



# National Infrastructure Protection Plan

## Chemical Sector

Homeland Security Presidential Directive 7 (HSPD-7) identified 17 critical infrastructure and key resources (CIKR) sectors and designated Federal Government Sector-Specific Agencies (SSAs) for each of the sectors. Each sector is responsible for developing and implementing a Sector-Specific Plan and providing sector-level performance feedback to the Department of Homeland Security (DHS) to enable gap assessments of national cross-sector CIKR protection programs. SSAs are responsible for collaborating with private sector security partners and encouraging the development of appropriate information-sharing and analysis mechanisms within the sector.

### Sector Overview

The Chemical Sector is an integral component of the U.S. economy, employing nearly 1 million people, and earning revenues of more than \$637 billion per year. The Chemical Sector can be divided into five main segments, based on the end product produced: (1) basic chemicals, (2) specialty chemicals, (3) agricultural chemicals, (4) pharmaceuticals, and (5) consumer products. Each of these segments has distinct characteristics, growth dynamics, markets, new developments, and issues.

The majority of Chemical Sector facilities are privately owned, requiring DHS to work closely with the private sector and its industry associations to identify and prioritize assets, assess risks, develop and implement protective programs, and measure program effectiveness.

The Chemical Sector is dependent on, depended on by, and overlaps with a wide range of other sectors, including **Transportation Systems**, for the movement of raw materials and finished products, **Energy, Water, Agriculture & Food**, **Information Technology**, and **Communications**.

### Sector Partnerships

SSAs are responsible for working with other Federal, State, local, tribal, territorial, and private sector security partners to implement the NIPP sector partnership model and risk management framework, develop protective programs and related requirements, and provide sector-level CIKR protection guidance in line with the overarching guidance established by DHS pursuant to HSPD-7.

In May 2004, the chemical industry formed a Sector Coordinating Council (SCC), which is presently composed of 18 trade associations, to work with DHS and other Federal agencies to ensure that the efforts of the private sector are informed by Federal activities. This council also serves as a critical mechanism for ensuring that the concerns and perspectives of the private sector are considered in Federal actions.

The Federal agencies that are involved in the coordination of the Chemical Sector make up the Chemical Government Coordinating Council (GCC). In June 2008, there were 23 member agencies, including the Environmental Protection Agency and the Departments of Commerce, Justice, and Transportation.

## CIKR Protection Issues

From a homeland security perspective, the most pressing concern in the Chemical Sector is the potential for terrorists to attack assets in such a way as to create harmful consequences to public health and safety. Reducing the risk inherent in toxic, flammable, and explosive chemicals, as well as the risk of theft and diversion, has been a leading DHS priority in this sector. The potential economic impact of a successful terrorist attack against the Chemical Sector is also a major concern.

Historically there have been regulatory programs that target safety at chemical facilities. The Chemical Facility Anti-Terrorism Standards (CFATS), published on April 9, 2007, is the first regulatory program that focuses on security at high-risk chemical facilities.

Section 550(a) of the Act authorizes DHS to require high-risk chemical facilities to complete Security Vulnerability Assessments (SVAs), develop Site Security Plans, and implement protective measures necessary to meet risk-based performance standards established by DHS. The CFATS Appendix A, published in the Federal Register on November 20, 2007, contains a list of chemicals and their Screening Threshold Quantities (STQ). Possession of one or more of these chemicals of interest at or above the applicable threshold quantity triggers a risk assessment process to determine if the facility must comply with CFATS regulations.

## Priority Programs

Within the Chemical Sector, protective programs occur primarily on two distinct levels: (1) overarching, sector-wide protective programs led by DHS as the SSA; and (2) asset-specific protective programs that are, for the most part, performed voluntarily by asset owners and operators.

Some of the programs underway today include:

- **Web-Based Chemical Security Awareness Training.** The Web-Based Chemical Security Awareness Training Program is a voluntary tool available free to the industry as a way to increase security awareness in chemical facilities nationwide. The multimedia program is expected to reach about 400,000 employees directly involved in the manufacture, transportation, and storage of chemicals. The training is designed for all facility employees, not just those traditionally involved in security. Upon completion of the training, a certificate is awarded to the student.
- **Security Seminar and Exercise Series with State Chemical Industry Councils.** The purpose of these events is to engage facility owner/operators and their security partners in an interactive seminar and tabletop planning exercise that requires participants to respond to real world situations in real time, often with partial or conflicting information. The events are conducted as a partnership between the SSA and State Chemical Industry Councils.
- **The Security Outreach and Awareness Program (SOAP).** SOAP provides a review of policies and procedures of process control systems at medium-

to small-sized facilities that will assist in measuring the level of cyber security vulnerability. The review results in a document provided to the facility that lists gaps and ways to fill the gaps for consideration.

- **Research and Development Integrated Project Teams (R&D IPT) Process.** In 2007, DHS' Science and Technology Directorate established a process which revolves around Integrated Project Teams (IPT) to involve all DHS divisions in the process of capability gap identification in the areas of research and development. Fiscal year 2007-2008 was the first year that the Chemical Sector participated in the IPT process, an iterative process that requires periodic inputs from DHS components to assist S&T in identifying research and development gaps that can be transformed into R&D projects.

In addition, many programs have been implemented to help facilitate coordination and communication between public and private sector security partners. These programs help to improve the security posture of the sector through information sharing and awareness. The Homeland Security Information Network-Critical Sectors portal (HSIN-CS) is the primary information-sharing platform for the Chemical Sector. It provides alerts and incident bulletins are posted when events occur. HSIN-CS enables DHS, critical sector security partners and chemical supply chain professionals to communicate, coordinate, and share information in support of the Sector Partnership Framework.

Further methods of communication that exist between the private and public sector are the Biweekly Sector Threat Reporting Teleconferences for chemical facility owner/operators and plant managers; and the Bi-annual Classified Briefings. In order to provide more depth to the Bi-annual Classified Briefings and foster an information-sharing environment, DHS sponsors security clearances for members of the chemical industry who have a need to know certain classified information.

Private sector protective activities contribute to the security posture of the Chemical Sector and range from participation in and sponsorship of awareness training and the physical hardening of facilities, to the completion of facility security plans. In particular, many members of the SCC have published mandatory security codes and/or voluntary guidance documents for members.



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