

PERMIT ATTACHMENT B
FORESTVILLE WATER DISTRICT
WASTE DISCHARGE REQUIREMENTS ORDER NO. R1-2004-0027
CTR CRITERION FOR COPPER, LEAD AND ZINC
INTERIM EFFLUENT LIMITATIONS FOR COPPER AND LEAD

Based on Effluent Limitations in Prior Permit - WDR Order No. 95-54

Hardness as CaCO ₃	Aquatic Life CCC 1-Hour Average			Aquatic Life CMC 4-Day Average		
	Copper ug/l	Lead ug/l	Zinc ug/l	Copper ug/l	Lead ug/l	Zinc ug/l
5	1.05	1.80	9.24	0.91	0.07	9.24
10	2.02	4.35	16.63	1.65	0.17	16.63
15	2.97	7.30	23.45	2.34	0.28	23.45
20	3.89	10.52	29.92	2.99	0.41	29.92
25	4.80	13.98	36.15	3.62	0.54	36.15
30	5.70	17.63	42.19	4.23	0.69	42.19
35	6.59	21.46	48.08	4.82	0.84	48.08
40	7.48	25.43	53.84	5.40	0.99	53.84
45	8.35	29.54	59.49	5.98	1.15	59.49
50	9.22	33.78	65.04	6.54	1.32	65.04
55	10.09	38.14	70.51	7.09	1.49	70.51
60	10.95	42.61	75.91	7.64	1.66	75.91
65	11.81	47.18	81.24	8.18	1.84	81.24
70	12.67	51.85	86.50	8.72	2.02	86.50
75	13.52	56.61	91.71	9.25	2.21	91.71
80	14.36	61.46	96.86	9.77	2.39	96.86
85	15.21	66.39	101.97	10.29	2.59	101.97
90	16.05	71.40	107.03	10.81	2.78	107.03
95	16.89	76.48	112.04	11.32	2.98	112.04
100	17.73	81.65	117.02	11.82	3.18	117.02
105	18.56	86.88	121.96	12.33	3.39	121.96
110	19.39	92.18	126.86	12.83	3.59	126.86
115	20.22	97.54	131.73	13.32	3.80	131.73
120	21.05	102.97	136.57	13.82	4.01	136.57
125	21.87	108.47	141.38	14.31	4.23	141.38
130	22.70	114.02	146.15	14.80	4.44	146.15
135	23.52	119.63	150.90	15.28	4.66	150.90
140	24.34	125.30	155.63	15.76	4.88	155.63
145	25.16	131.02	160.32	16.24	5.11	160.32
150	25.97	136.80	164.99	16.72	5.33	164.99
155	26.79	142.63	169.64	17.19	5.56	169.64
160	27.60	148.52	174.27	17.67	5.79	174.27
165	28.41	154.45	178.87	18.14	6.02	178.87
170	29.22	160.43	183.45	18.61	6.25	183.45
175	30.03	166.46	188.02	19.07	6.49	188.02
180	30.84	172.54	192.56	19.54	6.72	192.56
185	31.65	178.67	197.08	20.00	6.96	197.08
190	32.45	184.83	201.58	20.46	7.20	201.58
195	33.26	191.05	206.07	20.92	7.44	206.07
200	34.06	197.31	210.54	21.38	7.69	210.54
205	34.86	203.61	214.99	21.83	7.93	214.99
210	35.66	209.95	219.42	22.29	8.18	219.42
215	36.46	216.33	223.84	22.74	8.43	223.84
220	37.26	222.76	228.25	23.19	8.68	228.25
225	38.06	229.22	232.63	23.64	8.93	232.63
230	38.85	235.73	237.01	24.09	9.19	237.01
235	39.65	242.27	241.36	24.54	9.44	241.36
240	40.44	248.85	245.71	24.98	9.70	245.71
245	41.23	255.47	250.04	25.43	9.96	250.04
250	42.03	262.12	254.36	25.87	10.21	254.36
255	42.82	268.82	258.66	26.31	10.48	258.66
260	43.61	275.54	262.95	26.75	10.74	262.95
265	44.40	282.31	267.23	27.19	11.00	267.23
270	45.19	289.11	271.49	27.63	11.27	271.49
275	45.98	295.94	275.75	28.07	11.53	275.75
280	46.76	302.80	279.99	28.50	11.80	279.99
285	47.55	309.70	284.22	28.94	12.07	284.22
290	48.34	316.64	288.44	29.37	12.34	288.44
295	49.12	323.60	292.65	29.80	12.61	292.65
300	49.90	330.60	296.85	30.23	12.88	296.85
310	51.47	344.69	305.21	31.09	13.43	305.21
320	53.03	358.91	313.53	31.95	13.99	313.53
330	54.59	373.25	321.81	32.80	14.54	321.81
340	56.15	387.71	330.06	33.64	15.11	330.06
350	57.71	402.28	338.26	34.49	15.68	338.26
360	59.26	416.97	346.44	35.33	16.25	346.44
370	60.81	431.77	354.57	36.16	16.83	354.57
380	62.35	446.68	362.67	37.00	17.41	362.67
390	63.90	461.70	370.75	37.83	17.99	370.75
400	65.44	476.82	378.78	38.66	18.58	378.78

CCC = Criteria Continuous Concentration
CMC = Criteria Maximum Concentration

1-HOUR AVERAGE Copper limitation = $e^{0.9422H - 1.464}$

4-DAY AVERAGE Copper Limitation = $e^{0.8545H - 1.465}$

1-HOUR AVERAGE Lead limitation = $e^{1.273H - 1.460}$

4-DAY AVERAGE Lead Limitation = $e^{1.273H - 4.705}$

1-HOUR AVERAGE Zinc limitation = $e^{0.8473H + 0.8604}$

4-DAY AVERAGE Zinc Limitation = $e^{0.8473H + 0.7614}$