

ATTACHMENT 21

Evaluation of cooling tower discharges on ground water quality using the designated level methodology (DLM); comparison of maximum value detected in samples with the DLM values for septic systems less than 30 feet above ground water using attenuation factor of 10.

Parameter	Units	Maximum value detected in effluent	Designated level methodology value (10 attenuation factor)	Corresponding water quality goal ^a	Source of water quality goal ^a
Bicarbonate alkalinity (as CaCO ₃)	mg/L	220	None	None	None
Boron	mg/L	1.5	14	1.4	IRIS ^b
Calcium	mg/L	22	None	None	None
Carbonate alkalinity (as CaCO ₃)	mg/L	190	None	None	None
Chloride	mg/L	144	Not applicable	250	CA secondary MCL ^c
Chromium (total)	mg/L	0.003	0.5	0.05	CA primary MCL
Chromium (hexavalent)	mg/L	0.0067	0.21	0.021	IRIS
Copper	mg/L	0.0083	13	1.3	CA primary MCL
Fluoride	mg/L	0.62	20	2	CA primary MCL
Iron	mg/L	0.055	3	0.3	CA secondary MCL
Magnesium	mg/L	0.73	None	None	None
Molybdenum	mg/L	0.031	0.35	0.035	IRIS
Nitrate (as N)	mg/L	0.4	Not applicable	10	CA primary MCL
Nitrate (as NO ₃)	mg/L	1.8	Not applicable	45	CA primary MCL

continued

ATTACHMENT 21 - CONTINUED

Evaluation of cooling tower discharges on ground water quality using the designated level methodology (DLM); comparison of maximum value detected in samples with the DLM values for septic systems less than 30 feet above ground water using attenuation factor of 10.

Parameter	Units	Maximum value detected in effluent	Designated level methodology value (10 attenuation factor)	Corresponding water quality goal^a	Source of water quality goal^a
Ortho-phosphate	mg/L	0.52	None	None	None
Potassium	mg/L	13	None	None	None
Sodium	mg/L	390	Not applicable	30-60	Taste & odor threshold
Specific conductance	µmhos/cm	1,760	Not applicable	900	CA secondary MCL
Sulfate	mg/L	305	Not applicable	250	CA secondary MCL
Total alkalinity (as CaCO ₃)	mg/L	410	None	None	None
Total dissolved solids	mg/L	1,220	Not applicable	500	CA secondary MCL
Total hardness (as CaCO ₃)	mg/L	58	None	None	None
Total phosphorus (as P)	mg/L	0.72	None	None	None
Total trihalomethanes	mg/L	0.011	Not applicable	0.08	CA primary MCL
Vanadium	mg/L	0.037	0.5	0.05	IRIS
Zinc	mg/L	0.051	50	5	CA secondary MCL

^a From A Compilation of Water Quality Goals (Marshack August 2007).

^b IRIS – USEPA Integrated Risk Information System reference dose for drinking water.

^c MCL – Maximum contaminant level.