LEAP SCHEME
POTABLE WATER CONCENTRATION RANGES

GROUP 1

Determinand	Range (Approx) Min----------Max	Units	PCV
Sodium	5.0 - - - 50	mg/l	200 mg/l
Potassium	0.3 - - - 3.0	mg/l	
Chloride	6.0 - - - 50	mg/l	250 mg/l
Calcium	10 - - - 150	mg/l	
Magnesium	1.0 - - - 15	mg/l	
Alkalinity	30 - - - 300	mg HCO3/l	
Total Hardness	30 - - - 130	mg Ca/l	
Total Phosphorus	100 - - - 3000	µg P/l	
Fluoride	150 - - - 1800	µg/l	1500 µg/l
Sulphate	8 - - - 100	mg/l	250 mg/l

GROUP 2

Determinand	Range (Approx) Min----------Max	Units	PCV
Nitrite	0.02 - - - 0.6	mg NO2/l	0.5 (T) 0.1 (WTW)
Nitrate	2.0 - - - 60	mg NO3/l	50
Ammonium	0.1 - - - 0.6	mg NH4/l	0.5
TOC	0.2 - - - 5.0	mg/l	
PI	0.2 - - - 5.0	mg/l	
Colour (filtered)	0.2 - - - 20	HAZEN	20
SR Phosphate	10 - - - 1500	µg P/l	
pH	6.0 - - - 10.0	pH units	6.5 - - - 9.5
Turbidity	0.05 - - - 4.0	NTU	4 (T) 1.0 (WTW)
Conductivity @ 20ºC	100 - - - 600	µS/cm @ 20ºC	2500

Notes:

T = Customers' taps in WSZ

WTW = Water treatment works

GROUP 3

Determinand	Range (Approx) Min----------Max	Units	PCV
Lead	1.0 - - - 20	µg/l	10
Cadmium	0.5 - - - 7.0	µg/l	5
Chromium	5 - - - 50	µg/l	50
Nickel	5 - - - 30	µg/l	20
Copper	50 - - - 2000	µg/l	2000
Zinc	50 - - - 500	µg/l	
Iron	20 - - - 400	µg/l	200
Manganese	10 - - - 75	µg/l	50
Aluminium	20 - - - 300	µg/l	200

GROUP 4

Determinand	Range (Approx) Min----------Max	Units	PCV
Mercury	0.1 - - - 2.0	µg/l	1.0
Silver	1.0 - - - 20	µg/l	
Barium	100 - - - 1000	µg/l	
Boron	200 - - - 1500	µg/l	1000
Arsenic	1.0 - - - 15	µg/l	10
Selenium	1.0 - - - 15	µg/l	10
Antimony	0.5 - - - 7.5	µg/l	5
Strontium	50 - - - 500	µg/l	
Lithium	10 - - - 100	µg/l	
Cobalt	3.0 - - - 30	µg/l	
Vanadium	3.0 - - - 30	µg/l	
Molybdenum	3.0 - - - 30	µg/l	
Tin	1.0 - - - 100	µg/l	
Beryllium	2.0 - - - 10	µg/l	
Total Cyanide	5.0 - - - 75	µg/l	50
Free Cyanide	5.0 - - - 50	µg/l	
MBAS	2.0 - - - 300	µg/l	

GROUP 5

Determinand	Range (Approx) Min----------Max	Units	PCV
Bromide	5 - - - 200	µg/l	
Bromate	1 - - - 15	µg/l	10
Chlorite	1 - - - 100	µg/l	
Chlorate	1 - - - 100	µg/l	

GROUP 6

Determinand	Range (Approx) Min----------Max	Units	PCV
Chloroform	2 - - - 100	µg/l	100 †
Bromodichloromethane	2 - - - 50	µg/l	100 †
Dibromochloromethane	2 - - - 50	µg/l	100 †
Bromoform	2 - - - 50	µg/l	100 †
Carbon tetrachloride	0.5 - - - 4	µg/l	3
Trichloroethene	0.5 - - - 10	µg/l	10 *
Tetrachloroethene	0.5 - - - 10	µg/l	10 *
1,2-dichloroethane	0.5 - - - 4	µg/l	3
Dichloromethane	2 - - - 40	µg/l	
1,2,3-trichlorobenzene	0.1 - - - 2.0	µg/l	
1,2,4-trichlorobenzene	0.1 - - - 2.0	µg/l	
1,3,5-trichlorobenzene	0.1 - - - 2.0	µg/l	
1,1,1-Trichloroethane	0.1 - - - 2.0	µg/l	
Hexachlorobutadiene	0.01 - - - 0.15	µg/l	

† PCV of 100 is for sum of the four THMs. Performance requirement are as if PCV is 25 µg/l

*** PCV of 10 µg/l is for sum of the two. Performance requirement are as if PCV is 5 µg/l**

GROUP 7

Determinand	Range (Approx) Min----------Max	Units	PCV
Anthracene	0.005 - - - 0.05	µg/l	
Fluoranthene	0.01 - - - 0.10	µg/l	
Benzo (b) fluoranthene	0.003 - - - 0.050	µg/l	0.10 *
Benzo (k) fluoranthene	0.003 - - - 0.050	µg/l	0.10 *
Naphthalene	0.005 - - - 0.050	µg/l	
Benzo (a) pyrene	0.002 - - - 0.020	µg/l	0.010
Benzo (ghi) perylene	0.010 - - - 0.070	µg/l	0.10 *
Indeno (1,2,3-cd) pyrene	0.010 - - - 0.070	µg/l	0.10 *

PCV is for total of the 4. Performance requirement as if PCV was 0.025 µg/l

GROUP 8

Determinand	Range (Approx) Min----------Max	Units	PCV
Alachlor	0.01 - - - 0.15	µg/l	0.10
Azinphos-ethyl	0.01 - - - 0.15	µg/l	0.10
Azinphos-methyl	0.01 - - - 0.15	µg/l	0.10
Dichlorvos	0.01 - - - 0.15	µg/l	0.10
Fenitrothion	0.01 - - - 0.15	µg/l	0.10
Malathion	0.01 - - - 0.15	µg/l	0.10
Mevinphos	0.01 - - - 0.15	µg/l	0.10
Chlorofenvinphos	0.01 - - - 0.15	µg/l	0.10
Chlorpyrifos	0.01 - - - 0.15	µg/l	0.10
Diazinon	0.01 - - - 0.15	µg/l	0.10
Fenthion	0.01 - - - 0.15	µg/l	0.10
Parathion-ethyl	0.01 - - - 0.15	µg/l	0.10
Parathion-methyl	0.01 - - - 0.15	µg/l	0.10
Cypermethrin	0.01 - - - 0.15	µg/l	0.10
Propetamphos	0.01 - - - 0.15	µg/l	0.10

GROUP 9

Determinand	Range (Approx) Min----------Max	Units	PCV
MCPA	0.01 - - - 0.15	µg/l	0.10
MCPB	0.01 - - - 0.15	µg/l	0.10
2,4-D	0.01 - - - 0.15	µg/l	0.10
Dichlorprop	0.01 - - - 0.15	µg/l	0.10
Dicamba	0.01 - - - 0.15	µg/l	0.10
2,4-DB	0.01 - - - 0.15	µg/l	0.10
Bentazone	0.01 - - - 0.15	µg/l	0.10
Mecoprop	0.01 - - - 0.15	µg/l	0.10
Propyzamide	0.01 - - - 0.15	µg/l	0.10
Ioxynil	0.01 - - - 0.15	µg/l	0.10
bromoxynil	0.01 - - - 0.15	µg/l	0.10
Triclopyr	0.01 - - - 0.15	µg/l	0.10
Clopyralid	0.01 - - - 0.15	µg/l	0.10
Fluroxypyr	0.01 - - - 0.15	µg/l	0.10
2,3,6-TBA	0.01 - - - 0.15	µg/l	0.10
2,4,5-T	0.01 - - - 0.15	µg/l	0.10
Dichlobenil	0.01 - - - 0.15	µg/l	0.10
Bromacil	0.01 - - - 0.15	µg/l	0.10
Metazachlor	0.01 - - - 0.15	µg/l	0.10
Propachlor	0.01 - - - 0.15	µg/l	0.10
Benazolin	0.01 - - - 0.15	µg/l	0.10
Metaldehyde	0.01 - - - 0.15	µg/l	0.10

GROUP 10

Determinand	Range (Approx) Min----------Max	Units	PCV
Endrin	0.01 - - - 0.15	µg/l	0.10
Dieldrin	0.006 - - - 0.05	µg/l	0.03
Aldrin	0.006 - - - 0.05	µg/l	0.03
p,p'-DDT	0.01 - - - 0.15	µg/l	0.10
o,p'-DDT	0.01 - - - 0.15	µg/l	0.10
p,p'-DDE	0.01 - - - 0.15	µg/l	0.10
o,p' DDE	0.01 - - - 0.15	µg/l	0.10
p,p'-DDD	0.01 - - - 0.15	µg/l	0.10
o,p'-DDD (TDE)	0.01 - - - 0.15	µg/l	0.10
Hexachlorocyclohexane (alpha)	0.01 - - - 0.15	µg/l	0.10
Hexachlorocyclohexane (beta)	0.01 - - - 0.15	µg/l	0.10
Hexachlorocyclohexane (delta)	0.01 - - - 0.15	µg/l	0.10
Lindane (gamma HCH)	0.01 - - - 0.15	µg/l	0.10
Trifluralin	0.01 - - - 0.15	µg/l	0.10
Endosulphan (alpha)	0.01 - - - 0.15	µg/l	0.10
Endosulphan (beta)	0.01 - - - 0.15	µg/l	0.10
Hexachlorobenzene	0.01 - - - 0.15	µg/l	0.10
Heptachlor	0.006 - - - 0.04	µg/l	0.03
Heptachlor epoxide (Total))	0.006 - - - 0.04	µg/l	0.03
Pentachlorobenzene	0.01 - - - 0.15	µg/l	0.10
Pendimethalin	0.01 - - - 0.15	µg/l	0.10

GROUP 11

Determinand	Range (Approx) Min----------Max	Units	PCV
Benzene	0.1 - - - 1.5	µg/l	1.0
Toluene	0.2 - - - 4.0	µg/l	
Ethylbenzene	0.2 - - - 4.0	µg/l	
Styrene	0.2 - - - 4.0	µg/l	
o-Xylene	0.2 - - - 4.0	µg/l	
m-Xylene	0.2 - - - 4.0	µg/l	
p-Xylene	0.2 - - - 4.0	µg/l	
Total Xylene	0.5 - - - 12.0	µg/l	

GROUP 12

Determinand	Range (Approx) Min----------Max	Units	PCV
Total & Free Chlorine	0.5 - - - 3.0	mg/l	

GROUP 15

Determinand	Range (Approx) Min----------Max	Units	PCV
Isoproturon	0.01 - - - 0.15	µg/l	0.10
Diuron	0.01 - - - 0.15	µg/l	0.10
Linuron	0.01 - - - 0.15	µg/l	0.10
Chlortoluron	0.01 - - - 0.15	µg/l	0.10
Monuron	0.01 - - - 0.15	µg/l	0.10
Methabenzthiazuron	0.01 - - - 0.15	µg/l	0.10
Diflufenican	0.01 - - - 0.15	µg/l	0.10
Metamitron	0.01 - - - 0.15	µg/l	0.10
Simazine	0.01 - - - 0.15	µg/l	0.10
Atrazine	0.01 - - - 0.15	µg/l	0.10
Propazine	0.01 - - - 0.15	µg/l	0.10
Cyanazine	0.01 - - - 0.15	µg/l	0.10
Trietazine	0.01 - - - 0.15	µg/l	0.10
Prometryn	0.01 - - - 0.15	µg/l	0.10
Terbutryn	0.01 - - - 0.15	µg/l	0.10
Ametryn	0.01 - - - 0.15	µg/l	0.10
Carbetamide	0.01 - - - 0.15	µg/l	0.10
Pirimicarb	0.01 - - - 0.15	µg/l	0.10