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Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

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SEP 21 2016

The Honorable Brian Treece
City of Columbia
701 East Broadway
PO Box 6015
Columbia, MO 65205

Dear Mayor Treece:

Given the recent media interest in Columbia's public drinking water system, I wanted to ensure you have an understanding of the compliance history of the system related to disinfection byproducts as well as the Department of Natural Resources' regulatory role in overseeing the system's efforts to address this concern.

The department has regulatory responsibilities to ensure public water systems monitor and meet Maximum Contaminant Levels (MCLs) established under the Federal Safe Drinking Water Act. In this role, the department does not dictate specific treatment processes that must be utilized to meet those standards. The city's decision to switch to chloramination in 2009 was made to meet the requirements of a federal rule that tightened standards for disinfection byproducts in drinking water. Disinfection byproducts, particularly haloacetic acids and total trihalomethanes (TTHM's) pose chronic health risks if consumed above maximum contaminant levels for many years. These long term potential impacts include increased cancer risk and liver, kidney or central nervous system problems.

As you are aware, the city's drinking water had exceeded the maximum contaminant level (MCL) for TTHM's in three quarters during 2008. Consequently, the department required the city to take action to reduce the levels of these disinfection byproducts in its drinking water to meet the MCLs. At that time, the city was proactive in working with the University of Missouri to study the water characteristics that led to the MCL exceedances and determine courses of action to help bring the city's water system back into compliance. There were several treatment or infrastructure options available to the city to address this problem. After consulting with its hired consultants and professional staff, the city chose to pursue chloramination to meet the MCL. The department approved the city's selection of chloramination, as it is a well-established and proven technique for addressing the problems the city was experiencing. As with any change or alteration of a public water system, engineering approval is required. Following review of the submitted engineering plans, the department approved the modification in a letter dated April 28, 2009.

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As a result of the switch to chloramination, the city has been in compliance with the running annual average (RAA) MCL compliance calculation for TTHMs since 2008.

The department recognizes that there are some who are opposed to the usage of chloramines due to health concerns. According to the federal Center for Disease Control and Prevention, drinking water disinfected with "small amounts of chloramine does not cause harmful health effects and provides protection against waterborne disease outbreaks." This information can be found on the CDC's webpage at the following link:

<http://www.cdc.gov/healthywater/drinking/public/chloramine-disinfection.html>. However, regular monitoring and control of the treatment process is important to optimize the effectiveness of the chloramination process.

Currently 2.6 million citizens, or roughly half of the Missourians who are customers of a community water system, use water that is disinfected through chloramination. Chloramination is a common disinfection technology used throughout the country and the world. It is the most common solution implemented by public water systems working to prevent the formation of disinfection byproducts.

As previously mentioned, each community has the discretion to decide which treatment process it would like to utilize, as long as the technology is safe and will effectively provide treatment in all conditions. It is our opinion that, as long as the city properly operates and maintains its system, chloramination will prove to be an acceptable method for addressing the city's problems with disinfection byproducts.

We encourage you to maintain public education and communication with your customers on this topic. The information the city of Columbia has on its website regarding chloramination is thorough and gives a good overview of the issue.

If you have questions you may contact Mr. Todd Eichholz, of my staff, at (573) 751-4090 or via mail at the Department of Natural Resources, Water Protection Program, Public Drinking Water Branch, P.O. Box 176, Jefferson City, Missouri 65102-0176.

Sincerely,

WATER PROTECTION PROGRAM



David J. Lamb
Public Drinking Water Branch Chief

DJL:tej