



The U.S. Department of Homeland Security (DHS) is working to enhance the security of facilities storing chemicals that could either be stolen or used by terrorists to inflict mass casualties and destroy critical assets. DHS has identified security issues at these facilities, including the potential for chemical release; theft or diversion; and sabotage or contamination.

# REDUCING THE RISK OF DANGEROUS CHEMICALS GETTING INTO THE WRONG HANDS

By Nancy Mathews

Under the Department of Homeland Security Appropriations Act of 2007, DHS has the authority and funding to regulate security at facilities storing chemicals considered to be high-risk (P. L. 109-295, Section 550). The Department of Homeland Security Chemical Facility Anti-Terrorism Standards (CFATS) Final Rule (6 CFR Part 27) was published in the *Federal Register* April 9, 2007. This Rule uses 19 Risk-Based Performance Standards (RBPS) designed to improve the security of facilities storing chemicals.

DHS expects most submissions to come from chemical manufacturing, storage and distribution facilities, petroleum refineries, and liquefied natural gas storage (peak shaving) facilities. These facilities can store one or more of the “chemicals of interest” at the threshold quantity identified in Appendix A of the Rule. Depending on the types and quantities of chemicals stored at research and laboratory facilities, universities and colleges may be responsible for responding to these new standards.

#### **Fast-Paced compliance schedule to complete top screen**

On November 20, 2007, Appendix A: Chemicals of Interest (COI) was published in the *Federal Register*, identifying the

specific chemicals and storage thresholds for these chemicals. The addition of Appendix A to the Rule triggered a fast-paced compliance schedule.

The initiating event is fairly straightforward. If a facility stores any of the chemicals listed in Appendix A at the storage thresholds given, the facility will have 60 days to register each facility and complete the on-line Chemical Survey Assessment Tool (CSAT), or Top Screen. Top Screen asks for detailed information on the quantity, storage method, and location of any COI that exceeds the given threshold. Universities and colleges may request a 60-day extension with no further explanation.

The process of matching a facility’s inventory to the COI seems simple, but it ignores the challenges seen by organizations that aren’t traditionally classified as large chemical handlers, such as universities, colleges, hospitals, and other medical research facilities. Due to the nature of the operations and funding of these institutions, chemical purchasing is often conducted by researchers, rather than through a central office. Thus, these institutions don’t always know which chemicals they have on property.

### Who is responsible for compliance activities?

The Department of Homeland Security's Chemical Security Task Force is reaching out to the top 50 large chemical handlers to assist them in complying with CFATS. But DHS originally estimated 40,000 facilities will need to submit a Top Screen and approximately 6,000 of those will be classified as high-risk.

Another concern is that many facilities that should comply with CFATS may not even know that the rule exists. Thanks to professional organizations focusing on environmental health and safety (EHS) and large chemical handling companies, word is gradually reaching the intended targets. And, while security is the primary driver of the rule, EHS professionals seem to be tasked with leading compliance activities.

Whether compliance is assigned to EHS, security, emergency services, or facility operations, the ultimate responsibility lies with a designated officer at the institution, who must signoff on the CSAT/Top Screen submission, verifying its content. For colleges and universities, this may be the president, provost, dean, or another senior official.

### Getting in fo to complete the top screen—the basics

DHS has assigned chemicals to a category (or in some cases multiple categories) of security vulnerability, based on their potential use: Release, Theft, and/or Sabotage. While cumbersome to review in concert with Appendix A COI, these categories are important to identify because of their associated security vulnerabilities.

When determining if you have a COI at the threshold identified in Appendix A, remember that the calculation is cumulative, so if a chemical has a 500 lb. threshold and you have three buildings storing 200 lbs. each, the aggregate total is 600 lbs., and must be reported. Also, if the identified chemical makes up over 1 percent of the constituents of a mixture, you must include the sum total in your analysis.

Colleges and universities are exempt from including chemicals used in laboratories which fall under the category of Release; however some of those are also categorized as Theft or Sabotage chemicals, in which case they must be reported. Information about the Rule relevant to colleges and universities is available on the Campus Safety, Health and Environmental Management Association (CSHEMA) website at [www.cshema.org](http://www.cshema.org). CSHEMA and the National Association of College and University Business Officers (NACUBO) have been closely following the rule and have posted guidance on everything from how to request a 60-day extension, to a list of the most common chemicals found on campuses on the CSHEMA site.

Respondents need to gather not only the types and quantities of chemicals, but also the types of storage containers used. Can one person pick the container up and carry it away? Is it in a tank on wheels that could be hitched to a vehicle? Is it in a permanent storage tank that could be sabotaged, used to ignite an explosion, or tampered with for deliberate release? Also, DHS

needs not only the street address, but the GPS coordinates for each identified chemical. In addition, DHS's analysis of your Top Screen submission, and subsequent classification under CFATS as either a high-risk/regulated facility or a low-risk/not-regulated facility, includes an examination of the surrounding community and neighboring businesses.

### Identifying security vulnerability and Planning For its security

Once a facility submits its Top Screen, DHS will analyze the results and determine whether or not the facility will be categorized as high-risk. Each facility will be electronically notified of the results, and facilities deemed high-risk will be assigned a Tier (1 to 4, with 1 being the highest risk). The owner/operator of facilities deemed high-risk will be provided with a list identifying which of the 19 Risk-Based Performance Standards (RBPS) they will need to address in a Security Vulnerability Assessment (SVA) of their site, due 90 days after notification. a look at the 19 risk-based Performance standards (rbPs) When DHS categorizes a facility as high-risk, they use the following 19 RBPS to communicate measures required to secure chemicals. It is up to the facility to interpret these and determine the best methods for implementation of and response to the identified RBPS:

1. Restrict Area Perimeter
2. Secure Site Assets
3. Screen and Control Access
4. Deter, Detect, Delay
5. Shipping, Receipt and Storage
6. Theft and Diversions
7. Sabotage
8. Cyber
9. Response
10. Monitoring
11. Training
12. Personnel Surety
13. Elevated Threats
14. Specific Threats
15. Reporting Significant Security Incidents
16. Incidents and Suspicious Activities
17. Officials and Organization
18. Records
19. Any RBPS specified by DHS

While requirements will vary at each specific site, it is likely that training and records will be on most lists.

### site security Plans (ssP)

The final step for each facility will be to design and implement a Site Security Plan (SSP), closing any security gaps identified in the SVA and taking into consideration the applicable RBPS. All facilities with multiple buildings, including colleges and universities, are given flexibility to define their boundaries as either the entire property or the individual building where the COI is stored.

The Rule expects facilities to develop a layered approach to security measures, with a written plan which describes each component and how it—in combination with other security measures—will address the identified RBPS. The owner/

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operator of the facility will also be required to maintain and update the SSP on a regular basis. Facilities covered by the Rule have flexibility in determining the methods they will use to meet the requirements. DHS will assess the adequacy of those security measures by reviewing the written SSP and conducting site visits.

**Protecting chemical-terrorism vulnerability information (cvi)**

Of course, businesses and institutions are concerned with keeping detailed chemical inventories and security vulnerability data private. Many states have “Right to Know” or “Sunshine” laws which require a facility to disclose to the public which chemicals are on site. Emergency response plans shared with local law enforcement and fire departments may also be available as public documents.

This Rule treats all such information, once submitted to DHS through the Top Screen, as Chemical-Terrorism Vulnerability Information (CVI). This information remains secure under the CVI designation, and is not subject to any “Right to Know” laws. In fact, DHS takes protecting CVI so seriously that anyone with access to the CVI must complete CVI training to ensure they understand the responsibility to protect what they know.

While there are significant penalties for non-compliance (up to \$25,000/day), the intent of this regulation is to improve chemical security, not collect fines. DHS is doing its best to assist institutions with the CFATS process. Their website ([www.dhs.gov/chemicalsecurity](http://www.dhs.gov/chemicalsecurity)) includes

many useful tools, such as a PDF file of the Top Screen questions and a Top Screen users manual, dozens of FAQ’s, CVI training, and contact information for the CSAT help desk. Institutions need to begin this process now in order to address the important issues of creating a database of current chemicals, identifying funding for security improvements, and maintaining confidentiality while developing site security plans in coordination with local public agencies. 

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