



2021

CHEMICAL SECURITY SEMINARS

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#ChemicalSecurity

CHEMICAL SECURITY SEMINARS

Voluntary Chemical Security Initiatives: CISA ChemLock

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CHEM  LOCK

Setting the Stage: Genesis of an Idea



Where do we see gaps in the U.S.'s current approach to chemical security?



How can we leverage our expertise and resources to address them?



Addressing the Challenge

Challenge:

How can CISA best help regulated and unregulated chemical security partners to take additional voluntary steps to reduce the risk of terrorist attacks involving dangerous chemicals?

Our solution:

A suite of security risk management products, technical services, and incentives that **facilitate** and **motivate** meaningful action by entities that manufacture, store, distribute, transport, and sell dangerous chemicals.



CHEM LOCK

Know your **chemicals**.

Lock in your security posture.

Intended for Facilities with Dangerous Chemicals



Toxics and Toxic Precursors

Can cause death or serious injury through inhalation

▶ Examples: Ammonia, chlorine



Flammables

Can create a vapor cloud that explodes

▶ Examples: Butane, propane



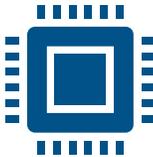
Explosives and Explosive Precursors

Can be used to create an explosive device

▶ Examples: Ammonium nitrate, hydrogen peroxide



Chemical Security Is Not Just for Chemical Industry

 <p>Colleges and Universities</p>	 <p>Cold Chain/ Refrigeration</p>	 <p>Fisheries and Hatcheries</p>	 <p>Energy Utilities</p>	 <p>Agricultural Production</p>
 <p>Laboratories</p>	 <p>Mining</p>	 <p>Industrial Manufacturing</p>	 <p>Paints and Coatings</p>	 <p>Plastics Manufacturing</p>
 <p>Pulp and Paper</p>	 <p>Semiconductor Manufacturing</p>	 <p>Motor Racing</p>	 <p>Warehouses/ Distribution</p>	 <p>Water Treatment</p>



Four Pillars of ChemLock



On-site assessments
and assistance



ChemLock resources



Exercises and drills



Training courses

cisa.gov/chemlock



On-Site Assessments and Assistance



Which security measures will best enhance security at your facility?

- Risk management processes
- Cyber and physical security gap assessment
- Assessment of existing security measures
- Recommendations for adding or enhancing security measures
- Assistance in developing tailored security plans



Facilities can request on-site assessments and assistance at [cisa.gov/chemlock](https://www.cisa.gov/chemlock).

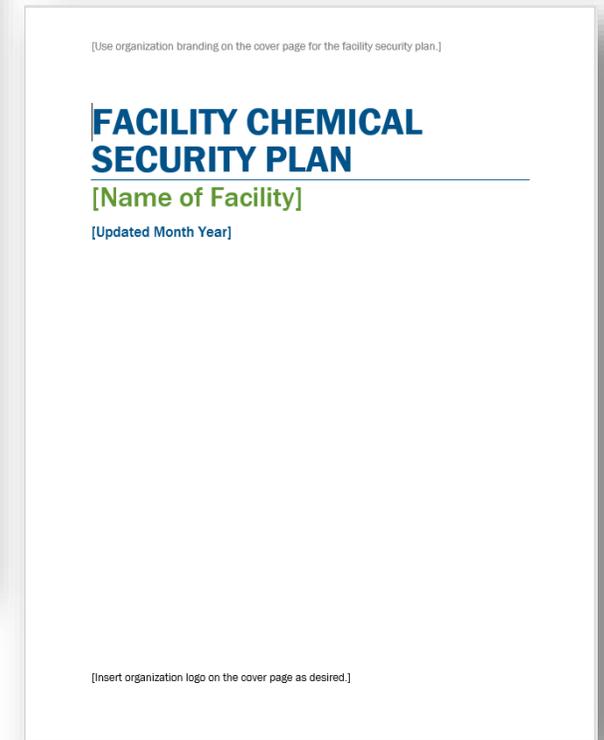
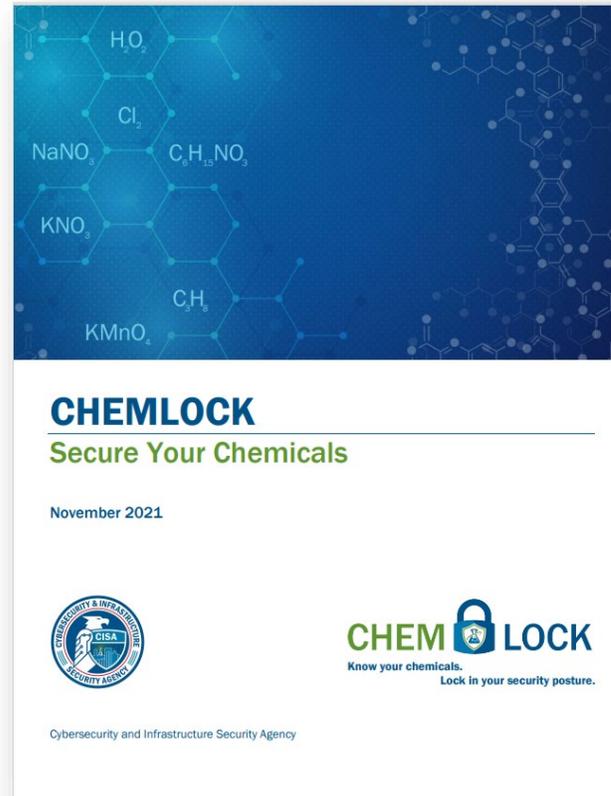
ChemLock Publications



Guidance Documents:

Helps facilities build a step-by-step chemical security plan tailored to their business model and unique circumstances

- ChemLock: Secure Your Chemicals
- ChemLock: Secure Your Chemicals Facility Plan Template
- Secure Your Chemicals: Before, During, and After a Pandemic



ChemLock Publications (cont.)



Fact Sheets: Focuses on a particular aspect of chemical security

- ChemLock Overview
- ChemLock: Reporting Suspicious Activities and Security Incidents
- ChemLock: Chemical Product Stewardship
- ChemLock: Drone Activity
- ChemLock: Chemical Security Considerations for No-Notice Events
- ChemLock: Chemical Security Self-Assessment
- ChemLock: Security on a Budget



ChemLock: Chemical Security on a Budget

Overview

Whether a small business or an international company, everyone who interacts with dangerous chemicals has a role to play in understanding the risk and taking collective action to prevent chemicals from being weaponized by terrorists. The Cybersecurity and Infrastructure Security Agency's (CISA) ChemLock program is a completely voluntary program that provides facilities that possess dangerous chemicals no-cost services and tools to help them better understand the risks they face and improve their chemical security posture in a way that works for their business model. This resource highlights some simple, effective, and cost-efficient actions to enhance a facility's security posture.

Security Goals

When considering how to optimize chemical security at your facility, it is important to start with an assessment of the different threats and hazards that may affect your facility, the vulnerability of your facility to an attack, and the consequences if the threat were to occur. For example, where are dangerous chemicals located, who has access to them, and how difficult are they to access or remove? Once these risks are assessed, facilities can apply a holistic approach to improve security measures using five security objectives.

1. Can you **DETECT** an attack or suspicious activity?
2. Can you **DELAY** the adversary?
3. Are you able to **RESPOND** in a timely manner?
4. Are you protecting your **CYBER** assets?
5. Do you have **POLICIES, PLANS, and PROCEDURES** to implement your plan and security measures?

Examples of Effective, Cost-Efficient Security Measures

Detection

- Explore opportunities for low-cost video monitoring systems and alarms.
- Train facility personnel on identifying and reporting suspicious activity.
- Develop an inventory control process to routinely check your chemical holdings, including:
 - Maintaining an inventory of quantity and location(s) for each chemical on site.
 - Monitoring frequency of access by authorized personnel.
 - Identifying the process for tracking receipts and chemical shipments as applicable.
- Ensure adequate lighting to deter and detect intrusion attempts.

Delay

- Consider perimeter and asset barriers that delay intruders and increase time for detection and response.
- Store smaller, portable containers of chemicals in cages or defined rooms with secure doors requiring specific keys, access cards, or keypad codes.
- Consider vehicle identification measures for vehicles to access the premises.
- Ensure access points are locked when not in use or manned.

CISA | DEFEND TODAY, SECURE TOMORROW

cisa.gov/chemlock | ChemLock@cisa.dhs.gov | [linkedin.com/company/cisa.gov](https://www.linkedin.com/company/cisa.gov) | [@CISAgov](https://twitter.com/CISAgov) | [@cyber](https://twitter.com/cyber) | [@uscert_gov](https://twitter.com/uscert_gov) | [Facebook.com/CISA](https://www.facebook.com/CISA) | [@cisagov](https://www.instagram.com/cisagov)

ChemLock Publications (cont.)



Flyers: Brings general awareness to chemical threats and need for chemical security measures

- Know Your Chemicals
- Secure Your Chemicals: Chemical Threats

Toolkits: Provides variety of resources to help facilities evaluate chemical security and preparedness

- In development



KNOW YOUR CHEMICALS

Chemicals are critical to our economy, national security, and public health. But in the wrong hands, dangerous chemicals can be weaponized by terrorists.



- ▶ What is your facility's security posture?
- ▶ Do you know if your facility possesses dangerous chemicals that could be weaponized by terrorists?
- ▶ What security does your facility have in place to prevent chemicals being weaponized?

Chemical security is national security.

The Cybersecurity and Infrastructure Security Agency's (CISA) ChemLock program is a completely voluntary program that provides facilities that possess dangerous chemicals no-cost services and tools to help them better understand the risks they face and improve their chemical security posture in a way that works for their business model.

CHEM LOCK
Know your chemicals.
Lock in your security posture.

Learn more at cisa.gov/chemlock.

Exercises and Drills



- CISA Tabletop Exercise Packages (CTEPs), drills, and general materials to help conduct exercises tailored to chemical security
 - Active Shooter
 - Drone Threat
 - Cyberattacks
 - Fire as a Weapon
 - Active Threat Communication
 - Complex Coordinated Attack
 - Edged Weapon
 - Major Earthquake
 - Vehicle Ramming
 - Improvised Explosive Device
 - Vehicle-Borne Improvised Explosive Device
 - Theft and Diversion
 - Insider Threat
 - Chemical Release/Spill
 - Civil Unrest



Facilities can request live exercise that are tailored to the needs and requests of the participating facility at cisa.gov/chemlock.

Training Courses



ChemLock Training 1 – Why Chemical Security?

An introductory course that provides an overview to chemical security and identifies key components for chemical security awareness.

ChemLock Training 2 – Secure Your Chemicals: Planning

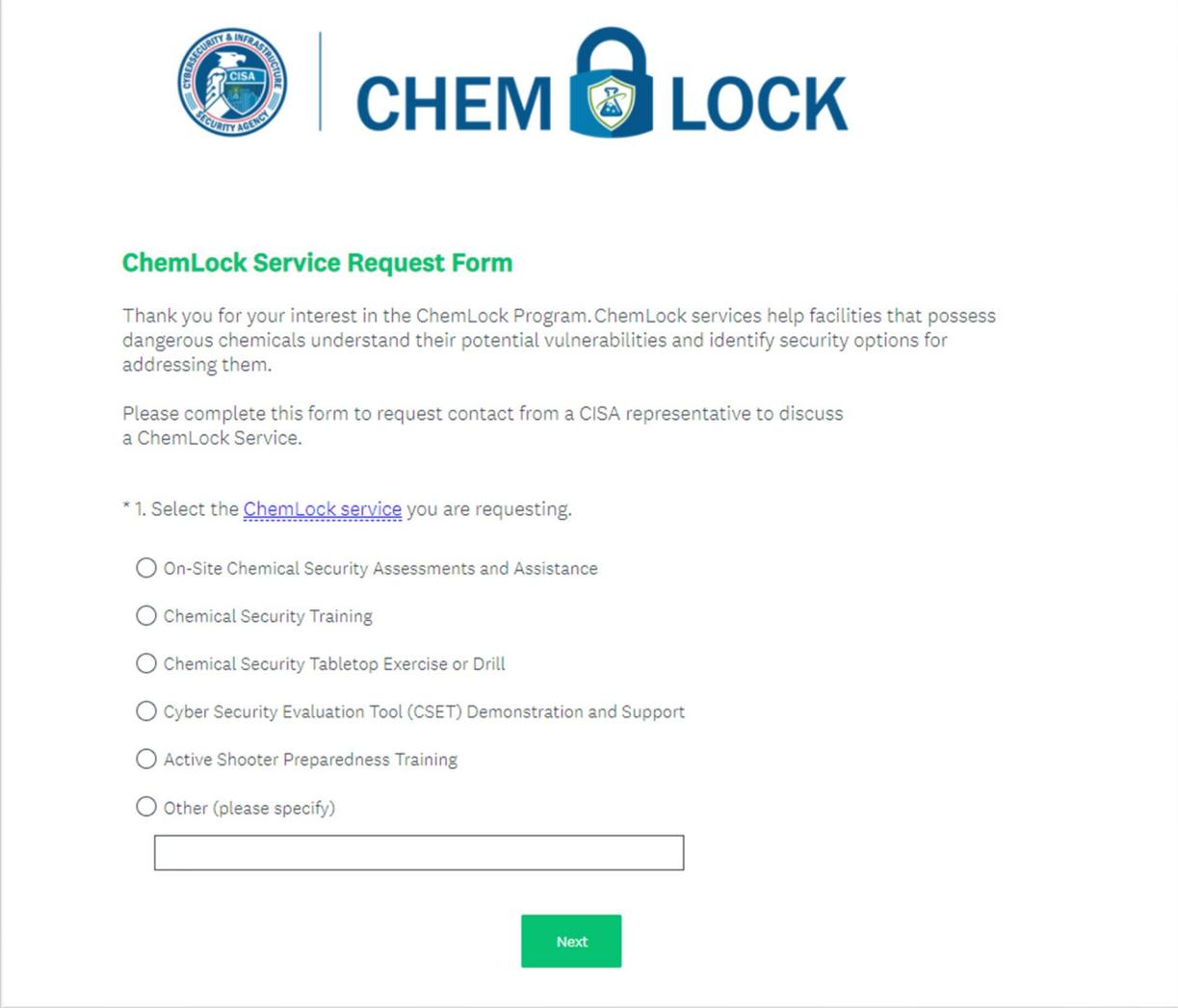
An in-depth course that:

- ▶ Provides an overview of the ChemLock: Secure Your Chemicals resource
- ▶ Identifies elements of a security plan, examples, lessons learned, and best practices
- ▶ Walks through how to create a tailored, scalable security plan



How Do I Sign Up for a ChemLock Service?

- Visit cisa.gov/chemlock
- Fill out our short service request form
- CISA will contact you to follow up



The screenshot shows the "ChemLock Service Request Form" page. At the top left is the CISA logo, and at the top right is the "CHEM LOCK" logo with a padlock icon. The main heading is "ChemLock Service Request Form" in green. Below this is a paragraph: "Thank you for your interest in the ChemLock Program. ChemLock services help facilities that possess dangerous chemicals understand their potential vulnerabilities and identify security options for addressing them." Another paragraph follows: "Please complete this form to request contact from a CISA representative to discuss a ChemLock Service." Below that is a question: "* 1. Select the [ChemLock service](#) you are requesting." There are six radio button options: "On-Site Chemical Security Assessments and Assistance", "Chemical Security Training", "Chemical Security Tabletop Exercise or Drill", "Cyber Security Evaluation Tool (CSET) Demonstration and Support", "Active Shooter Preparedness Training", and "Other (please specify)". Below the "Other" option is a text input field. At the bottom right is a green "Next" button.

How Does ChemLock Relate to CFATS?

- The ChemLock program is NOT a pathway to regulation under CFATS
- Participation in any portion of CISA's ChemLock program does not replace any reporting or compliance requirements under CISA's Chemical Facility Anti-Terrorism Standards (CFATS) regulation (6 CFR part 27).
- Some ChemLock services—such as on-site chemical security assessments or assistance—are only available to facilities that are not high-risk facilities covered under CFATS.
- Some ChemLock activities may fulfill CFATS requirements, depending on your specific security plan.



ChemLock Long-Term Project Vision



ChemLock Tools and
Services

- Launched 2021
- Can be selected a la carte
- Open to both CFATS and non-CFATS facilities

ChemLock
Membership
Program

- **Proposed** program projected for 2023 or beyond
- Offers tangible incentives to facilities that complete activities and adopt security measures. Incentives would be leveled commensurate to the activity completed/security adopted, and the program would require enrollment and verification.
- Open to CFATS and non-CFATS facilities who meet certain criteria of possessing dangerous chemicals



CHEM LOCK

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Questions?

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