Detroit Water and Sewerage Department

Water Quality Division

Laboratory Analysis of Water Samples Collected at Southwest Plant

5/13/2014

Parameter	Formula	Units	Raw	Tap	MCL	Sec.Std	MDL
Turbidity		NTU	IV	0.30	0.3/95% (1)		
Total Solids		mg/L	IV	125		500	10
Total Dissolved Solids		mg/L	IV	115		500	10
Aluminum	Al	mg/L	IV	0.188		0.05-0.2	0.005
Iron	Fe	mg/L	IV	0.099		0.3	0.005
Copper	Cu	mg/L	IV	< 0.005	1.3		0.002
Magnesium	Mg	mg/L	IV	8.11			0.5
Calcium	Ca	mg/L	IV	27.9			0.1
Sodium	Na	mg/L	IV	5.41		20 (2)	0.1
Potassium	K	mg/L	IV	0.91			0.1
Manganese	Mn	mg/L	IV	0.002		0.05	0.002
Lead	Pb	mg/L	IV	< 0.002	0.015		0.002
Zinc	Zn	mg/L	IV	< 0.10		5	0.1
Silica	SiO_2	mg/L	IV	1.0			0.4
Sulfate	SO_4^{2-}	mg/L	IV	28.5			
Chloride	Cl^-	mg/L	IV	10.0		250	5
Phosphorus	P	mg/L	IV	0.35			0.05
Free Carbon Dioxide	CO_2	mg/L	IV	4.0			
Total Hardness (3), (4), (5)		mg/L	IV	98			
Total Alkalinity (3)		mg/L	IV	69			
Carbonate Alkalinity (3)		mg/L	IV	0			
Bi-Carbonate Alkalinity (3)		mg/L	IV	69			
Non-Carbonate Hardness (3)		mg/L	IV	29			
Chemical Oxygen Demand		mg/L	IV	6.4			2
Dissolved Oxygen		mg/L	IV	9.6			
Nitrite Nitrogen	NO_2^--N	mg/L	IV	< 0.1	1		0.1
Nitrate Nitrogen	NO_3^--N	mg/L	IV	0.29	10	10	0.1
Fluoride	F^-	mg/L	IV	0.56	4		0.5
pH			IV	7.54	6.5-8.5	6.5-8.5	
Specific Conductance @ 25 °C.		micromhos	IV	230			
Temperature		°C	IV	15.3			

Legend	Notes:
MCL: Maximum Contaminant Level	(1) Turbidity must not exceed 0.3 NTU in 95% of daily samples in any month
Sec.Std: Secondary Standard	(2) EPA Guidance Level
NTU: Nephelometric Turbidity Unit	(3) As Calcium Carbonate
mg/L: Milligram Per Liter	mg/L is equivalent to part per million (ppm)
µg/L: Microgram Per Liter	µg/L is equivalent to part per billion (ppb)
MDL: Method Detection Limit	(4) By Titration
< : Less than	(5) Tap Water Hardnessin in Grains per Gallon **5.68 GPG**
AE: Analytical Error	(6) Reported results are below the low calibration standard but above the instrument
IV: Invalid Sample	detection limit.

Analyst: Brian Brown — Sr. Analytical Chemist — Initial **B. B.** — Date: 7/2/2014

Reviewed By: Patrick Williford — Principal Chemist — Initial **P. W.** — Date: 7/2/2014

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