CHEMICAL FACILITY ANTI-TERRORISM STANDARDS (CFATS)
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
Ensuring Chemical Facility Security

Statutory Authority

- In December 2006, Congress authorized DHS to regulate security at “high-risk” chemical facilities

- The Department developed the Chemical Facility Anti-Terrorism Standards (CFATS), 6 CFR Part 27, to implement this authority

- In December 2014, Congress extended the Department’s authority through 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)
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.
“Appendix A” – a list of 300+ chemicals of interest (COI) at specific threshold quantities and concentrations that require reporting to the Department
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
Rather than prescribe 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.
Improved Tiering Methodology and CSAT 2.0

- DHS released the enhanced tiering methodology and Chemical Security Assessment Tool (CSAT) 2.0 in Fall 2016.

- The enhanced tiering methodology accounts for the relevant elements of risk:
  ✓ Threat
  ✓ Vulnerability
  ✓ Consequence

- CSAT 2.0 consists of a revised Top-Screen, Security Vulnerability Assessment, and SSP
  - All facilities with chemicals of interest (COI) at or above screening threshold quantity (STQ) have to resubmit a new Top-Screen
## Tiering Factors

<table>
<thead>
<tr>
<th>Release</th>
<th>Consequence</th>
<th>Vulnerability</th>
<th>Threat</th>
</tr>
</thead>
</table>
| ▪ Topography surrounding facility  
▪ Surrounding population  
▪ COI toxicity/flammability/explosive energy  
▪ COI quantity and concentration  
▪ COI storage: container location, temperature, pressure rating,  
▪ COI secondary containment area | ▪ Motor vehicle accessibility to COI  
▪ Pressure rating of a storage container  
▪ Storage location  
▪ Underground earth formation | ▪ Specific chemical of interest  
▪ Facility Type  
▪ COI location Type |
| Theft & Diversion | ▪ COI quantity and concentration  
▪ COI toxicity/explosive energy  
▪ COI storage: types of transportation packing  
▪ CW precursor: toxicity of a finished chemical weapon  
▪ IED precursor: explosive energy of a finished explosive | ▪ COI container size and portability  
▪ Facility shipment of COI (diversion) | ▪ Specific chemical of interest  
▪ Mode of shipment |
| Sabotage | ▪ COI quantity and concentration  
▪ COI characteristics: toxicity of the reaction product  
▪ Mode of shipping | ▪ Not shipped off site | ▪ Mode of shipment |
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 COI that is not used for the purposes of the excluded public water system.

- Yes
- No
COI Search Function

Chemical of Interest (COI) Selection

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.

Facility has no Chemicals of Interest (COIs) to report.

Chemicals of Interest

- Acetaldehyde (75-07-0)
- Acetone cyanohydrin, Solutions (75-09-5)
- Acetyl bromide (506-96-7)
- Acetyl chloride (75-36-5)
- Acetyl iodide (507-02-8)
- Acetylene (Ethyne) (74-86-2)
- Acrolein ([2-Propanol or Acrylaldehyde]) (107-02-8)
- Acrylonitrile ([2-Propenenitrile]) (107-13-1)
- Acryl chloride ([2-Propanoyl chloride]) (814-68-6)
- Allyl alcohol ([2-Propan-1-ol]) (107-18-6)
- Allylamine ([2-Propan-1-amine]) (107-11-9)
Top-Screen, cont.

Place circle so that it contains largest amount of Release-Toxic COI

*Phosphorus trichloride*

Click on the map above to place the circle so it contains the largest quantity of Phosphorus trichloride. After placing the circle click "Lock Circle" to finalize.
Top-Screen, cont.

Attributes, Second circle

Add COI Details

- Name and Description of Storage
  - Tanks 1-6

- Quantity (lbs)
  - 40,000

- Concentration Range (%)

- Physical State

- Process/Storage Temperature (°F)
  - In cases where process/storage temperature is at or near ambient temperature, report the temperature as 68 °F

- Process/Storage Pressure (psig)
  - In cases where typical process/storage pressure is ambient (e.g., atmospheric storage tanks),

Table:

<table>
<thead>
<tr>
<th>Name and Description</th>
<th>Quantity (lbs)</th>
<th>Concentration (%)</th>
<th>Physical State</th>
<th>Temp (°F)</th>
<th>Pressure (psig)</th>
<th>Design Pressure / MAWP (psig)</th>
<th>Location Type</th>
<th>Secondary Containment (t²/ft²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tanks 1-6</td>
<td>40,000</td>
<td>80% to &lt; 90%</td>
<td>Liquid</td>
<td>0</td>
<td>100</td>
<td>50 psig &lt; 100 psig</td>
<td>Above grade and not covered with soil</td>
<td>Area: 1,000 Capacity: 10,000</td>
</tr>
<tr>
<td>Bulk Storage</td>
<td>35,000</td>
<td>50% to &lt; 60%</td>
<td>Liquid</td>
<td>68</td>
<td>0</td>
<td>&lt; 15 psig</td>
<td>Above grade and not covered with soil</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Appendix A – Ammonia

- Two forms of ammonia are regulated under the CFATS program.
  - **Ammonia** with a concentration of 20% or greater is regulated for *Release-Toxic* concern with a screening threshold quantity (STQ) of 20,000 lbs.
  - **Anhydrous Ammonia** is also regulated for *Release-Toxic* concern with a STQ of 10,000 lbs. at 1% concentration or greater

- Regulated under the Security Issue of *Release-Toxic*, ammonia is a concern because a deliberate release at a facility could cause significant harm to both those onsite and in the surrounding area

- Any facility that stores, manufactures, or distributes ammonia at the minimum STQ or higher must report their holdings by submitting a Top-Screen

*Access Appendix A to learn more:* [www.dhs.gov/appendix-a-chemicals-interest-list](http://www.dhs.gov/appendix-a-chemicals-interest-list)
How should a facility report anhydrous ammonia that undergoes various changes in temperature, pressure, and physical state within a refrigeration system?

The total mass quantity within the system and the physical state, temperature, and pressure of the ammonia as it exists in the vessel(s) downstream of the condenser(s) should be reported.
Ammonia Security Measures

- A CFATS tiered facility is required to develop a **Site Security Plan (SSP)** tailored to its assigned tier, security concerns for which it is tiered, and business practices.

- Security measures outlined in the **SSP** must satisfy all applicable **risk-based performance standards (RBPS)**. Measures that may apply to facilities at risk of ammonia release include:
What is an Authorization Inspection?

- Authorization Inspections are conducted at covered facilities to verify the facility content listed in the Site Security Plan (SSP) or Alternative Security Program (ASP) is accurate and that existing and planned measures satisfy the risk-based performance standards (RBPS).

- DHS sends the facility a Letter of Authorization through CSAT

- A Chemical Security Inspector will reach out to the facility to discuss:
  - A date and time for the inspection
  - The scope of the visit
  - The facility personnel required to be present
  - Required documents to be made available
  - Chemical-terrorism Vulnerability Information (CVI) considerations
  - Protective equipment and safety requirements
What is a Compliance Inspection?

- A Compliance Inspection (CI) is conducted as part of the recurring inspection process after a Letter of Approval has been issued to ensure the facility continues to implement its approved security plan.

  - Compliance Inspections are conducted:
    - To ensure that both existing and planned security measures that are identified in the approved SSP or ASP continue to be implemented fully and on schedule.
    - To ensure that the equipment, processes, and procedures described in the SSP or ASP are appropriate and sufficient to meet the established risk-based performance standards.
    - To ensure that required corrective actions have been implemented and are sustainable.
    - To discuss other issues that have come up since the Letter of Approval.
Available Resources

**Outreach:** DHS outreach for CFATS is a continuous effort to educate stakeholders on the program.
- To request a CFATS presentation or a CAV, submit a request through the program website [www.dhs.gov/chemicalsecurity](http://www.dhs.gov/chemicalsecurity), or email DHS at CFATS@hq.dhs.gov.

**CFATS Help Desk:** Direct questions about the CFATS program to the CFATS Help Desk.
- Hours of Operation are Mon. – Fri. 8:30 AM – 5:00 PM (ET)
- CFATS Help Desk toll-free number 1-866-323-2957
- CFATS Help Desk email address csat@dhs.gov

**CFATS Web Site:** For CFATS Frequently Asked Questions (FAQs), CVI training, and other useful CFATS-related information, please go to [www.dhs.gov/chemicalsecurity](http://www.dhs.gov/chemicalsecurity)
Hometown Security

Security starts here.

connect  plan  train  report

For more information, visit www.dhs.gov/hometown-security
* You may choose to incorporate any of the additional slides below based on relevance to your audience.
DHS is committed to promoting chemical security awareness through outreach and fostering relationships within communities. CFATS continually develops new outreach resources in support of its outreach efforts and commitment to provide stakeholders with informative resources, including:

- CFATS Overview Fact Sheet
- CFATS First Steps Fact Sheet
- Top Regulated COI Fact Sheet
- Appendix – A Trifold
- Shipping and Receiving COI Flyer
- RBPS Specific Fact Sheets
- Industry Specific Fact Sheets
**Current CFATS Population**

<table>
<thead>
<tr>
<th>Tier</th>
<th>Currently Covered Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>164</td>
</tr>
<tr>
<td>2</td>
<td>78</td>
</tr>
<tr>
<td>3</td>
<td>1,384</td>
</tr>
<tr>
<td>4</td>
<td>1,729</td>
</tr>
<tr>
<td>Total</td>
<td>3,355</td>
</tr>
</tbody>
</table>

**Current Population Distribution**

- Tier 1: 5%
- Tier 2: 2%
- Tier 3: 41%
- Tier 4: 52%

**Currently Covered Facilities**: 3,355

- **Currently Authorized Facilities**: 454
- **Currently Approved Facilities**: 2,723
- **Currently* Tiered Facilities**: 178

*Facilities labeled as Currently Tiered reflect facilities that have received a tier but are awaiting Authorization*

All statistics are current as of December 2018.
Agricultural Production Facilities Extension

- The extension applies to:
  - Farms (e.g., crop, fruit, nut, and vegetable)
  - Ranches and rangeland
  - Poultry, dairy, and equine facilities
  - Turf grass growers
  - Golf courses
  - Nurseries
  - Floricultural operations
  - Public and private parks

- DHS is considering whether a modification to the Top-Screen requirement for agricultural production facilities might be warranted

- In January 2008, DHS indefinitely extended the Top-Screen for farmers and other agricultural facilities that use chemicals of interest (COI) for certain agricultural purposes
Agricultural Production Facilities Extension

- The extension does **not** apply to chemical distribution facilities or commercial chemical application services.

- It applies only to agricultural production facilities that use COI in preparation for the treatment of crops, feed, land, livestock (including poultry) or other areas of an agricultural production facility or during application to or treatment of crops, feed, land, livestock (including poultry) or other areas of the facility.

- Therefore, if your facility possesses COI at or above the screening threshold quantity for any other purpose, your facility is **not** eligible to claim the CFATS Top-Screen extension and you must comply with the CFATS regulation by submitting a Top-Screen
Active Shooter Preparedness

- Preparedness
  - Ensure that your facility has at least two evacuation routes
  - Post evacuation routes in conspicuous locations throughout your facility
  - Include local law enforcement and first responders during training exercises
  - Encourage law enforcement, emergency responders, SWAT teams, K-9 teams, and bomb squads to train for an active shooter scenario at your location

1. How you should react when law enforcement arrives:
   - Remain calm, and follow officers’ instructions
   - Immediately raise hands and spread fingers
   - Keep hands visible at all times
   - Avoid making quick movements toward officers such as attempting to hold on to them for safety
   - Avoid pointing, screaming and/or yelling
   - Do not stop to ask officers for help or direction when evacuating; just proceed in the direction from which officers are entering the premises

2. Information you should provide to law enforcement or 911 operator:
   - Location of the victims and the active shooter
   - Number of shooters, if more than one
   - Physical description of shooter/s
   - Number and type of weapons held by the shooter/s
   - Number of potential victims at the location
Active Shooter Response

**1. RUN**
- Have an escape route and plan in mind
- Leave your belongings behind
- Evacuate regardless of whether others agree to follow
- Help others escape, if possible
- Do not attempt to move the wounded
- Prevent others from entering an area where the active shooter may be
- Keep your hands visible
- Call 911 when you are safe

**2. HIDE**
- Hide in an area out of the shooter’s view
- Lock door or block entry to your hiding place
- Silence your cell phone (including vibrate mode) and remain quiet

**3. FIGHT**
- Fight as a last resort and only when your life is in imminent danger
- Attempt to incapacitate the shooter
- Act with as much physical aggression as possible
- Improvise weapons or throw items at the active shooter
- Commit to your actions . . . your life depends on it

To learn more visit [https://www.dhs.gov/active-shooter](https://www.dhs.gov/active-shooter)