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Chlorine Institute Statement on Corps of Engineers Washington Aqueduct Water Disinfectant Switch

The Chlorine Institute and its members are committed fully to protecting against a terrorist attack involving elemental chlorine. Our industry has taken numerous steps in cooperation with authorities at all levels to enhance and reinforce security and safety measures involved in chlorine manufacturing, transport and use, including use by water-treatment operations such as the Washington Aqueduct. The Chlorine Institute believes that individual water-treatment-user facilities are in the best position to evaluate all the factors in determining which disinfectant to use. While the Institute has no information to evaluate the Corps of Engineers' decision to switch disinfectants, we have no reason to believe that the Corps did not make this decision in a comprehensive and thoughtful manner.

Chlorine and other water-treatment chemicals, including sodium hypochlorite, are essential to public health. Prior to the addition of disinfectants to drinking water in the early 20th century, approximately 20,000 people died each year of water-borne diseases such as cholera and typhoid fever. Through the addition of disinfectants, with chlorine being the one most commonly used in the United States, deaths due to water-borne diseases in drinking water now are virtually non-existent. In recent years, the use of elemental chlorine gas by public drinking water and wastewater systems has come under intense public scrutiny due to security concerns involving potential terrorist attacks.

The Chlorine Institute believes that chlorine can be transported and used safely and securely by all chlorine users, including drinking water treatment facilities, provided that appropriate safety and security measures are taken.

Changing from chlorine gas to sodium hypochlorite (liquid chlorine bleach) is not a simple matter, and it may not be feasible for every facility. Switching requires consideration of many site-specific factors including not only security, but also efficacy of the disinfectant, and

safety. In addition, the logistics required for handling different disinfectants and the economic impacts of using each must be considered. These factors are detailed in a Chlorine Institute technical document, *Important Considerations for Converting from Elemental Chlorine to Sodium Hypochlorite*, which is posted at **<post and link to article>**. In addition, the American Chemistry Council's Chlorine Chemistry Division has posted a technical [article](#) addressing issues to be considered when evaluating various disinfectants.

The use of chlorine as a disinfectant to treat drinking water comprises only about 3 percent of all chlorine uses. In addition to clean drinking water, chlorine helps provide myriad benefits from life-saving pharmaceuticals to computer microprocessors to solar cells. For 95 percent of chlorine uses, no feasible alternatives exist. A recent economic analysis shows that using chlorine chemistry to provide essential products saves U.S. and Canadian consumers over \$630 billion a year. Because availability of chlorine is so essential to our health and way of life, our members, their customers and their partners are committed to continually enhancing the safe and secure production, transportation and use of chlorine.

The Chlorine Institute, Inc. is a trade association supporting the North American and global chlor-alkali industry by fostering continuous improvements to safety, security, and the protection of human health and the environment connected with the production, distribution and use of chlorine and other chlor-alkali mission chemicals. The Institute provides numerous technical publications that can be freely downloaded from our [website](#) to assist members and non-members to more safely and securely handle our mission chemicals.