



City of Phoenix
WATER SERVICES DEPARTMENT
Quality Reliability Value

Chlorine Q & A

June 2015

Background: Gaseous chlorine is the most common and cost effective disinfectant used by approximately 95% of the water industry. Phoenix has used gaseous chlorine for about 50 years.

1. How does Phoenix maintain its history of safe chlorine use?

Numerous chlorine-related safety precautions are in place to protect customers, even though Phoenix has never had a chlorine accident that has affected the public. There are extremely strict delivery and transfer procedures used to ensure the safety of the public and employees. Phoenix water employees have been trained in the safe handling of liquid and gaseous chlorine. Quarterly chlorine safety drills are conducted for each facility.

2. What are the specific safety procedures used to protect customers?

Phoenix has specific on-site and remote monitoring procedures in place that are confidential to protect our customers. The elements common to the confidential procedures include using the smallest practical container size for transporting chlorine, using strict chain of custody delivery procedures and using highly sensitive mechanical devices to help prevent an accidental chlorine release. Emergency planning and response procedures are coordinated with the Arizona State Emergency Response Commission, Local Emergency Planning Committee, and with fire departments within jurisdiction.

3. Can anything other than chlorine be used to disinfect the water supply?

Phoenix has evaluated alternates to gaseous chlorine for disinfection, but none of the existing technologies has been proven to be as effective as gaseous chlorine. We will continue to be open to possible alternatives to chlorine.

4. How much chlorine is in the Phoenix's water?

Phoenix works hard to maintain a chlorine residual around 1.0 part per million in the water leaving a water treatment plant and throughout the distribution system. Federal law requires a minimum chlorine disinfectant level of 0.2 parts per million in the water leaving a water treatment plant and a maximum chlorine disinfectant level of 4 parts per million in the distribution system.

5. Who says Phoenix is working safely with chlorine?

All chemical facilities have undergone a recent, extremely successful review for compliance with all codes and regulations. Federal, State, County and local entities, as well as the Chlorine Institute (which establishes chlorine practices pertaining to handling, transportation and safety measures) enthusiastically support our practices. The Phoenix Fire Department has adopted the Chlorine Institute recommendations and federal regulations as written in the International Fire Code for the safe handling and storage of chlorine containers. All our facilities are inspected annually for compliance and the Phoenix Fire Department participates in the quarterly drills and evacuations. EPA and Homeland Security have reviewed all of our facilities for safety and compliance and found them to meet and exceed required safety standards.

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