

Chemical Facility Anti-Terrorism Standard (C-FATS) Compliance

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Background

Anti-terrorism security requirements The Department of Homeland Security (DHS) issued the Chemical Site Anti-Terrorism Standard (C-FATS) to minimize the potential threat of dangerous chemicals being used by terrorists. The [C-FATS Interim Final Rule \(http://a257.g.akamaitech.net/7/257/2422/01jan20071800/edocket.access.gpo.gov/2007/E7-6363.htm\)](http://a257.g.akamaitech.net/7/257/2422/01jan20071800/edocket.access.gpo.gov/2007/E7-6363.htm) gave DHS authority to impose security regulations on certain chemical facilities in the United States.

Purpose and Scope

Purpose This chapter:

- Explains the Department of Homeland Security (DHS) Chemical Site Anti Terrorism Standards (C-FATS) and registration process.
- Assigns responsibility for preparing, submitting and authorizing electronic submissions to the DHS secure web site to ensure all Linde sites meet C-FATS program requirements.

Note: Unless otherwise noted, all DHS submissions are through the DHS Secure Web Site.

Scope This chapter applies to all Linde sites in the United States and its US possessions that have Chemicals of Interest (COI) above the specified threshold quantities.

Note: C-FATS **does not** apply to facilities regulated pursuant to the Maritime Transportation Security Act of 2002, Public Water Systems, as defined by Public Water Systems, Treatment Works under the Federal Water Pollution Control Act, any facilities operated by the Department of Defense, or any site subject to regulation by the Nuclear Regulatory Commission.

Target audience This chapter is primarily intended for regional and location managers.

Responsibilities

Senior Management and Business Unit Managers Senior Management and Business Unit Managers **must**:

- Determine if managed sites fall under the jurisdiction of DHS and C-FATS and make sure applicable facilities register with DHS
- Ensure funding for the security program is available if C-FATS applies to a managed site
- Periodically review the Security Plan to ensure it is being implemented and followed.

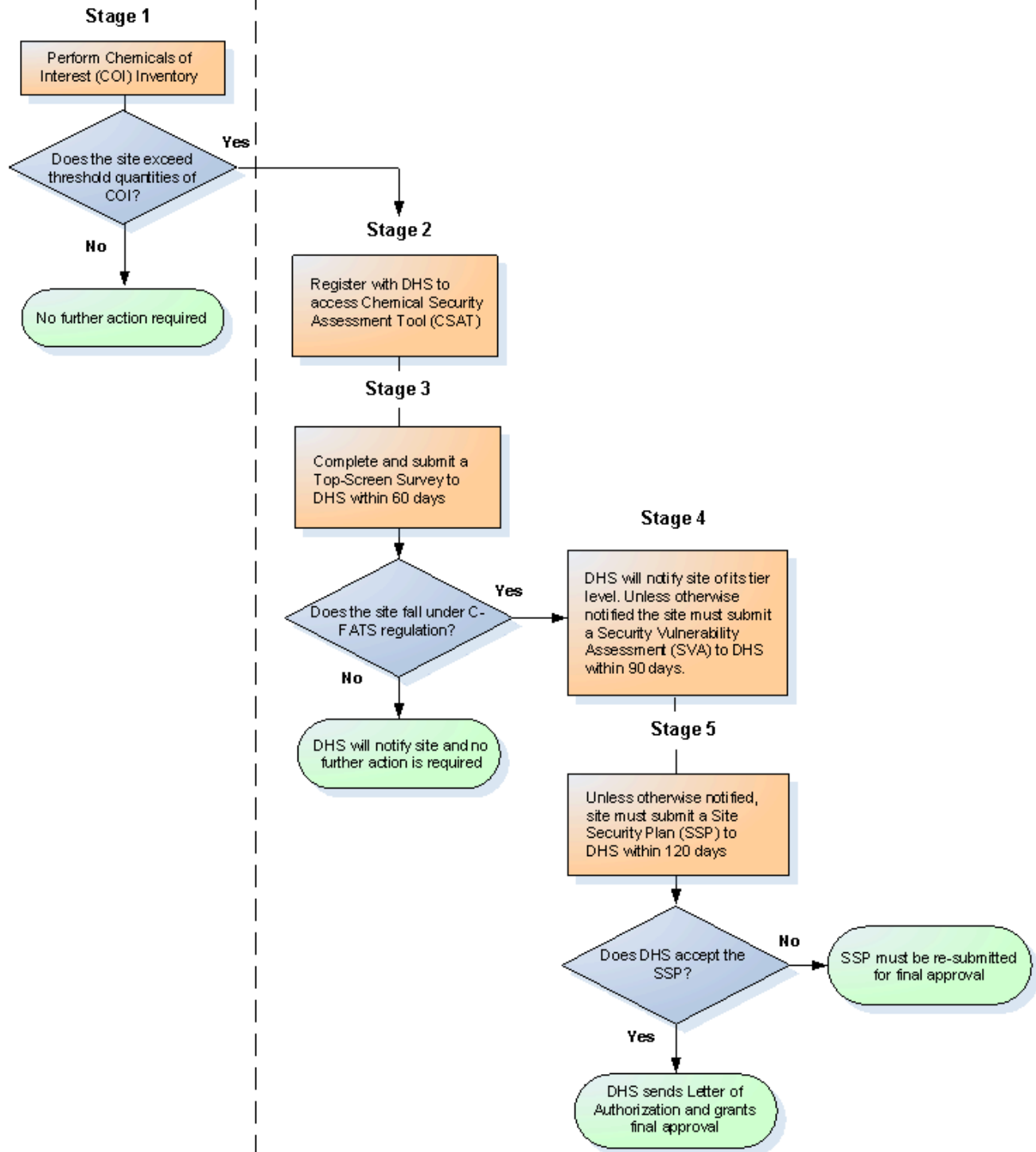
- Location Manager or Security Manager (Preparer)** The Location Manager or Security Manager (Preparer) **must**:
- Determine if a site has or will possess COIs above the threshold levels
 - Register the site with DHS
 - Prepare the electronic submissions through the Chemical Security Assessment Tool (CSAT) on the DHS Web Site
 - Ensure the site complies with C-FATS in its entirety on a daily basis
- Head of Security North America (Submitter)** The Head of Security North America **must**:
- Assist the Location Manager in preparing, reviewing and submitting to DHS
 - Conduct a periodic audit (every three years) of the site to ensure C-FATS compliance.
- Head of SHEQ North America (Authorizer)** The Head of SHEQ North America **must**:
- Provide assurance to DHS that the Submitter (Head of Security North America) and Preparer (Location Manager) are authorized to complete the CSAT information.
- Project Manager** The Project Manager **must** consult with the Head of Security North America to determine the recommended security installations and measures for all renovations or new projects.

Overview of DHS Compliance Process

- Determining site security risks** For ease of understanding, the process has been divided into five stages. Not all sites are required to complete all five stages, only those with the greatest threat potential based on the amounts of Chemicals of Interest (COI) on site and other factors as determined by DHS.
- The chart below summarizes the decision-making process for the DHS C-FATS Compliance Process:

Sites that do not exceed threshold quantities of COI in Appendix A

Sites that exceed threshold quantities of COI in Appendix A



DHS Compliance Process

Stage 1 - Chemicals of Interest (COI) Inventory Procedure

About Chemicals of Interest (COI) Linde sites that have Chemicals of Interest (COI) at or above the specified thresholds in the COI Thresholds Table below **must** register, complete and submit an electronic Top-Screen Survey to DHS.

COI Inventory All sites **must** complete an inventory of chemicals on site for total bulk and cylinder quantities. Check the thresholds in the table below against quantities maintained on site:

Chemicals of Interest (COI) Thresholds Table		
Chemical	Threshold Quantities	
	Total Bulk Product Weight on Site	Total Product Weight in Cylinders on Site
Acetylene (C ₂ H ₂)	10,000 lbs.	
*/**Ammonia (NH ₃)	10,000 lbs.	
Arsine (AsH ₃)	1,000 lbs.	15 lbs.
Boron Trichloride (BCl ₃)	5,000 lbs.	45 lbs.
Boron Trifluoride (BF ₃)	5,000 lbs.	45 lbs.
*Chlorine (Cl ₂)	2,500 lbs.	500 lbs.
Diborane (B ₂ H ₆)	2,500 lbs.	15 lbs.
Dichlorosilane (SiH ₂ Cl ₂)	10,000 lbs.	45 lbs.
Germane (GeH ₄)	45 lbs.	
*Hydrogen (H ₂)	10,000 lbs.	
Hydrogen Bromide (HBR)	500 lbs.	
**Hydrogen Chloride (HCl)	5,000 lbs.	500 lbs.
Hydrogen Fluoride (HF)	1,000 lbs.	45 lbs.
Hydrogen Selenide (H ₂ Se).	10,000 lbs.	15 lbs.
Hydrogen Sulfide (H ₂ S)	10,000 lbs.	45 lbs.
MAPP gas	10,000 lbs.	
Methylchloride (CH ₃ Cl)	10,000 lbs.	
Nitric Oxide	10,000 lbs.	15 lbs.
Propylene.	10,000 lbs.	
*Propane (C ₃ H ₈)	60,000 lbs.	
*Phosgene (COCl ₂)	500 lbs.	15 lbs.

*Phosphine (PH ₃)	10,000 lbs.	15 lbs.
*Silane (SiH ₄)	10,000 lbs.	
Sulfur Dioxide (SO ₂)	5,000 lbs.	500 lbs.
Trichlorosilane (SiHCl ₃)	10,000 lbs.	
Trimethylsilane ((CH ₃) ₃ SiH)	10,000 lbs.	
*Precursor or weapon of mass destruction		
**Drug Enforcement Agency Chemical of Interest		

Appendix A

The table lists the chemicals commonly found on Linde sites, and the thresholds at which registration becomes necessary. The table is based on [Appendix A - C-FATS List of Chemicals \(http://www.dhs.gov/xlibrary/assets/chemsec_appendixafinalrule.pdf\)](http://www.dhs.gov/xlibrary/assets/chemsec_appendixafinalrule.pdf). Please be sure to review the entire appendix to determine whether the site falls under C-FATS.

Top-Screen Survey Submission	
If...	Then...
a site possesses a COI at or above the screening threshold quantity	a site must register, complete and submit a consequence assessment known as a Top-Screen Survey to DHS within 60 days of the effective date of the list being published in the federal register or within 60 days upon possessing a COI.
a site does not possess a COI at or above the screening threshold quantity	no further action is required by the site.
Note: Many sites that register and fill out the Top-Screen may not be subject to further regulation under C-FATS. The Top-Screen and Appendix A - C-FATS List of Chemicals will allow DHS to make preliminary determinations about whether sites present a high level of security risk.	

Stage 2 - Registration for Chemical Security Assessment Tool (CSAT) Procedure

Registering for access to CSAT After performing a COI Inventory and determining that a Top-Screen Survey is necessary, a site **must** register with DHS to use the tool.

Preparing the Registration for Top-Screen Survey

Step	Action
1	The Preparer (Location Manager) accesses the DHS web site and submits the registration. See Register to Access CSAT (http://www.dhs.gov/xprevprot/programs/gc_1169501486197.shtm) on the DHS Web Site. <input type="checkbox"/>

- 2 The Authorizer (Head of SHEQ North America) verifies that the Preparer and Submitter are Linde-authorized to complete and submit C-FATS information.
- 3 Once the site has registered, DHS will email a confirmation form to the Preparer, Submitter and Authorizer.
- 4 The signed form **must** be returned to DHS and then a user name and password is sent to the Preparer and the Submitter to access the CSAT area of the DHS Web Site to complete the Top-Screen Survey.

Training The Preparer and Submitter **must** complete Chemical-Terrorism Vulnerability Information (CVI) Training annually. The training is provided on the DHS Web Site. See [CVI Authorized User Training \(http://www.dhs.gov/xprevprot/programs/gc_1185556876884.shtm\)](http://www.dhs.gov/xprevprot/programs/gc_1185556876884.shtm).

Stage 3 - Top-Screen Survey Procedure

Completing the Top-Screen Survey The Location Manager and Head of Security North America work together to complete the CSAT Top-Screen Survey. Between one to two weeks after the Top-Screen is submitted, the site will be notified that it either:

- Falls under C-FATS regulations, and will need to submit more material, or
- Does not fall under C-FATS regulations, and as long as no further modifications are made to the site, does not need to supply any further documentation to maintain compliance.

About Top-Screen Surveys The Top-Screen is an online tool, through which representatives of the site answer a series of straight forward questions, allowing DHS to preliminarily determine if the site presents a high level of security risk. The Top-Screen is part of the Chemical Security Assessment Tool (CSAT) process.

Sites required to register and submit a CSAT Top-Screen Survey Any site that manufactures, uses, stores or distributes certain chemicals above a specified quantity, according to the COI Thresholds Table in *Stage 1 - Chemicals of Interest (COI) Inventory Procedure (Page 5)*, **must** complete and submit a CSAT Top-Screen Survey.

Note: The DHS may also notify sites--either directly or through a Federal Register notice--that they need to register, complete and submit a CSAT Top-Screen Survey.

Preparing the CSAT Top-Screen Survey Procedure

- | Step | Action | |
|------|---|--------------------------|
| 1 | Use the CSAT Top-Screen Questions (http://www.dhs.gov/xlibrary/assets/chemsec_csattopscreenquestions.pdf) to assist in assembling the information needed to complete the secure web-based CSAT application. | <input type="checkbox"/> |
| | Note: For further guidance, see the CSAT User Manual (http://www.dhs.gov/xlibrary/assets/chemsec_csattopscreenusermanual.pdf) | |
| 2 | Proofread and edit the Top-Screen Survey carefully. It cannot be recalled or edited once it has been submitted. | <input type="checkbox"/> |

- 3 The Submitter maintains a copy of the Top-Screen for future use.
- 4 Once completed and proofed, submit the CSAT Top-Screen Survey using the DHS secure web site.
Note: If resubmitting a Top-Screen, please contact the CSAT Help Desk at 1-866-323-2957 or csat@dhs.gov.
- 5 DHS will respond within one to two weeks to inform the site of its Tier Level in the notification letter or the facility is not regulated under CFATS.

Revising Top-Screen Survey for change in COI If there is a COI-related change in inventory that takes it above or below the threshold limit, the covered site **must** complete and submit a revised Top-Screen to DHS within 60 days of the change. DHS will notify each site as to whether the site **must** submit a revised SVA, SSA or both.

In addition, Top-Screens **must** be resubmitted as follows:

- Tier 1 and Tier 2 covered sites **must** complete and submit a new or renewal Top-Screen every two years.
- Tier 3 and Tier 4 covered sites **must** complete and submit a new or renewal Top-Screen every three years.

Stage 4 - Site Security Vulnerability Assessment (SVA) Procedure

Site Security Vulnerability Assessment (SVA) If a site is notified it will be regulated by C-FATS, DHS assigns a tier level, and the site **must** complete a Site Security Vulnerability Assessment (SVA) unless otherwise notified. The SVA **must** be submitted through CSAT within 90 calendar days of receiving the notification letter. The SVA **must** follow the CSAT methodology and be submitted electronically.

Tier levels If a site is regulated by C-FATS, DHS uses four tier levels to indicate the likelihood that a site may be a terrorist target. The levels are indicated below:

DHS C-FATS Tier Levels	
Tier 1	Highest risk, and generally higher levels of threshold quantities on site with high consequence
Tier 2	Higher risk
Tier 3	Mid-level risk
Tier 4	Low-level risk

SVA risk assessment tools Since this is a new regulation, risk assessment tools have not yet been defined. Once DHS has received Linde's site registration and Top Screen Survey, they will provide guidance on appropriate tools that can be used.

Stage 5 - Site Security Plan (SSP) Procedure

Sites required to submit a Site Security Plan (SSP)	<p>Unless otherwise notified, a covered site must complete and electronically submit a Site Security Plan (SSP) within 120 calendar days of written notification from DHS or within the time frame specified in any subsequent Federal Register notice.</p> <p>It is the responsibility of the Location Manager or Security Manager to prepare and coordinate the development and ensure funding, training and maintenance of the site-specific security plan.</p>
SSP tools	<p>Since this is a new regulation, Site Security Plan Templates or other tools have not been defined. Once DHS has received Linde's site registration and Top Screen Survey, it will provide guidance on appropriate tools that can be used.</p>
Risk based performance standards	<p>The SVA and the SSP are based on the site's tier ranking and the acceptable layering of measures used to meet the standards, see <i>Risk Based Performance Standards (see attachment)</i>.</p>

DHS Inspection and Audits

DHS inspection requirements	<p>Once the SSP is submitted, DHS will schedule an inspection and audit with the site.</p> <ul style="list-style-type: none">• During the inspection:• An inspector may request all required security records and must be given immediate access to a photocopier to copy those records. If copies cannot be provided, the inspector is permitted to take the original records for duplication and promptly return them to the site.• Information provided to inspectors must remain confidential.
Regulatory and third party inspection requirements	<p>Linde has established standards to follow during third party audits. For more information, see <i>IMS-17-16 : Handling Regulatory and Third Party Inspections</i></p>
Post-audit notification and record retention	<p>Following the SSP inspection, DHS will issue a Letter of Approval or send notification that the SSP was not approved, including reasons for the SSP failure.</p> <p>Generally, if the site receives notification that it was not approved, a period of negotiations and a timeline for corrections will be implemented.</p> <p>If a Letter of Approval is received, it must be treated as a Chemical-Terrorism Vulnerability Information (CVI) document. See <i>CVI Requirements (see attachment)</i></p>
Internal Audit	<p>Annual internal audits are required for sites that are regulated under C-FATS.</p>

Fines and Penalties

Violations may result in fines or site shut down	When DHS Assistant Secretary determines that a site is in violation of any DHS C-FATS requirement, he or she may take appropriate action including the issuance of an appropriate Order: <ul style="list-style-type: none">• Orders to assess a civil penalty of not more than \$25,000 per day per violation, and/or• Orders to cease operations
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Recordkeeping

Chemical-Terrorism Vulnerability Information (CVI)	All sites must follow <i>CVI Requirements (see attachment)</i> when handling sensitive material.
Recordkeeping requirements	A covered DHS site must keep records of security activities as listed below for at least six years and make them available to DHS upon request. Records required by DHS may be kept in electronic format but must be protected against unauthorized access, deletion, destruction, amendment and disclosure.
Letter of Authorization and Approval	All Letters of Authorization and Approval from DHS, and documentation identifying the results of the audits and inspections conducted as a result of the DHS standard must be maintained on site and follow CVI Requirements for marking and securing the documents.
DHS and other federal program requirements	Top-Screens, SVAs, SSPs, ASPs, and all other related correspondence with the DHS must be maintained on site and made available to DHS upon request. To the extent necessary for security purposes, DHS may request that a covered site make available records kept pursuant to other federal programs and regulations such as the EPA Clean Air Act Risk Management Plan (RMP).

Forms and Attachments

Attachments	The following attachments are available in this chapter: <ul style="list-style-type: none">• <i>CVI Requirements (see attachment)</i>• <i>Risk Based Performance Standards (see attachment)</i>
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DHS Web Site
hyperlinks

The following hyperlinks are for information on the DHS Web Site:

- [Appendix A - C-FATS List of Chemicals](http://www.dhs.gov/xlibrary/assets/chemsec_appendixafinalrule.pdf)
(http://www.dhs.gov/xlibrary/assets/chemsec_appendixafinalrule.pdf)
- [CVI Authorized User Training](http://www.dhs.gov/xprevprot/programs/gc_1185556876884.shtm)
(http://www.dhs.gov/xprevprot/programs/gc_1185556876884.shtm)
- [Register to Access CSAT](http://www.dhs.gov/xprevprot/programs/gc_1169501486197.shtm)
(http://www.dhs.gov/xprevprot/programs/gc_1169501486197.shtm)
- [CSAT Top-Screen Questions](http://www.dhs.gov/xlibrary/assets/chemsec_csattopscreenquestions.pdf)
(http://www.dhs.gov/xlibrary/assets/chemsec_csattopscreenquestions.pdf)
- [CSAT User Manual](http://www.dhs.gov/xlibrary/assets/chemsec_csattopscreenusersmanual.pdf)
(http://www.dhs.gov/xlibrary/assets/chemsec_csattopscreenusersmanual.pdf)
- [CVI Procedural Manual](http://www.dhs.gov/xlibrary/assets/chemsec_cvi_proceduresmanual.pdf)
(http://www.dhs.gov/xlibrary/assets/chemsec_cvi_proceduresmanual.pdf)