Analytical Results
Dallas Water Utilities

CUSTOMER ADDRESS:	3701 S. Lamar
MAPSCO:	56G
DATE & TIME COLLECTED:	3/9/2016 8:51

PARAMETERS	MCL or SMCL	RESULTS
Field Chlorine (mg/L)	4.0	1.9
Lab Chlorine Residual (mg/L)	4.0	1.9
pH	6.5-8.5	8.1
Alkalinity (mg/L)	N/S	48
Total Hardness (mg/L)	N/S	106
Chloride (mg/L)	250 mg/L	34
Phosphate (mg/L)	N/S	0.95
Lead (mg/L)	See Description	< 0.0002*

MCL: Maximum Contaminate Level
SMCL: Secondary Maximum Contaminate Level (Non enforceable, these contaminants may cause cosmetic and aesthetic effects)
N/S: No Standard

See attached page(s) for parameter descriptions.

Parameter Descriptions

FIELD CHLORINE: (MCL)Taken on site at the time of smple collection and is the primary value for Chlorine residual. The primary purpose of chlorine in the production of potable water is disinfection. In addition to disinfection of the water supply chlorine is also used for taste and odor control, oxidation of iron and manganese, oxidation of hydrogen sulfide, and disinfection of repairs. In Texas all public water systems are required to have chlorination facilities. To be effective as a disinfectant, chlorine must be present in drinking water at all times. All water in storage or transported through the distribution system must have a chlorine (disinfectant) residual.
LAB CHLORINE: (MCL) Verified by laboratory as part of the laboratory analysis, and is conducted past the holding time for Chlorine residual (15 Minutes). The primary purpose of chlorine in the production of potable water is disinfection. In addition to disinfection of the water supply chlorine is also used for taste and odor control, oxidation of iron and manganese, oxidation of hydrogen sulfide, and disinfection of repairs. In Texas all public water systems are required to have chlorination facilities. To be effective as a disinfectant, chlorine must be present in drinking water at all times. All water in storage or transported through the distribution system must have a chlorine (disinfectant) residual.
LAB pH: (SMCL) The term pH indicates whether water is acidic or basic. The scale is 0 to 14 with 7.0 being neutral. Acids (less than 7) include acids, soda pop, vinegar and many fruits and fruit juices such as citrus, tomatoes, grapes and apples. Bases (greater than 7) include antacids, bicarbonate of soda and many laundry detergents. Lower pH tends to make many substances such as metals and hardness minerals more soluble. High concentrations of lead in water are usually the result of low pH which dissolves lead from soil or rock or from the plumbing system if present.
ALKALINITY: (N/S) The alkalinity of water is a measure of its capacity to neutralize acids. Bicarbonates and carbonates are the major contributors to alkalinity, but borate, silicate, hydroxide and phosphate also contribute. A complex relationship of pH, hardness, alkalinity, dissolved oxygen and total dissolved solids determines whether water will cause corrosion or deposits. Water with low alkalinity is more likely to be corrosive, which could cause deterioration of plumbing and an increased chance for lead in water, if present in pipe, solder or plumbing fixtures.

HARDNESS: (N/S) Water readily dissolves calcium and magnesium from the soil and rocks. Hardness of 15 to 40 grains per gallon is common and greater than 50 grains per gallon is not unusual (Table 3). In addition to calcium and magnesium, iron and manganese also contribute to hardness. Hardness minerals react with soaps and detergents producing scums and deposits that make unsightly rings in the bathtub and wash basin and leave deposits on clothes. Hardness also precipitates in appliances, water heaters and water pipes, which reduces their capacity and eventually contributes to their early failure. The hardness minerals may also precipitate in a glass of water. Hardness minerals give water flavor and have no known health effect; they may even contribute to better cardiovascular condition. The attached scales may help interpret water hardness. To convert grains per gallon to parts per million multiply hardness (gpg) by 17.1.

CHLORIDE: (SMCL) The SMCL of 250 milligrams per liter for chloride is the level above which the taste of the water may become objectionable. In addition to adverse taste, high chloride concentrations in the water contribute to the deterioration of domestic plumbing and water heaters and municipal waterworks equipment. Chloride is suspected of being a contributor to hypertension (high blood pressure). High chloride concentrations may also be associated with the presence of sodium in drinking water. See sodium discussion

PHOSPHATE: (N/S) Added as a corrosion inhibitor.

LEAD: The MCLG (Maximum Contaminate Level Goal) for lead is zero. EPA has set this level based on the best available science which shows there is no safe level of exposure to lead. For most contaminants, EPA sets an enforceable regulation called a maximum contaminant level (MCL) based on the MCLG. MCLs are set as close to the MCLGs as possible, considering cost, benefits and the ability of public water systems to detect and remove contaminants using suitable treatment technologies. However, because lead contamination of drinking water often results from corrosion of the plumbing materials belonging to water system customers, EPA established a treatment technique rather than an MCL for lead. The treatment technique regulation for lead (referred to as the Lead and Copper rule) requires water systems tocontrol the corrosivity of the water.

*The minimum detection level (MDL) of the analysis performed is 0.0002 mg/L.The result of the sample tested falls below the MDL of 0.0002 mg/L.

Table 3

Measures of

mg per liter	Grains per	Description
0 to 60	0 to 3.5	Soft No hardness problems.
60 to 120	3.5 to 7	Moderately hard Increased hardness problems.
120 to 180	7 to 10.5	Hard Selection of detergents helps solve cleaning problems.
180 to 350	10.5 to 20.5	Very hard Select detergents and use some non-precipitating softening agent to cope with cleaning problems.
More than 350	More than 20.5	Extremely hard Select detergents, use non-precipitating softening agent and consider ion-exchange softening to cope with hard water problems