Metsimaholo Municipality Water Quality Report

22 June 2011 to 22 July 2011 **Date generated : 01 August 2011**

Parameter	Units of measure	Specifications (based on SANS241: 2005)		No of results	Achieved compliance levels	
		Required compliance				
		95% min to Class I	99% min to Class II		Class I	Class II
SPECIFICATIONS						
Chemical and Physical properties						
Colour	(mg / l as Pt)	< 20	≤ 50	6	100.0%	100.0%
Conductivity	(mS / m)	< 150	≤ 370	17	100.0%	100.0%
pH	(pH units)	≥ 5 to ≤ 9.5	≥ 4 to ≤ 10	17	100.0%	100.0%
Turbidity	(NTU)	< 1	≤ 5	36	100.0%	100.0%
Total Dissolved Solids	(mg / l)	< 1000	≤ 2400	6	100.0%	100.0%
Taste	(FTN)	< 5	≤ 10	10	100.0%	100.0%
Odour	(TON)	< 5	≤ 10	10	100.0%	100.0%
Organic Determinants						
Total Trihalomethanes	(ug / l)	< 200	≤ 300	8	100.0%	100.0%
Phenols as C6H5OH	(ug / l)	< 10	≤ 70	4	100.0%	100.0%
Dissolved Organic Carbon	(mg / l)	< 10	≤ 20	8	100.0%	100.0%
Micro Elements						
Antimony	(µg / l as Sb)	< 10	≤ 50	3	100.0%	100.0%
Arsenic	(µg / l as As)	< 10	≤ 50	3	100.0%	100.0%
Cadmium	(µg / l as Cd)	< 5	≤ 10	6	100.0%	100.0%
Chromium (Total)	(µg / l as Cr)	< 100	≤ 500	6	100.0%	100.0%
Cobalt	(µg / l as Co)	< 500	≤ 1000	6	100.0%	100.0%
Cyanide (Recoverable)	(µg / l as CN)	< 50	≤ 70	3	100.0%	100.0%
Lead	(µg / l as Pb)	< 20	≤ 50	6	100.0%	100.0%
Mercury	(µg / l as Hg)	< 1	≤ 5	3	100.0%	100.0%
Nickel	(µg / l as Ni)	< 150	≤ 350	6	100.0%	100.0%
Selenium	(µg / l as Se)	< 20	≤ 50	3	100.0%	100.0%
Vanadium	(µg / l as V)	< 200	≤ 500	6	100.0%	100.0%
Macro Elements & Miscellaneous Determinants						
Aluminium	(mg / l as Al)	< 0.3	≤ 0.5	6	100.0%	100.0%
Ammonia	(mg / l as N)	< 1	≤ 2	3	100.0%	100.0%
Calcium	(mg / l as Ca)	< 150	≤ 300	6	100.0%	100.0%
Chloride	(mg / l as Cl)	< 200	≤ 600	2	100.0%	100.0%
Copper	(mg / l as Cu)	< 1	≤ 2	6	100.0%	100.0%
Fluoride	(mg / l as F)	< 1	≤ 1.5	2	100.0%	100.0%
Iron	(mg / l as Fe)	< 0.2	≤ 2	6	100.0%	100.0%
Magnesium	(mg / l as Mg)	< 70	≤ 100	6	100.0%	100.0%
Manganese	(mg / l as Mn)	< 0.1	≤ 1	6	100.0%	100.0%
Nitrate & Nitrite	(mg / l as N)	< 10	≤ 20	3	100.0%	100.0%
Potassium	(mg / l as K)	< 50	≤ 100	6	100.0%	100.0%
Sodium	(mg / l as Na)	< 200	≤ 400	6	100.0%	100.0%
Sulphate	(mg / l as SO4)	< 400	≤ 600	2	100.0%	100.0%
Zinc	(mg / l as Zn)	< 5	≤ 10	6	100.0%	100.0%
Microbiological						
E. Coli	(cfu per 100 ml)	minimum of 95% of the original results shall be non-detected	minimum of 99% of the original and repeat/consecutive results shall be non-detected	45	100.0%	100.0%
Other Determinants as required by supply contract						
Free chlorine and monochloramine	(mg / l)	≥ 0.2 min 95% compliance		45	97.8%	

Notes :

(1) Specification date of effect : July 2006

(2) Guideline derived from SANS 241: 2005 operations alert and industry practices

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22 June 2011 to 22 July 2011 **Date generated : 01 August 2011**

Parameter	Units of measure	Specification	No of samples	Mean - 3 SD	Mean - 1 SD	Mean	Mean + 1 SD	Mean + 3 SD	Standard Deviation
Chemical and Physical properties									
Colour	(mg / l as Pt)	< 20	6	5.00	5.00	5.00	5.00	5.00	0.00
Conductivity	(mS / m)	< 150	17	18.00	21.87	27.71	33.55	35.00	5.84
pH	(pH units)	≥ 5 to ≤ 9.5	17	7.25	7.48	7.70	7.93	8.02	0.23
Turbidity	(NTU)	< 1	36	0.21	0.21	0.28	0.35	0.42	0.07
Total Dissolved Solids	(mg / l)	< 1000	6	135.00	138.74	179.17	219.59	220.00	40.42
Hardness	(mg / l as CaCO3)	> 20 to < 200	6	65.00	68.31	94.33	120.36	130.00	26.03
Taste	(FTN)	< 5	10	1.00	1.00	1.00	1.00	1.00	0.00
Odour	(TON)	< 5	10	1.00	1.00	1.00	1.00	1.00	0.00
Organic Determinants									
Total Trihalomethanes	(ug / l)	< 200	8	36.70	39.31	49.06	58.80	63.04	9.75
Phenols as C6H5OH	(ug / l)	< 10	4	2.70	2.75	2.93	3.10	3.10	0.17
Dissolved Organic Carbon	(mg / l)	< 10	8	5.00	5.08	5.30	5.52	5.70	0.22
Micro Elements									
Antimony	(µg / l as Sb)	< 10	3	1.00	1.00	1.00	1.00	1.00	0.00
Arsenic	(µg / l as As)	< 10	3	1.00	1.00	1.67	2.82	3.00	1.15
Cadmium	(µg / l as Cd)	< 5	6	1.25	1.25	1.25	1.25	1.25	0.00
Chromium (Total)	(µg / l as Cr)	< 100	6	5.00	5.00	5.00	5.00	5.00	0.00
Cobalt	(µg / l as Co)	< 500	6	7.50	7.50	7.50	7.50	7.50	0.00
Cyanide (Recoverable)	(µg / l as CN)	< 50	3	5.00	5.00	5.00	5.00	5.00	0.00
Lead	(µg / l as Pb)	< 20	6	4.00	4.00	4.00	4.00	4.00	0.00
Mercury	(µg / l as Hg)	< 1	3	0.40	0.40	0.40	0.40	0.40	0.00
Nickel	(µg / l as Ni)	< 150	6	7.50	7.50	7.50	7.50	7.50	0.00
Selenium	(µg / l as Se)	< 20	3	1.00	1.00	1.00	1.00	1.00	0.00
Vanadium	(µg / l as V)	< 200	6	15.00	15.00	15.00	15.00	15.00	0.00
Macro Elements & Miscellaneous Determinants									
Aluminium	(mg / l as Al)	< 0.3	6	0.005	0.005	0.012	0.022	0.030	0.011
Ammonia	(mg / l as N)	< 1	3	0.122	0.122	0.122	0.122	0.122	0.000
Calcium	(mg / l as Ca)	< 150	6	16.000	18.441	30.000	41.559	45.000	11.559
Chloride	(mg / l as Cl)	< 200	2	12.000	12.000	12.000	12.000	12.000	0.000
Copper	(mg / l as Cu)	< 1	6	0.005	0.005	0.008	0.014	0.020	0.006
Fluoride	(mg / l as F)	< 1	2	0.180	0.180	0.185	0.190	0.190	0.007
Iron	(mg / l as Fe)	< 0.2	6	0.010	0.010	0.048	0.095	0.110	0.047
Magnesium	(mg / l as Mg)	< 70	6	3.200	3.200	4.400	5.704	6.300	1.304
Manganese	(mg / l as Mn)	< 0.1	6	0.002	0.002	0.006	0.010	0.010	0.005
Nitrate & Nitrite	(mg / l as N)	< 10	3	0.010	0.052	0.325	0.500	0.500	0.273
Potassium	(mg / l as K)	< 50	6	0.155	0.444	1.526	2.608	3.000	1.082
Sodium	(mg / l as Na)	< 200	6	6.300	6.632	7.983	9.335	9.900	1.351
Sulphate	(mg / l as SO4)	< 400	2	15.000	15.000	15.500	16.000	16.000	0.707
Zinc	(mg / l as Zn)	< 5	6	0.004	0.004	0.004	0.004	0.004	0.000
Microbiological									
E. Coli	(cfu per 100 ml)	minimum of 95% of the original results shall be non-detected	45	0.0	0.0	0	0.0	0.0	0.0
Other Determinants as required by supply contract									
Free chlorine and monochloramine	(mg / l)	≥ 0.2 min 95% compliance	45	0.17	0.69	1.09	1.48	1.67	0.40

Notes :
(1) Specification date of effect : July 2006
(2) Guideline derived from SANS 241: 2005 operations alert and industry practices

Report compiled by Mighty Mohotsi
Water Quality Information
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