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City of Detroit
Water and Sewerage Department
Laboratory Analysis of Water Samples Collected at
Southwest Plant
March 8, 2004

Parameter	Formula	Units	Raw	Tap	MCL	Sec. Std	MDL
Turbidity		NTU	3.00	0.08	0.3/95%*		
Total Solids		mg/l	112	114		500	10
Total Dissolved Solids		mg/l	109	112		500	10
Aluminum	Al	mg/l	0.190	0.078		0.05-0.2	0.005
Iron	Fe	mg/l	0.157	0.034		0.3	0.002
Copper	Cu	mg/l	0.009	0.007	1.3		0.001
Magnesium	Mg	mg/l	6.78	7.18			0.2
Calcium	Ca	mg/l	15.9	15.8			0.06
Sodium	Na	mg/l	3.53	3.81		20**	0.01
Potassium	K	mg/l	1.03	0.96			0.01
Manganese	Mn	mg/l	0.005	<0.001		0.05	0.001
Zinc	Zn	mg/l	<0.01	<0.01		5	0.01
Silica	SiO ₂	mg/l	12.86	21.41			0.4
Sulfate	SO ₄	mg/l	17.8	23.7			
Chloride	Cl	mg/l	8.3	10.3		250	1
Phosphorus	P	mg/l	<0.01	0.32			0.01
Free Carbon Dioxide	CO ₂	mg/l	0.0	3.6			
Total Hardness ***/****/*****		mg/l	100	102			
Total Alkalinity ***		mg/l	80	70			
Carbonate Alkalinity ***		mg/l	0	0			
Bi-Carbonate Alkalinity ***		mg/l	80	70			
Non-Carbonate Hardness ***		mg/l	20	32			
Chemical Oxygen Demand		mg/l	2.8	<2.0			2
Dissolved Oxygen		mg/l	9.1	11.6			
Ammonia Nitrogen	NH ₃ -N	mg/l	<0.10	<0.10			0.1
Organic Nitrogen		mg/l	0.2	0.2			0.1
Nitrite Nitrogen	NO ₂ -N	mg/l	<0.01	<0.01	1		0.01
Nitrate Nitrogen	NO ₃ -N	mg/l	0.24	0.28	10	10	0.01
Fluoride	F	mg/l	0.1	1.0	4		0.1
pH			7.94	7.59	6.5-8.5	6.5-8.5	
Specific Conductance @ 25 °C.		micromhos	197	203			
Temperature in °C.			8.6	4.5			

Legend MCL: Maximum Contaminant Level Sec. Std: Secondary Standard NTU: Nephelometric Turbidity Unit mg/l: Milligram Per Liter MDL: Method Detection Limit <: Less than EF: Equipment Failure IV: Invalid Sample	Notes: * Turbidity must not exceed 0.3 NTU in 95% of daily samples in any month ** EPA Guidance Level *** As Calcium Carbonate mg/l is equivalent to part per million (ppm) **** By Titration ***** Tap Water Hardness in Grains per Gallon 5.92 GPG
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April 8, 2004
Date

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Chemical Engineer

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April 12, 2004
Date

Victor M. Mercado, Director
Detroit Water & Sewerage Department

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