

City of Detroit
Water and Sewerage Department
Laboratory Analysis of Water Samples Collected at
Southwest Plant
January 8, 2008

| Parameter | Formula | Units | Raw | Tap | MCL | Sec.Std | MDL |
|-------------------------------|--------------------|-----------|-------|--------|-------------|----------|-------|
| Turbidity | | NTU | 4.40 | 0.04 | 0.3/95% (1) | | |
| Total Solids | | mg/l | 150 | 146 | | 500 | 10 |
| Total Dissolved Solids | | mg/l | 139 | 143 | | 500 | 10 |
| Aluminum | Al | mg/l | 0.453 | 0.143 | | 0.05-0.2 | 0.005 |
| Iron | Fe | mg/l | 0.179 | <0.050 | | 0.3 | 0.005 |
| Copper | Cu | mg/l | 0.007 | 0.007 | 1.3 | | 0.002 |
| Magnesium | Mg | mg/l | 8.20 | 7.60 | | | 0.1 |
| Calcium | Ca | mg/l | 31.5 | 29.8 | | | 0.5 |
| Sodium | Na | mg/l | 8.21 | 7.23 | | 20 (2) | 0.1 |
| Potassium | K | mg/l | 1.07 | 0.96 | | | 0.1 |
| Manganese | Mn | mg/l | 0.004 | <0.002 | | 0.05 | 0.002 |
| Zinc | Zn | mg/l | <0.1 | <0.1 | | 5 | 0.1 |
| Silica | SiO ₂ | mg/l | 1.52 | 1.6 | | | 0.4 |
| Sulfate | SO ₄ | mg/l | 28.5 | 37.0 | | | 15 |
| Chloride | Cl ⁻ | mg/l | 11.0 | 10.0 | | 250 | 5 |
| Phosphorus | P | mg/l | <0.05 | 0.35 | | | 0.05 |
| Free Carbon Dioxide | CO ₂ | mg/l | 1.1 | 6.4 | | | |
| Total Hardness (3), (4), (5) | | mg/l | 107 | 109 | | | |
| Total Alkalinity (3) | | mg/l | 81 | 75 | | | |
| Carbonate Alkalinity (3) | | mg/l | 0 | 0 | | | |
| Bi-Carbonate Alkalinity (3) | | mg/l | 80 | 71 | | | |
| Non-Carbonate Hardness (3) | | mg/l | 22 | 33 | | | |
| Chemical Oxygen Demand | | mg/l | 2.8 | <2.0 | | | 2 |
| Dissolved Oxygen | | mg/l | 16.0 | 14.7 | | | |
| Ammonia Nitrogen | NH ₃ -N | mg/l | <0.1 | <0.1 | | | 0.1 |
| Organic Nitrogen | | mg/l | 0.2 | 0.1 | | | 0.1 |
| Nitrite Nitrogen | NO ₂ -N | mg/l | <0.1 | <0.1 | 1 | | 0.1 |
| Nitrate Nitrogen | NO ₃ -N | mg/l | 0.51 | 0.41 | 10 | 10 | 0.1 |
| Fluoride | F | mg/l | 0.2 | 0.9 | 4 | | 0.5 |
| pH | | | 7.75 | 7.37 | 6.5-8.5 | 6.5-8.5 | |
| Specific Conductance @ 25 °C. | | micromhos | 245 | 239 | | | |
| Temperature in °C. | | | 4.9 | 9.6 | | | |

| 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) |
| MDL: Method Detection Limit | (4) By Titration |
| <: Less than | (5) Tap Water Hardness in Grains per Gallon 6.32 GPG |
| AE: Analytical Error | (6) Reported results are below the low calibration standard but above the instrument |
| IV: Invalid Sample | detection limit. |

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Sr. Analytical Chemist

Principal Chemist

Initial **B. B.**

Initial **M.L.S.**

Date: Feb 26, 2008

Date: Feb 26, 2008

Victor M. Mercado, Director
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