

Chettinad Cement Corporation Private Limited (Karikkali Works)
Karikkali Village, Dindigul District, Tamilnadu

Ambient Air Quality Monitoring- Consolidated Report (Oct '17 - Mar '17)														
S.No	Location/Direction	PM ₁₀ (µg/m ³)			PM _{2.5} (µg/m ³)			SO ₂ (µg/m ³)			NOx(µg/m ³)			
		Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	
1	Sukkanatham Village- North	40	27	33	19	12	15	9.0	7.0	7.5	10.0	7.0	8.5	
2	Kanagupillayar Village - Northeast	38	20	30	18	9	13	8.0	6.0	7.0	10.0	7.0	7.8	
3	East Security Gate - East	47	35	43	24	16	20	10.0	9.0	9.5	13.0	10.0	11.7	
4	Near B2 Quarters - Southeast	35	26	31	16	12	14	8.0	7.0	7.3	9.0	7.0	8.7	
5	Near C5 Quarters- South	35	25	30	17	13	14	8.0	6.0	7.0	9.0	7.0	7.8	
6	Near Workers Quarters - Southwest	38	23	31	17	11	14	7.0	6.0	6.7	9.0	7.0	7.5	
7	Karikkali Village - West	41	23	32	18	10	14	9.0	6.0	6.8	11.0	6.0	8.0	
8	Vasavanaikanpatti Village- Northwest	23	15	19	11	9	10	8.0	6.0	6.3	7.0	5.0	5.8	
Norm		100 µg/m ³			60 µg/m ³			80 µg/m ³			80 µg/m ³			

for Chettinad Cement Corporation Private Limited

U. Subramanayan

M U Subramanayan

Joint President (Works)



Chettinad Cement Corporation Private Limited (Karikkali Works)

Karikkali Village, Dindigul District, Tamilnadu

Treated Industrial & Sewage Effluent Quality Monitoring
Consolidated Report (Oct '17 to Mar '17)

A. Treated Industrial Effluent

S No	Paramenter	UoM	Norm	Max	Min	Avg
1	PH	-	5.5 to 9.0	7.87	7.45	7.70
2	Suspended Solids	mg/l	100	81	34	58.50
3	Total Dissolved Solids	mg/l	2100	910	792	848
4	Chlorides	mg/l	1000	144	119	132
5	Sulphates	mg/l	1000	38	27	34
6	Oil and Grease	mg/l	10	0	0	0
7	BOD	mg/l	30	17	10	13
8	COD	mg/l	250	158	112	137

B. Treated Sewage Effluent - Factory

S No	Paramenter	UoM	Norm	Max	Min	Avg
1	PH	-	5.5 to 9.0	7.79	7.37	7.61
2	Total Suspended Solids	mg/l	30	20	14	18
3	BOD	mg/l	20	14	8	10

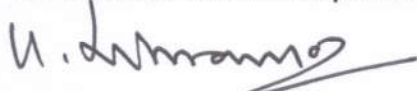
C. Treated Sewage Effluent - Rani Meyyammani Colony

S No	Paramenter	UoM	Norm	Max	Min	Avg
1	PH	-	5.5 to 9.0	8.09	7.6	7.80
2	Total Suspended Solids	mg/l	30	26	20	23
3	BOD	mg/l	20	17	11	14

D. Treated Sewage Effluent - Seethai Nagar Colony

S No	Paramenter	UoM	Norm	Max	Min	Avg
1	PH	-	5.5 to 9.0	7.93	7.68	7.83
2	Total Suspended Solids	mg/l	30	28	18	24
3	BOD	mg/l	20	19	11	13

for Chettinad Cement Corporation Private Limited



M U Subramanayan
Joint President (Works)



Chettinad Cement Corporation Private Limited (Karikkali Works)

Karikkali Village, Dindigul District, Tamilnadu

Ground Water Quality Monitoring Report (Oct '17 to Mar '17)

Sr. No	Parameter	UoM	GW 1		GW 2		GW 3		GW 4		GW 5		Limit
			Nov '17	Feb'18	Nov '17	Feb'18	Nov '17	Feb'18	Nov '17	Feb'18	Nov '17	Feb'18	
1	pH	-	7.11	7.42	7.20	8.20	7.44	7.48	7.20	7.48	7.78	8.02	5.5 - 9.0
2	Temperature	Deg C	26	31	26	30	25	30	25	30	26	31	40
3	Particle size for TSS	-	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	Shall pass 850µ IS sieve
4	TSS	mg/l	1.7	1.2	2.0	2.3	1.7	1.6	2.0	2.3	1.7	1.8	100
5	TDS	mg/l	710	818	699	857	644	800	600	863	632	889	2100
6	Chloride as Cl	mg/l	51	56	44	53	50	53	46	48	52	68	1000
7	Sulphide as S	mg/l	0.20	0.25	0.20	0.25	0.18	0.25	0.20	0.32	0.18	0.25	2
8	Sulphate as SO ₄	mg/l	90	101	74	83	83	79	80	77	85	94	1000
9	Fluride as F	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	2.0
10	Sodium	%	25	29	22	24	22	22	26	24	22	22	-
11	Copper	mg/l	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.02	3
12	Zinc as Zn	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1
13	Phenolic compounds as C ₆ H ₅ OH	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1
14	Oil & Grease	mg/l	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	10
15	Boron as B	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	2
16	BOD 3 days 27°C	mg/l	1.7	2.0	1.6	1.5	1.3	1.5	1.4	2.4	1.4	1.7	30
17	COD	mg/l	5.9	7.3	5.8	5.4	4.1	5.3	5.1	5.4	5.0	5.4	250
18	Total Residual Chlorine	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1
19	Arsenic as As	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.2
20	Cadmium as Cd	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	2
21	Total Chromium as Cr	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	2
22	Hexavalant Chromium Cr+6	mg/l	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	0.1
23	Lead as pb	mg/l	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	0.1
24	Selenium as se	mg/l	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	0.05
25	Mercury as Hg	mg/l	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	0.01
26	Pesticides	mg/l	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	---
27	Free Ammonia as NH ₃	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	5
28	Dissolved Phosphate as P	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	5
29	Total Kieldahl Nitrogen as N	mg/l	9	13	6	11	8	15	8	15	7	14	100
30	Cyanide as CN	mg/l	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	0.2
31	Nickel as Ni	mg/l	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	3
GW 1 : Karikkali Village					GW 4 : Palayam Village								
GW 2 : Tirumakkarpati Village					GW 5 : Kattareddiyur Village								
GW 3 : Vasavanayakkanpatti Village													

BDL : Below Detectable Level

for Chettinad Cement Corporation Private Limited



M U Subramanayan
Joint President (Works)



Chettinad Cement Corporation Private Limited (Karikkali Works)

karikkali Village, Dindigul District, Tamilnadu

Noise Level Monitoring- Consolidated Report (Oct '17 to Mar '17)

Sr. No	Location	UoM	Day			Night		
			L _{min}	L _{eq}	L _{max}	L _{min}	L _{eq}	L _{max}
Outside the Premises								
1	Sukkanatham Village	dB(A)	31.8	39.9	54.8	30.4	36.3	43.8
2	Kanakupillaiyur Village	dB(A)	32.8	44.5	54.3	31.7	40.2	44.8
3	East Security Gate	dB(A)	33.5	46.0	54.2	32.4	42.1	44.3
4	Nearby B2 Quarters	dB(A)	32.2	41.0	54.2	30.2	37.1	44.7
5	Nea by C5 Quarters	dB(A)	30.8	39.8	53.8	29.7	36.9	44.6
6	Nearby Workers Quarters	dB(A)	32.0	43.0	54.1	30.7	38.8	44.3
7	Karikkali Village	dB(A)	32.4	42.5	54.6	31.7	38.7	44.8
8	Vasavanaikanpatti Village	dB(A)	31.7	39.1	54.1	30.6	36.0	43.8
Permissible Limit (L _{eq})		dB(A)	55			45		
Within the Premises								
S. No	Location	UoM	Day			Night		
			L _{min}	L _{eq}	L _{max}	L _{min}	L _{eq}	L _{max}
1	Kiln 1 Area	dB(A)	42.1	62.2	73.9	40.9	58.8	69.5
2	Kiln 2 Area	dB(A)	39.2	65.0	74.1	41.2	61.2	68.6
3	Packing Plant 1 Area	dB(A)	48.4	66.0	72.3	45.8	62.6	67.2
4	Packing Plant 2 Area	dB(A)	44.2	60.1	70.3	41.9	57.1	65.3
5	Boiler 1 & 2 Area	dB(A)	56.8	73.5	74.3	53.6	66.6	69.1
6	Boiler 3 Area	dB(A)	41.6	53.0	56.8	39.5	50.3	52.8
7	Turbo-Generator 1 & 2 Area	dB(A)	60.5	73.3	74.2	57.5	66.5	68.8
8	Turbo-Generator 3 Area	dB(A)	42.8	47.0	52.4	40.6	44.5	48.7
Permissible Limit (L _{eq})		dB(A)	75			70		

for Chettinad Cement Corporation Private Limited

M. U. Subramanayan
M U Subramanayan
 Joint President (Works)



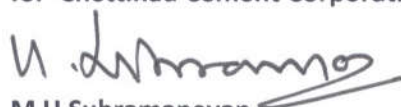
Chettinad Cement Corporation Private Limited (Karikkali Works)

Karikkali Village, Dindigul District, Taminadu

Stack Emission Monitoring- Consolidated Report (Oct '17 to Mar '17)

S.No	Stack Connected to	Parameter	UoM	Norm	Max	Min	Avg
1	Kiln/Raw Mill 1 (Under Shut down)	Particulate Matter	mg/Nm ³	30	0.0	0.0	0.0
2	Kiln/Raw Mill 2				28.0	13.0	23.8
3	Coal Mill 1 (Under shut down)				0.0	0.0	0.0
4	Coal Mill 2				28.0	13.0	22.3
5	Cement Mill 1				26.0	12.0	19.7
6	Cement Mill 2				17.0	7.0	11.3
7	Cement Mill 3				28.0	12.0	23.0
8	Cooler ESP 1 (Under Shut down)				0.0	0.0	0.0
9	Cooler ESP 2				29.0	14.0	26.2
10	Captive Power Plant 1 st & 2 nd Boilers			50	29.0	12.0	26.5
11	Captive Power Plant 3 rd Boiler (Under Shut Down)				0.0	0.0	0.0
S.No	Stack Connected to	Parameter	UoM	Norms	Max	Min	Avg
1	Raw Mill /Kiln-1 (under Shut down)	SO ₂	mg/Nm ³	100	0	0	0
2	Raw Mill /Kiln-2				74	31	45
3	Captive Power Plant 1 st & 2 nd Boilers			600	482	426	449
4	Captive Power Plant 3 rd Boiler (Under Shut Down))				0	0	0
S.No	Stack Connected to	Parameter	UoM	Norms	Max	Min	Avg
1	Raw Mill /Kiln-1	NO _x	mg/Nm ³	800	0	0	0
2	Raw Mill /Kiln-2				482	214	358
3	Captive Power Plant 1 st & 2 nd Boilers			300	279	212	260
4	Captive Power Plant 3 rd Boiler (Under Shut Down))				0	0	0

for Chettinad Cement Corporation Private Limited


M U Subramanayan
Joint President (Works)

