Analysis : 16/11/2018 & 28/11/2018
9. Sampling Point : ## Final Outlet of the ETP ~ From treated waste water collection tank
10. Flow Details (Remarks) : ----
11. Mode of Disposal : Through GIDC underground line.
12. Ultimate Receiving Body : Deep Sea through GIDC Sewer line.
13. Temperature on Collection : 28 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for : barcode & Color & Appearance :Yellowish
    : Ind :49678.000 , Dom :818.000 & Ind :30231.000 , Dom :650.000
15. Water Consumption & W.W.G (KLPD) : 12 ,Cap No & Weight : ----

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	28
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.21
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	85
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	1996
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	16
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	14
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	685
8	Sulphate	mg/l	APHA(23rd edi) 4500 SO4 E	2-40mg/l	381
9	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	164
10	Oil & Grease	mg/l	Liquid – Liquid Partition Gravimetric method. (5520 B	01 – 1000 mg/l	0.4
11	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	4.2
12	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirmed	05--50000 mg/l	51

Laboratory Remarks : Freezed By:210-vig_210 Dt.: 28/11/2018

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the Invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

6143

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:255529 - Analysis Completion:28/03/2019

Organic Chemicals manufacturing / LAB Inward : 37567

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 37567 Date: 28/03/2019

1. Name of the Customer	: Srf Limited - 24521
2. Address	: D-II/I ,Dahej,Dahej Dahej-392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej2
3. Nature of Sample	: REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By	: F.M.Modi, DEE
5. Quantity of Sample Received	: 5 lit
6. Code No. of the Sample	: 255529
7. Date & Time of Collection & Inwarding	: 25/03/2019 , (1530 to 1530) & 26/03/2019
8. Date of Start & Completion of Analysis	: 26/03/2019 & 28/03/2019
9. Sampling Point	: ## Final Outlet of the ETP ~ From final outlet of ETP
10. Flow Details (Remarks)	: ---
11. Mode of Disposal	: Through GIDC underground line.
12. Ultimate Receiving Body	: Deep Sea through GIDC Sewer line.
13. Temperature on Collection	: 28 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for	: barcode & Color & Appearance :Light Brown : Ind :49678.000 , Dom :818.000 & Ind :30231.000 , Dom :650.000
15. Water Consumption & W.W.G (KLPD)	: 10 ,Cap No & Weight : ----

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	28
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.05
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	30
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	2468
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	20
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	18.48
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	1042
8	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	156
9	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	1.15
10	Sulphide	mg/l	APHA (23rd Edi.)4500-s2-F –iodometric Method	1-500.0 mg/l	BDL

Laboratory Remarks : freezed By:210-vig_210 Dt.: 28/03/2019

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory Is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

6144

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:260794 - Analysis Completion:28/06/2019

Organic Chemicals manufacturing / LAB Inward : 38258

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 38258 Date: 28/06/2019

1. Name of the Customer	: Srf Limited - 24521
2. Address	: D-II/I ,Dahej,Dahej Dahej-392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej2
3. Nature of Sample	: REP-Representative/Grab, (Insp Type : COM-On Complaint)
4. Sample Collected By	: Vijay K. Patel, AEE
5. Quantity of Sample Received	: 5 lit
6. Code No. of the Sample	: 260794
7. Date & Time of Collection & Inwarding	: 15/06/2019 , (1135 to 1135) & 17/06/2019
8. Date of Start & Completion of Analysis	: 17/06/2019 & 28/06/2019
9. Sampling Point	: ## Final Outlet of the ETP ~ --
10. Flow Details (Remarks)	: ---
11. Mode of Disposal	: Through GIDC underground line.
12. Ultimate Receiving Body	: Deep Sea through GIDC Sewer line.
13. Temperature on Collection	: 28 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for	: barcode & Color & Appearance :Light Yellowish : Ind :49678.000 , Dom :818.000 & Ind :30231.000 , Dom :650.000
15. Water Consumption & W.W.G (KLPD)	: 11 ,Cap No & Weight : ----

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	28
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.21
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	85
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	2838
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	10
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	17.92
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	585
8	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	184
9	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	28.5
10	Sulphide	mg/l	APHA (23rd Edi.)4500-s2-F –iodometric Method	1-500.0 mg/l	BDL
11	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	24

Laboratory Remarks : freezed By:210-vig_210 Dt.: 28/06/2019

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

6145

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:264889 - Analysis Completion:31/08/2019

Organic Chemicals manufacturing / LAB Inward : 38996

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 38996 Date: 03/09/2019

1. Name of the Customer : Srf Limited - 24521
2. Address : D-II/I ,Dahej,Dahej
   Dahej-392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej2
3. Nature of Sample : REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By : F.M.Modi, DEE
5. Quantity of Sample Received : 5 ltr
6. Code No. of the Sample : 264889
7. Date & Time of Collection & Inwarding : 22/08/2019 , (1435 to 1435) & 23/08/2019
8. Date of Start & Completion of Analysis : 23/08/2019 & 31/08/2019
9. Sampling Point : ## Final Outlet of the ETP ~ Final outlet of ETP
10. Flow Details (Remarks) :
11. Mode of Disposal : In to GIDC U/ G Drainage
12. Ultimate Receiving Body : Deep Sea through GIDC Sewer line.
13. Temperature on Collection : 27 & pH Range on pH Strip :7- 8 on pH Strip
14. Carboys Nos for : Barcode & Color & Appearance :Light orange
    : Ind :49678.000 , Dom :818.000 & Ind :30231.000 , Dom :650.000
15. Water Consumption & W.W.G (KLPD) : 11 ,Cap No & Weight :

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	27
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.30
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	20
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	850
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	24
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	17.52
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	245
8	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	120
9	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	13.5
10	Sulphide	mg/l	APHA (23rd Edi.)4500-s2-F –iodometric Method	1-500.0 mg/l	1.2
11	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	25

Laboratory Remarks : freezed By:210-vig_210 Dt.: 03/09/2019

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

6146

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:272080 - Analysis Completion:26/12/2019

Organic Chemicals manufacturing / LAB Inward : 39926

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 39926 Date: 26/12/2019

1. Name of the Customer : Srf Limited - 24521
2. Address : D-II/I ,Dahej,Dahej
   Dahej-392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej2
3. Nature of Sample : REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By : Mr P M Soni,AEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 272080
7. Date & Time of Collection & Inwarding : 11/12/2019 , (1150 to 1150) & 13/12/2019
8. Date of Start & Completion of Analysis : 13/12/2019 & 26/12/2019
9. Sampling Point : ## Final Outlet of the ETP ~ From treated waste water collection tank
10. Flow Details (Remarks) : ---
11. Mode of Disposal : Through GIDC underground line.
12. Ultimate Receiving Body : Deep Sea through GIDC Sewer line.
13. Temperature on Collection : 28 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for : Barcode & Color & Appearance :Yellowish tinge
    : Ind :49678.000 , Dom :818.000 & Ind :30231.000 , Dom :650.000
15. Water Consumption & W.W.G (KLPD) : 11 ,Cap No & Weight : ----

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	28
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.23
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	10
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	1946
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	24
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	31.02
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	369
8	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	70
9	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	3.6
10	Sulphide	mg/l	APHA (23rd Edi.)4500-s2-F –iodometric Method	1-500.0 mg/l	BDL
11	B.O.D (3 Days 27oC)	mg/l	3 – Day BOD test. (IS 3025 (Part 44) 1993 Reaffirme	05–50000 mg/l	14

Laboratory Remarks : Freezed By:210-vig_210 Dt.: 26/12/2019

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

6147

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:280480 - Analysis Completion:15/05/2020

Organic Chemicals manufacturing / LAB Inward : 40884

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 40884 Date: 16/05/2020

1. Name of the Customer	: Srf Limited - 24521
2. Address	: D-II/I ,Dahej,Dahej Dahej-392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej2
3. Nature of Sample	: REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By	: F.M.Modi, DEE
5. Quantity of Sample Received	: 5 Lit
6. Code No. of the Sample	: 280480
7. Date & Time of Collection & Inwarding	: 09/05/2020 , (0900 to 0900) & 11/05/2020
8. Date of Start & Completion of Analysis	: 11/05/2020 & 15/05/2020
9. Sampling Point	: ## Final Outlet of the ETP ~ ----------
10. Flow Details (Remarks)	: -----
11. Mode of Disposal	: GIDC U/g drainage line
12. Ultimate Receiving Body	: Deep Sea through GIDC Sewer line.
13. Temperature on Collection	: 28 & pH Range on pH Strip :7-8 on pH strip
14. Carboys Nos for	: Barcode & Color & Appearance :Colourless
	: Ind :49678.000 , Dom :818.000 & Ind :30231.000 , Dom :650.000
15. Water Consumption & W.W.G (KLPD)	: 9 ,Cap No & Weight : -----

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	28
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.54
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	20
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	2123
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	06
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	18.09
7	Chloride	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	736
8	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Method-2(	5.0- 50000 mg/l	76
9	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	10.3

Laboratory Remarks : Freezed By:210-vig_210 Dt.: 16/05/2020

K. I. Karelia,SSO

Note :

1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bioassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***

6148

ANALYSIS REPORT FOR
WATER / WASTE WATER SAMPLE

Sample ID:288818 - Analysis Completion:05/10/2020

Organic Chemicals manufacturing / LAB Inward : 41990

Gujarat Pollution Control Board
Bharuch
C-1/119/3, GIDC Phase-2
Narmadanagar
Bharuch-392015
Tele:(0264)2246333

TEST REPORT

Test Report No. : 41990 Date: 05/10/2020

1. Name of the Customer : Srf Limited - 24521
2. Address : D-II/I ,Dahej,Dahej
   Dahej-392130, Taluka : Vagra, District : Bharuch, GIDC : Dahej2
3. Nature of Sample : REP-Representative/Grab, (Insp Type : APP-On Application)
4. Sample Collected By : Ms Patel. Nancy. A, AEE
5. Quantity of Sample Received : 5 lit
6. Code No. of the Sample : 288818
7. Date & Time of Collection & Inwarding : 15/09/2020 , (1450 to 1455) & 17/09/2020
8. Date of Start & Completion of Analysis : 17/09/2020 & 05/10/2020
9. Sampling Point : ## Final Outlet of the ETP ~ From Treated waste water holding cum
10. Flow Details (Remarks) discharge tank
11. Mode of Disposal : ----
12. Ultimate Receiving Body : GIDC u/g drainage line
13. Temperature on Collection : Deep Sea through GIDC Sewer line.
14. Carboys Nos for : & pH Range on pH Strip :@ 7 to 8 on pH strip
    : & Color & Appearance :Light yellowish
15. Water Consumption & W.W.G (KLPD) : Ind :49678.000 , Dom :818.000 & Ind :30231.000 , Dom :650.000

Sr	Parameter	Unit	Test Method	Range of Testing	Result
1	Temperature	Centigrade	IS: 3025 (Part – 9) – 1984(Reaffirmed 2006)	Ambient oC - 60 oC	0
2	pH	pH Units	4500 H+ B APHA Standard Methods 23rd edi.2012	1 – 14 pH value As or	7.93
3	Colour	Pt.Co.Sc.	2120 B APHA Standard Methods 22nd edi. 2012	2 - to 99 Hazen & 1-50	10
4	Total Dissolved Solids	mg/l	Gravimetric method. (2540 C APHA Standard Method	10 – 200000 mg/L	4016
5	Suspended Solids	mg/l	Gravimetric method. (2540 D APHA Standard Method	2 – 10000 mg/L	22
6	Ammonical Nitrogen	mg/l	1).Titrimetric method (4500 NH3 B & C APHA Standa	1 - 2000 mg/l.	20.16
7	Chlorice	mg/l	Argentometric method. (4500 Cl? B APHA Standard M	1 - 50000 mg/l	1328
8	Chemical Oxygen Demand	mg/l	APHA (23rd Edition)- 5220 B Open Reflux Methoc-2(	5.0- 50000 mg/l	155
9	Fluoride	mg/l	SPADNS method (4500-F-D APHA standard Methods	0.10-40 mg/l	2.38

Laboratory Remarks : Approved By:236-lab_236 Dt.: 05/10/2020

D. N. Vasadia, Lab Head

Note :
1. The results relate only to the items sampled and tested.
2. Samples will be destroyed after 10 days from the date of issue of test report unless otherwise specified.
3. The report shall not be reproduced except in full or part without approval of the laboratory.
4. The Board is not responsible for the authenticity for the samples not collected by the Board's officials.
5. Total liability of our laboratory is limited to the invoiced amount. Any dispute arising out of this report is subject to Gujarat Jurisdiction only.
6. Permissible Limits: as per Schedule VI of EPA Rules, 1986 as ammended by Second and Third ammendment 1993 for Effluents
7. Physicochemical and microbiological parameters, Std.Methods for Water and Waste Water- 23nd Edition by APHA.
8. Bicassay test (for toxicity) -IS:6582:Part-2:2001; Reaffirmed 2007.

*** END OF TEST REPORT ***