Highlights of October 2007 Survey of Methods and Protocols to Security Onsite Hazardous Chemicals at Water & Wastewater Facilities

In October 2007, six of the nation's largest drinking water and wastewater associations sponsored a joint survey designed to determine the methods and protocols employed by utilities to secure the onsite hazardous chemicals used at their facilities. The survey responses represent almost 1,200 drinking water utilities and over 950 wastewater utilities, with 32% of responses from utilities serving a population of over 100,000, 16% serving 50,000 to 100,000 people, 42% serving 3,300 to 50,000 people, and 9% serving less than 3,300 people. The responses provide a unique look at the sector's current security posture within a statistically valid sampling containing a 3% plus or minus margin of error at the 95% confidence level. This summary highlights some of the key findings and documents the accomplishments and the remaining areas of improvement of water sector utilities in securing chlorine gas and other hazardous materials.

The survey responses indicated that two-thirds of drinking water utilities use chlorine gas for disinfection, while half of wastewater utilities use chlorine gas. The choice of disinfection method has been considered carefully, with 95% of utilities indicating that they have evaluated their disinfection methods considering water quality, public health, and security issues.

An overwhelming number of respondents, regardless of their disinfection strategies, use a combination of security methods to safeguard their utility perimeters. Methods or measures include fences (88% of all responses), gates (65% of all responses), and warning signage (64% of all responses). Access into the utility is controlled for 85% of all utilities, using methods such as manual locks, electronic access controls, and visitor restrictions.

For utilities that use chlorine gas, approximately 80% store the chlorine and other hazardous chemicals in a hardened building, and nearly all of these are concrete/block construction. Other measures taken to secure the building are doors with exterior locks, interior locks, and sensor alarms, video surveillance and remote sensors, and additional fencing and restricted viewing from off-site. Inventories of hazardous chemicals are routinely reconciled and/or audited for 86% of these utilities, and 95% of these utilities limit access to hazardous materials to authorized personnel.

Most utilities have taken steps to prepare for emergency situations, with 94% of all responding utilities having an emergency response plan, most of which address chemical theft or release. Eighty-five percent of all utilities have established protocols with first responders, such as law enforcement, fire departments, and hazmat responders, to address hazardous chemical theft or release, and the majority of utilities would also report to their state primacy agency. Over 60% of all utilities also communicate regularly with law enforcement to report and receive information on suspicious incidents and activities.

The survey results indicate that most utilities have taken multiple voluntary measures to secure their chlorine gas supplies and other hazardous materials, although some utilities could still improve their security measures. The water sector associations are using the survey results to inform EPA, DHS, and federal legislators about the voluntary actions being taken by utilities to safeguard hazardous chemicals. The survey findings will also inform future policy decisions as well as voluntary programs sponsored by the water sector associations to enhance the sector's overall security and resiliency.

In addition to sharing the survey results, the associations have also continued to call attention to the significant progress made by the sector towards the design and implementation of security and emergency response programs. Nearly 100% of community water systems have submitted to EPA a vulnerability assessment of their facility and certification that their emergency response plan has been updated. Many wastewater utilities have also conducted these vulnerability assessments voluntarily. Other voluntary measures taken by sector utilities include the following:

- Over 10,000 drinking water and wastewater professionals have been trained in security and emergency preparedness practices by the associations listed on this letter since September 11, 2001. In addition, on-site training and assistance is available through technical service providers, to implement security plans in every small water supply. Over 20,000 communities relied on this assistance last year.

- Approximately 13,000 drinking water and wastewater utility professionals have access to security and response information distributed by the WaterISAC, which is among the most successful information sharing and analysis centers.

- The water sector has developed sector specific vulnerability assessment and emergency response tools and is in the process of evaluating interdependencies between the water sector and other critical infrastructures and key resources.

- Utilities in most states have organized (or are in the process of establishing) mutual aid and assistance networks, known as Water/Wastewater Agency Response Network (WARNs), to facilitate the rapid response and recovery of drinking water and wastewater utility operations following an incident.

These actions, in conjunction with the findings of the survey, demonstrate the commitment of utilities to ensuring the safety and security of the communities they serve. The associations will continue to advocate for voluntary security measures for utilities and local choice of disinfection method, while ensuring that help is provided to utilities that need to make security improvements.