TESTIMONY OF

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BEFORE THE

COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS

UNITED STATES SENATE

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Introduction

Good morning Mr. Chairman, Ranking Member Collins, and Members of the Committee. I am Peter Silva, Assistant Administrator for Water at the United States Environmental Protection Agency. I welcome this opportunity to discuss EPA's efforts to promote security and resiliency in the Water Sector with an emphasis on our role in addressing chemical security at water facilities.

EPA has worked over the last several years to support the Water Sector in improving security and resiliency, and I am pleased to report that the sector has taken its charge seriously. EPA has been entrusted with important responsibilities for coordinating the protection of the Water Sector through Congressional authorization under the *Public Health Security and Bioterrorism Preparedness and Response Act of 2002* (the Bioterrorism Act), and through Presidential mandates under Homeland Security Presidential Directives (HSPD) 7, 9 and 10. HSPD 22 (the domestic chemical defense) also applies to water protection.

Promoting the security and preparedness of the Nation's water infrastructure remains a priority of the Agency in a post-9/11 and post-hurricane Katrina world. A loss of water service can seriously jeopardize the public health, economic vitality, and general viability of a community. In working with the Water Sector, we have emphasized a multi-layered approach to security consisting of prevention,

detection, response, and recovery so that we can assist water facilities in avoiding incidents and, should an incident occur, in quickly identifying and recovering from such events.

Implementation of Section 1433 of the Safe Drinking Water Act

Existing statutory requirements address chemical security at drinking water systems to a degree. Section 1433 of the Safe Drinking Water Act (added by the Bioterrorism Act of 2002) required each community water system providing drinking water to more than 3,300 persons to conduct a vulnerability assessment, certify its completion, and submit a copy of the assessment to EPA. These vulnerability assessments addressed security at water systems comprehensively, from water collection to treatment and distribution, and they specifically included the use, storage, or handling of chemicals. In addition, Section 1433 required each water system to prepare or revise an emergency response plan that incorporates the findings of the vulnerability assessment and to certify to EPA that the system has completed such a plan.

Since 2003, EPA has received 100% of the vulnerability assessments and emergency response plan certifications from large and medium community water systems serving more than 50, 000 people. Over 99% of small community water systems serving between 3,300 and 50,000 people have submitted their vulnerability assessments and emergency response plan certifications. EPA reviewed the vulnerability assessments to ensure compliance with Bioterrorism Act, and where necessary provided technical assistance to individual drinking water systems to bring these systems into compliance. EPA also initiated some enforcement actions against non-compliant systems.

EPA's Role in Chemical Security for Drinking Water and Wastewater Utilities

EPA's current approach for addressing chemical security in the Water Sector involves a long-standing effort to promote the voluntary adoption of countermeasures by water facilities. Before I discuss

some of these activities, however, I would like to take a step back to consider the broader implications of chemical security for the Water Sector. It is of paramount importance for us to acknowledge in this discussion that the primary purpose of drinking water systems is the provision of safe drinking water, while that of wastewater systems is the protection of water bodies. In fact, the effective treatment of drinking water to control infectious diseases like typhoid and cholera has been hailed by the U.S. Centers for Disease Control and Prevention as one of the greatest public health achievements of the twentieth century.

Therefore, authorizing language should allow for a consideration of this essential public health and environmental mission, particularly with respect to any provision which may require a facility to consider alternative water treatment processes. In other words, chemical security regulations when applied to the water sector should enable a reasoned balance of multiple, important factors so that we can achieve the joint policy goals of protecting public health and the environment while enhancing security. Such factors include: efficacy of treatment in meeting public health and environmental requirements, security concerns, reliability of treatment, source water characteristics, feasibility, and operator safety.

Tools and Technical Assistance

EPA has worked closely with the water sector to assess and reduce the risks associated with hazardous chemicals. To this end, EPA and industry associations, often in partnership, have developed tools, training and technical assistance to help water utilities identify and mitigate those risks. A few examples of our efforts are as follows:

1. We developed tools that assist water systems with assessing vulnerabilities, including chemical storage and handling. Examples of the tools include:

    - The *Vulnerability Self Assessment Tool (VSAT™)* – a software package that supports water

and wastewater utility vulnerability assessments using a qualitative risk assessment methodology;

- The *Security Vulnerability Self-Assessment Guide for Small Drinking Water Systems* – a manual specifically designed to help small water systems conduct vulnerability assessments; and
- The *Security Vulnerability Self-Assessment Guide for Very Small (<3,300) Systems*, which assists these systems in assessing their critical components and identifying security measures that should be implemented.

2. Under the Bioterrorism Act of 2002, EPA created a document to "provide baseline information to community water systems…regarding which kinds of terrorist attacks or other intentional acts are the probable threats to: (A) substantially disrupt the ability of the system to provide a safe and reliable supply of drinking water; or (B) otherwise present significant public health concerns." The baseline threat document addressed vulnerabilities related to the use, transfer and storage of chemicals, including the evaluation of different disinfection options. EPA provided this document to drinking water facilities to assist them in conducting their vulnerability assessments.
3. The National Association of Clean Water Agencies (NACWA) has worked with the Department of Homeland Security (DHS) and EPA to create a Chlorine Gas Decision Tool for Water and Wastewater Utilities. The Tool is designed to provide utilities with a user-friendly, but thorough, means of evaluating alternatives to chlorine gas disinfection.
4. EPA created a series of Security Product Guides that assist water facilities with making enhancements to reduce risks and protect against man-made and naturally occurring events. These guides provide recommendations for improving physical security, such as the use of barriers, placement and security of aboveground equipment, selection of fencing materials, and the

use of visual surveillance monitoring systems, all of which can help to secure hazardous chemicals used by water facilities.

5. We funded a cooperative agreement with the American Society of Civil Engineers, the American Water Works Association, and the Water Environmental Federation to develop Voluntary Physical Security Standards for drinking water and wastewater systems. Completed in December 2006, these voluntary standards address storage of hazardous or toxic chemicals, including chlorine and ammonia gas.
6. Together with the National Oceanic and Atmospheric Administration, EPA developed ALOHA (Aerial Locations of Hazardous Atmospheres) and RMP*Comp – software tools that many water utilities and other facilities use to model the dispersion of hazardous substances. DHS uses RMP*Comp in its Chemical Facilities Anti-Terrorism Standards (CFATS) program.

Risk Management Plans

In addition to the above activities, EPA's Chemical Accident Prevention Provisions (40 CFR 68.1 - .220), developed under the authority of the Clean Air Act, Section 112(r), require utility processes containing certain levels of specific hazardous substances to implement an accident prevention program, conduct a hazard assessment, prepare and implement an emergency response plan, and submit to EPA a summary report known as a risk management plan (RMP). The RMP must describe the facility's accidental release prevention and emergency response policies, the regulated substances handled at the facility, the worst-case release scenario(s) and alternative release scenario(s), the 5-year accident history of the facility, the Emergency Response Plan, and planned changes to improve safety at the facility (see 40 CFR Part 68). Hazardous chemicals of most relevance to the Water Sector, including gaseous chlorine,

ammonia, sulfur dioxide, and chlorine dioxide, trigger RMP regulatory requirements if they exceed certain threshold quantities.

Considerations for Chemical Security in the Water Sector

It is important to note that the Administration has developed a set of guiding principles for the reauthorization of the Chemical Facility Anti-Terrorism Standards (CFATS) program and for addressing the chemical security of our nation's wastewater and drinking water treatment facilities. These principles are:

1) The Administration supports permanent chemical facility security authorities and a detailed and deliberate process for doing so, hence our preference for that process to be completed in FY10.

2) Nonetheless, CFATS single year reauthorization in this session presents an opportunity to promote the consideration and adoption of inherently safer technologies (IST) among high risk chemical facilities. We look forward to working with this Committee and others on this important matter.

3) CFATS reauthorization also presents an opportunity to close the existing security gap for wastewater and drinking water treatment facilities by addressing the statutory exemption of these facilities from CFATS. The Administration supports closing this gap.

As we have stated to Congress before, we believe that there is a critical gap in the U.S. chemical security regulatory framework—namely, the exemption of drinking water and wastewater treatment facilities. We need to work with Congress to close this gap in order to secure substances of concern at these facilities and to protect the communities they serve. Drinking water and wastewater treatment facilities that meet CFATS thresholds for chemicals of interest should be regulated. We do, however, recognize the unique public health and environmental requirements and responsibilities of such facilities. For example, we understand that a "cease operations" order that might be appropriate for another facility under CFATS would have significant public health and environmental consequences when applied to a water facility.

The Administration also has established the following policy principles in regards to regulating security at water sector facilities:

- EPA should be the lead agency for chemical security for both drinking water and wastewater systems, with DHS supporting EPA's efforts.

- To address chemical security in the water sector, EPA would utilize, with modifications as appropriate given statutory requirements and the uniqueness of the sector, DHS' existing risk assessment tools and performance standards for chemical facilities.

- DHS should be responsible for ensuring consistency of high-risk chemical facility security across all 18 critical infrastructure sectors.

- Where possible, we support using safer technology, such as less toxic chemicals, to enhance the security of the nation's high-risk chemical storing facilities. Facilities posing the highest degree of risk should be required to implement IST method(s) if such methods enhance overall security, are feasible, and consider public health and environmental requirements.

In addition to articulating these principles, I would like to present the Agency's view of the appropriate division of regulatory labor between EPA and the states. EPA supports legislative authority which would provide the states with an important role in regulating chemical security at water systems, including a prominent state role in IST determinations and auditing/inspections. This federal partnership with the states would leverage long established EPA-state relationships under the drinking water and wastewater programs, as well as the states' expertise and familiarity with individual water facilities.

CONCLUSION

Over the past several years, we have made progress in ensuring the security of our nation's drinking water and wastewater systems. We have produced a broad array of tools and assistance that the Water Sector is using to assess its vulnerabilities, reduce risk, and prepare for emergencies, including chemical theft and release. In developing these tools, we have worked effectively with our partners within the sector, and also reached out to build new relationships beyond the sector, to ensure that water utilities can be prepared to prevent, detect, respond to and recover from intentional incidents and natural disasters.

With respect to security at water sector facilities, we look forward to continuing to work with members of the Committee on legislation that ensures the security of drinking water and wastewater facilities while supporting the critical mission of these facilities for public health and environmental protection.

Thank you again for the opportunity to testify about our role in water security. I would be happy to answer any questions you may have.