

SSLGC Using Chlorine Dioxide In Water Treatment Process



HISTORY

In the late 1990's the cities of Schertz and Seguin formed the Schertz-Seguin Local Government Corp. (SSLGC) to provide a reliable water source for residents. Water provided to SSLGC customers is collected from wells in the Carrizo-Wilcox Aquifer and is treated/disinfected at water treatment plants in wellfields before transmission lines carry it to residents.

QUESTIONS?

If you detect these types of odors in your home, please call Public Works at 210-619-1800. Public Works and SSLGC will dispatch technicians to your residence to test the water for Chlorine Dioxide and Chlorite levels. This will help us understand more about the odors that are occurring.

For more information, call Public Works at 210-619-1800 or SSLGC at 830-401-2409.

WHY CHLORINE DIOXIDE?

The presence of Sulfate Reducing Bacteria (SRB) in the Carrizo-Wilcox Aquifer has been identified as a source of corrosion at the Nixon Water Treatment Plant (NWTP). In an effort to prevent corrosion and damage to equipment, the Texas Commission on Environmental Quality (TCEQ) granted SSLGC's request to use Chlorine Dioxide at NWTP in September 2015. A safer alternative for regular Chlorine, Chlorine Dioxide is commonly used in the water treatment industry for the purpose of disinfection. Normal water disinfection using Chlorine has been ineffective against SRB's.

WHAT'S THAT SMELL?

A side effect of Chlorine Dioxide use can be short-term odor issues for some water customers. Ideally, Chlorine Dioxide would be completely consumed through the disinfection process, however, there are times where trace amounts of Chlorine Dioxide can remain in the water as it travels to the customer. If this occurs, when water taps are open minute amounts of Chlorine Dioxide gas can diffuse into the air and combine with normal airborne household compounds.

While harmless to humans at the levels being used, the excess Chlorine Dioxide can be released and react with airborne volatile organic compounds (VOCs) found in all houses. VOCs are introduced into ambient air through the use of scented products (soaps, candles, air fresheners, etc.), cleaning agents or solvents, paint, furnishings, new carpet, fresh flowers, and many other common household items. Odors produced from the combination of VOCs/Chlorine Dioxide are described as smelling like fuel oil, kerosene, chemicals or cat urine.

Odors produced from the combination are intermittent and short-term and typically cease when the water is turned off. Since this side effect is random and sporadic the odor will not be present every time the water is running. Water customers can remove excess Chlorine Dioxide and other chlorine compounds from their water by using an activated carbon filter. This will prevent the formation of compounds causing unpleasant odors.

WHAT IS SSLGC DOING?

SSLGC is currently working to reduce potential odors associated with its use of Chlorine Dioxide. Since SSLGC began utilizing the Chlorine Dioxide System at the Nixon plant the feed rate has been reduced from 0.5 milligrams per liter (mg/L) to 0.4mg/L, to avoid residual levels within the distribution system. This balancing will continue to minimize issues with water odors while making sure the SRBs are effectively eliminated.

SSLGC continues to test the levels of Chlorine Dioxide and Chlorite on a daily basis, and monthly samples are taken at several TCEQ approved locations within the SSLGC System. The monthly samples are delivered to a third party lab for testing and results are then submitted in the form of a Monthly Operating Report to TCEQ. SSLGC continues to be in compliance with TCEQ's Chlorine Dioxide and Chlorite monitoring and reporting requirements, and the levels of Chlorine Dioxide and chlorite are consistently far below TCEQ mandates.

Water Treatment

