

The Office of Infrastructure Protection

National Protection and Programs Directorate
Department of Homeland Security

What is the Chemical Facility Anti-Terrorism Standards Regulation?

10th Annual Region 7 Safety Day

Kansas City, KS (Garden City Ammonia Program)

June 2018

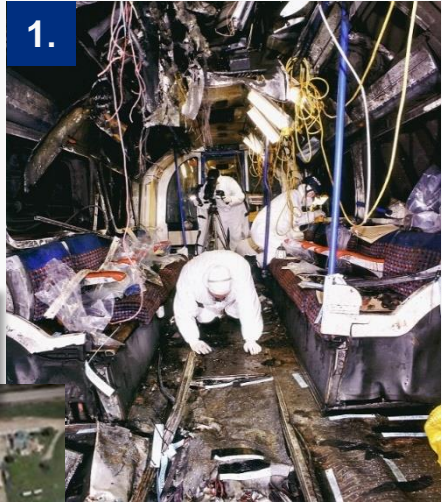


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Why Chemical Facility Security?

We face a persistent and evolving threat

- A successful attack on a chemical facility could potentially cause a significant number of deaths and injuries
- Certain chemical facilities possess materials that could be stolen or diverted and used for terrorist activities



1.

Death Toll in West, Texas, Fertilizer Explosion Rises to 15
NPR, April 23, 2013



2.

French Authorities Hold Suspect in Beheading and Explosion at Chemical Plant
NY Times, June 26, 2015



3.


“Compelling Confirmation” that Chlorine Gas Used as Weapon in Syria
OPCW, September 10, 2014

1. Subway Bombings, London, July 2005
2. Ammonium Nitrate, Texas, April 2013
3. Chlorine-tinged cloud of smoke rises from a bomb detonated by Iraqi army and Shi'ite fighters, Iraq, March 2015



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The CFATS Regulation



The CFATS program identifies and regulates high-risk chemical facilities to ensure they implement appropriate security measures to reduce the risk of a terrorist attack associated with more than 300 chemicals of interest (COI). If held in specified quantities and concentrations, these chemicals must be reported to DHS. Facilities that store, manufacture, or distribute COI at or above screening threshold quantities (STQ) are required to comply with the CFATS standards.

- CFATS follows a risk-based approach, allowing DHS to focus on high-risk chemical facilities in accordance with their specific level of risk



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Ensuring Chemical Facility Security



Statutory Authority

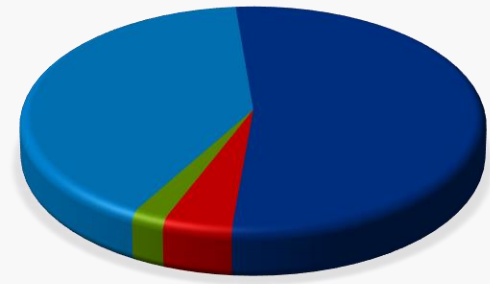
- In December 2006, Congress authorized the Department to regulate security at “high-risk” chemical facilities through the Appropriations Act of 2007
 - The Department developed the Chemical Facility Anti-Terrorism Standards (CFATS), 6 CFR Part 27, to implement this authority
- In December 2014, Congress passed the *Protecting and Securing Chemical Facilities from Terrorist Attacks Act of 2014* - 6 U.S. Code Chapter 1, Subchapter XVI: Chemical Facility Anti-Terrorism Standards (CFATS)
 - Extended the Department’s authority over security at high-risk chemical facilities



Essentials of the CFATS Program

- DHS uses information submitted through an online survey (Top-Screen) to determine if a facility is high-risk
 - High-risk (i.e., covered) facilities are placed in 4 tiers. Tier 1 represents the highest risk
- Covered facilities are required to develop and implement security plans that meet applicable risk-based performance standards (RBPS)
- More than 3,000 facilities have eliminated, reduced, or modified their holdings and/or processes and are no longer considered high-risk

Current
Population
Distribution



- Tier 1
- Tier 2
- Tier 3
- Tier 4



The CFATS Process

Facility may be tiered in or drop out

If the facility receives a tier...

Submit
Top-Screen

Receive a
Tier (1-4)
or be deemed
not high-risk

Provide a
**Security Vulnerability
Assessment (SVA)/Complete
Site Security Plan (SSP) or
Alternative Security Plan (ASP)**

Receive
Authorization
and an
**Authorization
Inspection**

Receive
Approval of
the SSP/ASP

**Implement
Planned
Measures and
Undergo Regular
Compliance
Inspections**

All facilities with COI

High-risk facilities

- DHS provides compliance assistance upon request at any stage of this process
- More than 150 Chemical Security Inspectors are available for support across the country



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The Chemicals of Interest List

Known as “**Appendix A**” to the CFATS Regulation

- “Appendix A” – a list of 300+ **chemicals of interest (COI)** which at **specific threshold quantities and concentrations** require reporting to the Department
- COI are categorized by **security issue**. Some COI fall under more than one security issue.

Chemical Facilities Come in All Shapes and Sizes



Chemical
Manufacturing



Oil Refineries



Food Processing



Wineries



Colleges and
Universities



Farm
Cooperatives



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Appendix A

Appendix A to Part 27. -- DHS Chemicals of Interest ¹

Chemicals of Interest (COI)	Synonym	Chemical Abstract Service (CAS) #	Release		Theft		Sabotage		Security Issue							
			Minimum Concentration (%)	Screening Threshold Quantities (in pounds)	Minimum Concentration (%)	Screening Threshold Quantities (in pounds unless otherwise noted)	Minimum Concentration (%)	Screening Threshold Quantities	Release -- Toxic	Release -- Flammables	Release -- Explosives	Theft -- CW/CWP	Theft -- WME	Theft -- EXP/IEDP	Sabotage/Contamination	
Acetaldehyde		75-07-0	1.00	10,000						X						
Hydrocyanic acid		105-07-8					ACG	APA								X

■ Definitions:

- **Chemical of Interest:** a chemical on Appendix A
- **Screening threshold quantity and concentration:** the minimum amount (in pounds) and minimum concentration of a chemical of interest that a facility must report to DHS
- **Security issue:** the way that a chemical of interest may be used to do harm
 - **Release:** toxic, flammable, or explosive chemicals that could do harm on-site if released
 - **Theft or diversion:** chemicals that, if stolen or diverted, could be misused as weapons or easily made into weapons to be used off site
 - **Sabotage:** chemicals that could cause harm if mixed with readily available materials prior to shipping (for example, if mixed with water.)



Deciphering Appendix A

Check minimum concentration % and screening threshold quantities that trigger reporting requirements

Check list for chemicals



Chemicals of Interest (COI)

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Acetaldehyde		75-07-0	1.00	10,000						X						
Acetone cyanohydrin, stabilized		75-86-5					ACG	APA								X
Acetyl bromide		506-96-7					ACG	APA								X
Acetyl chloride		75-36-5					ACG	APA								X
Acetyl iodide		507-02-8					ACG	APA								X
Acetylene	[Ethyne]	74-86-2	1.00	10,000							X					
Acrolein	[2-Propenal or Acrylaldehyde]	107-02-8	1.00	5,000					X							
Acrylonitrile	[2-Propenenitrile]	107-13-1	1.00	10,000						X						
Acrylyl chloride	[2-Propenoyl chloride]	814-68-6	1.00	10,000						X						
Allyl alcohol	[2-Propen-1-ol]	107-18-6	1.00	15,000					X							
Allylamine	[2-Propen-1-amine]	107-11-9	1.00	10,000						X						
Allyltrichlorosilane, stabilized		107-37-9					ACG	APA								X
Aluminum (powder)		7429-90-5			ACG	100									X	
Aluminum bromide, anhydrous		7727-15-3					ACG	APA								X
Aluminum chloride, anhydrous		7446-70-0					ACG	APA								X
Aluminum phosphide		20859-73-8					ACG	APA								X
Ammonia (anhydrous)		7664-41-7	1.00	10,000					X							



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Submitting Information

Chemical Security Assessment Tool (CSAT)

CSAT is a set of online applications.

These include:

- User Registration
- Top-Screen
- Security Vulnerability Assessment/Site Security Plan
- Personnel Surety Program



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CSAT 2.0
Chemical Security Assessment Tool



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Chemical Security Assessment Tool 2.0

Navigating CSAT 2.0 – The Enhanced Risk Tiering Engine

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CSAT 2.0
Chemical Security Assessment Tool

OMB No 1670-0007
Expiration Date: July 31, 2019
Version 2.0.00

Top-Screen Survey **CHEMICAL-TERRORISM VULNERABILITY INFORMATION (CVI)** 59 days left to complete

Exclusions
Facility Attributes
COI Selection
Validate and Submit
User Guide
Instructions

CFATS Excluded Facility

Q1.10.010 MTSA Exclusion

Is the facility regulated under the Maritime Transportation Security Act (MTSA) of 2002 (Public Law 107-295, 116Stat 2064)? If the facility possesses a chemical of interest (COI) in an amount at or above the applicable screening threshold quantity (STQ) in a portion of the facility that is not regulated by MTSA, that portion of the facility is not excluded and the facility must select "No". When answering the questions in this Top-Screen, the facility should only report a COI that is in portions of the facility not regulated by MTSA.

Yes
 No

Q1.10.020 Public Water Systems Exclusion

Is the facility a public water system, as that term is defined in Section 1401 of the Safe Drinking Act (42 U.S.C. 300f)? If the facility possesses a COI in an amount at or above the applicable STQ that is not used for the purpose of the excluded public water system, the facility must select "No." When answering the questions in this Top-Screen, the facility should only report a COI that is not used for the purposes of the excluded public water system.

Yes
 No



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Selecting Chemicals of Interest (COI)

Navigating the COI Search Function

The screenshot displays the CSAT 2.0 Web interface. On the left, a red navigation menu contains the following items: Exclusions, Facility Attributes, **COI Selection** (highlighted with a yellow arrow), Validate and Submit, User Guide, and Instructions. The main header shows 'Chemical Security Assessment Tool' and 'CHEMICAL-TERRORISM VULNERABILITY INFORMATION (CVI)'. The page title is 'Top-Screen Survey' and '59 days left to complete'. The main content area is titled 'Chemical of Interest (COI) Selection' and contains the following text: 'Q1.30.010 COIs at the Facility', 'Select all of the CFATS Appendix A chemicals at or above the Screening Threshold Quantity the facility possesses.', and a checkbox labeled 'Facility has no Chemicals of Interest (COIs) to report.' Below this is a search box labeled 'Chemicals of Interest' with a 'COI Search Box' placeholder and a 'clear' button. A yellow oval highlights the search box and the 'clear' button. To the right of the search box is a list of chemicals with their CAS numbers: Acetaldehyde (75-07-0), Acetone cyanohydrin, stabilized (75-86-5), Acetyl bromide (506-96-7), Acetyl chloride (75-36-5), Acetyl iodide (507-02-8), Acetylene ([Ethyne]) (74-86-2), Acrolein ([2-Propenal or Acrylaldehyde]) (107-02-8), Acrylonitrile ([2-Propenenitrile]) (107-13-1), Acrylyl chloride ([2-Propenoyl chloride]) (814-68-6), Allyl alcohol ([2-Propen-1-ol]) (107-18-6), and Allylamine ([2-Propen-1-amine]) (107-11-9). To the right of the list are navigation buttons: '>', '<', and '<<'. On the far right, there is a section labeled 'Facility Chemicals (0)' with an empty list area.

If you experience any difficulties during your Top-Screen submission make sure to watch the pre-recorded CSAT 2.0 Webinars for step by step instructions.

<https://share.dhs.gov/p7got8g596a>



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Protecting Information

Chemical-terrorism Vulnerability Information (CVI)

CVI is the information protection category used to ensure secure handling of certain sensitive CFATS-related information.

To access CVI, an individual must have passed CVI training and have a need-to-know.

<https://www.dhs.gov/cvi-authorized-user-training>



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What industries may have to report chemicals?

CFATS regulates facilities by chemical holdings, not by industry. There are high-risk facilities in a range of industries, including:

- Academia (College & Universities)
- Breweries
- Cold Chain/Refrigeration
- Fisheries and Hatcheries
- Food Processors and Co-Ops
- Healthcare (Hospitals & Providers)
- Industrial Equipment Manufacturing
- Laboratories
- Metal Service and Metal Merchants
- Mining
- Paints/Coatings
- Petrochemical Manufacturing
- Petroleum Refining/Oil Drilling
- Plastics
- Pulp and Paper
- Race Tracks
- Retail Storage and Distribution
- Semiconductors
- Wineries

Facilities are Excluded by Statute if:

- Regulated by the Nuclear Regulatory Commission
- Owned by the Departments of Defense or Energy
- They are public water systems or treatment works regulated under Federal water quality laws
- Regulated by the Maritime Transportation Security Act



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Risk-Based Performance Standards (RBPS)

RBPS-1 Restrict Area Perimeter



RBPS-8 Cyber



RBPS-10 Monitoring



RBPS-18 Records



If a facility is deemed to be high-risk, it is required to comply with the RBPS

- Rather than define specific security measures, DHS developed 18 Risk-Based Performance Standards (RBPS)
- Compliance with the RBPS will be tailored to fit each facility's circumstances, including tier level, security issues, and physical and operating environments



RBPS 9 - Response



Develop and exercise an emergency plan to respond to security incidents internally and with assistance of local law enforcement and first responders.

- Response focuses on the planning to mitigate, respond, and report incidents in a timely manner between facility personnel, first responders, and law enforcement
- Local Emergency Planning Committees (LEPC) may be contacted by local Chemical Inspectors in order to verify the facilities have developed and implemented plans to execute for emergency notification, response, evacuation, etc.



RBPS 9 – Response (cont.)

What are some possible facility security components related to RBPS-9?

- Crisis Management Plan
- Communication Systems
- Process Safeguards
- Outreach



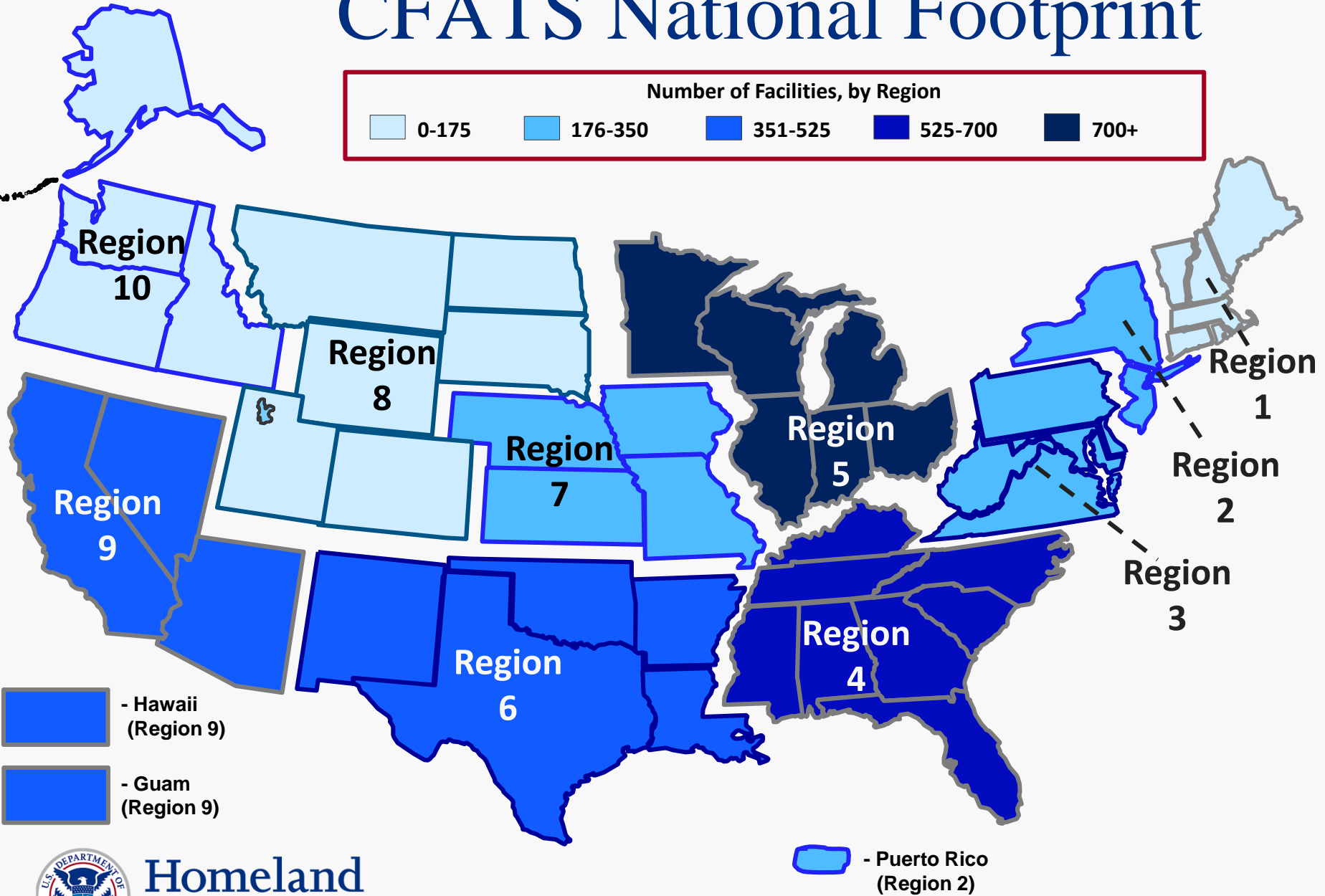
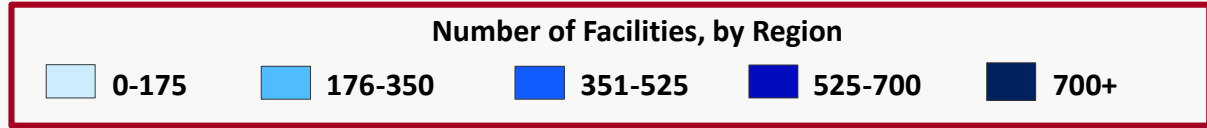
What are some activities a facility may want to include in its Crisis Management Plan?

- Contingency Plans
- Continuity of Operations Plan
- Emergency Response
- Post-incident Security
- Evacuation
- Notification Control
- Re-entry
- Security Response



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CFATS National Footprint



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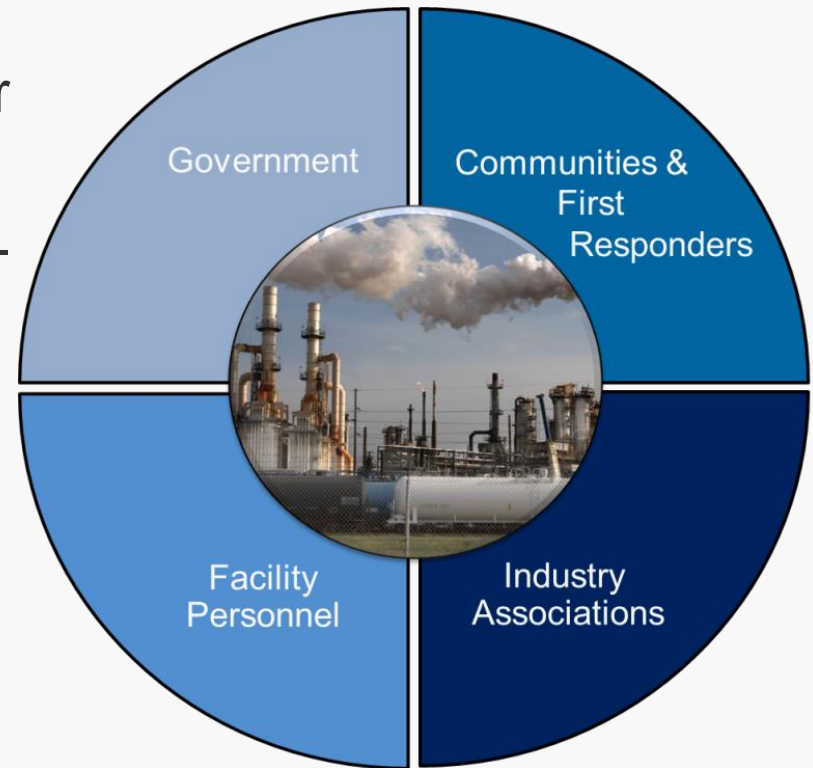
What penalties exist for non-compliance?

- DHS's focus is on security, and the Department has a strong preference for working with facilities to help bring them into compliance
- DHS has the authority to fine a facility if it does not meet its regulatory obligations
 - For example, a facility that does not register for the CFATS program and is found to possess COI above STQ may be subject to fines.
- DHS has the authority to fine facilities up to \$33,333 per day for each day the violation continues
- DHS also reserves the right to issue an Order to Cease Operations for a facility's continuous failure to comply or for other very serious violations



Spreading the Word

- DHS continues to expand outreach efforts and reach deeper into communities
 - Seeking to identify potentially non-compliant facilities
 - Increasing interagency coordination
 - Involving private and public state-level organizations



Chemical Facility Security & Safety Working Group



Five Thematic Areas

- Strengthening community planning and preparedness
- Enhancing Federal operational coordination
- Improving data management
- Modernizing policies and regulations
- Incorporating stakeholder feedback and developing best practices



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Ongoing Interagency Efforts

Improving Chemical Facility Safety and Security

- Sharing data to identify potentially non-compliant facilities
 - The sharing of information and a cross-walk of lists with EPA, ATF, and certain state agencies
 - Enhanced outreach efforts, especially to certain populations
 - Engaging State and local officials
- Rulemaking efforts:
 - Environmental Protection Agency (EPA) Risk Management Plan (RMP)
 - Occupational Safety & Health Administration (OSHA) Process Safety Management
 - CFATS Notice of Proposed Rulemaking (NPRM)
- Gathering and sharing best practices



Chemical Facility Security & Safety Working Group Available Resources

<https://www.osha.gov/chemicalexecutiveorder/>

EXECUTIVE ORDER 13650



On August 1, 2013, the President issued Executive Order 13650 - Improving Chemical Facility Safety and Security (EO). The EO directs the Department of Homeland Security (DHS), the Environmental Protection Agency (EPA), the Department of Labor (DOL), the Department of Justice (DOJ), the Department of Agriculture (USDA), and the Department of Transportation (DOT) to establish a Chemical Facility Safety and Security Working Group to improve chemical facility safety and security in coordination with State regulators; State, local, and tribal emergency responders; chemical facility owners and operators; and local and tribal communities (here after referred to as stakeholders). This fact sheet provides an update to the December 30, 2013, Progress Fact Sheet on progress to address improvements in chemical facility safety and security, specifically stakeholder input, operational coordination with State, local, and Tribal partners, and efforts to modernize policies, programs, and requirements. Through this Progress Fact Sheet the Working Group is specifically inviting public input on actions described herein to improve stakeholder coordination.



Stakeholder Input

At stakeholder meetings and listening sessions organized by the Working Group, agencies have continued to solicit feedback, best practices, and suggestions from interested stakeholders. The Working Group recently completed its twelfth listening session. The Working Group web page, www.osha.gov/chemicalexecutiveorder, is a one-stop location that provides information and accepts comments from interested parties. Stakeholders also can submit written comments through email at eo.chemical@dhs.gov or via the [regulations.gov](http://www.regulations.gov) website (<http://www.regulations.gov/#/documentDetail;D=DHS-2013-0075>).

Operational Coordination with State, Local, and Tribal Partners

Hazardous chemicals are located in many types of facilities and areas. Communities need to know where hazardous chemicals are used and stored; how to assess the risks associated with those chemicals; and how to ensure community preparedness for accidents or incidents that may occur. Many facility owners and operators rely on local resources for emergency preparedness and response, including first responders, emergency medical services, and hazardous materials response teams. It is important for facility owners and operators and their communities to foster strong relationships with one another and maintain a robust, open dialogue to help ensure chemical safety and security. Therefore, the EO directed the Working Group to develop a plan to support and further enable efforts by Federal regulators and stakeholders to work together to improve chemical safety and security.

February 2014

FactSheet

Actions to Improve Chemical Facility Safety and Security

Responding to recent catastrophic chemical facility incidents in the United States, President Obama issued Executive Order (EO) 13650 "Improving Chemical Facility Safety and Security" on August 1, 2013. The focus of the EO is to reduce risks associated with hazardous chemical incidents to owners and operators, workers, and communities by enhancing the safety and security of chemical facilities. A Federal Interagency Working Group led by the Assistant Secretary of Homeland Security for the Office of Infrastructure Protection (DHS); Assistant Secretary of Labor for the Occupational Safety and Health Administration (OSHA); and the Assistant Administrator of the Environmental Protection Agency's (EPA) Office of Solid Waste and Emergency Response, in coordination with the Department of Justice (DOJ), Bureau of Alcohol, Tobacco, and Firearms (ATF), Department of Transportation (DOT), and the Department of Agriculture (USDA) oversees chemical facility safety and security.

Through the analysis of the current operating environment, existing regulatory programs and stakeholder feedback, a consolidated Federal Action Plan was created to address five elements:

- Strengthening community planning and preparedness
- Enhancing Federal operational coordination
- Improving data management
- Modernizing policies and regulations
- Incorporating stakeholder feedback and developing best practices

The Working Group has implemented the following actions since the release of the EO:

Strengthening Community Planning and Preparedness

The Interagency Working Group, in collaboration with state, local, tribal, and territorial governments and private sector partners, is working to develop, re-energize, and enhance programs to assist the following: State Emergency Response Commissions (SERC), Tribal Emergency Response Commissions (TERC), Local Emergency Response Commissions (LERC), and Tribal Emergency Planning Committees (TEPC). This is critical to improving chemical facility safety and security across the country. Actions include:

- EPA expects to release an on-line training module on key requirements for SERC/TERCs and LERC/TEPCs under the Emergency Planning and Community Right-to-Know Act (EPCRA) this summer. EPA also hosted 32 Local Leadership Planning Committee (LEPC) workshops from May - September 2014. There are over 300,000 facilities covered by EPCRA, making these efforts a vital component of our work to strengthen chemical facility safety throughout the nation.
- DHS/FEMA is working with the 10 counties with the highest combination of Chemical Facility Anti-Terrorism Standards (CFATS) and Risk Management Program (RMP) facilities to ensure they are using the Integrated Public Alert and Warning System (IPAWS), which provides public notification of incidents at local chemical facilities.
- ATF is transmitting explosives contacts to SERCs to establish greater relationships and facilitate better communication between local responders and facilities, assist responders in discussing explosive storage information, and enable authorities to develop training for emergencies involving explosives plants and storage facilities. DHS has created a list of government-approved training courses for first responders and emergency planners which are available on the [EO website](#).



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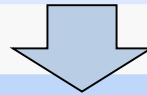
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What Should You Do Next?

1

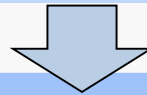
Visit *DHS.gov* to access Appendix A

<https://www.dhs.gov/publication/cfats-coi-list>



2

If your facility manufactures, stores, or distributes any of the chemicals of interest (COI) in Appendix A at or above the minimum concentrations and screening threshold quantities, you must submit a Top-Screen



3

Submit a Top-Screen

<https://csat-registration.dhs.gov/>



Resources



- **Contact the CFATS Help Desk** with questions. The Help Desk can be reached at **1-866-323-2957** or at csat@hq.dhs.gov.



- Watch the webinars on [registering](#) and filling out the [CFATS Top-Screen](#), available online.



- **Learn more about the program** at www.dhs.gov/chemicalsecurity. Resources include the regulation and list of chemicals of interest, frequently asked questions, and more on how facilities' information is protected as Chemical-terrorism Vulnerability Information.





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For more information visit:
www.dhs.gov/chemicalsecurity

CFATS@hq.dhs.gov