

WIVENHOE MANAGEMENT GROUP

ONE PHEASANT RUN * MILLSTONE TOWNSHIP, NEW JERSEY 08510-1709
TEL: 609-208-0112 * FAX: 609-208-1295

EMAIL: info@wivenhoegroup.com
Website: www.wivenhoegroup.com

CFATS (CHEMICAL FACILITY ANTI-TERRORISM STANDARDS) SECURITY LEGISLATION AS IT IS LIKELY TO APPLY TO THE WATER & WASTEWATER INDUSTRIES

Background:

The 2007 Department of Homeland Security (DHS) regulations, in 6 CFR Part 27, require DHS to identify “high-risk” chemical facilities through analysis of facility-supplied “Top-Screen” information and require affected facilities to conduct Security Vulnerability Assessments (SVAs), write Site Security Plans (SSPs), and implement gap-closure measures. The regulations are affecting thousands of facilities across the United States that manufacture, use, store or transport hazardous chemicals (a.k.a. “DHS Chemicals of Interest”). Facilities that possess any of the DHS Chemicals of Interest at or above a Screening Threshold Quantity (STQ) must initiate the Top-Screen process, which will guide DHS in identifying “high risk” facilities and help determine the preliminary “risk tier” for the facility. DHS will evaluate the Top-Screen information and notify a facility in writing whether it is or is not a “high risk” facility.

It is further understood that Water & Wastewater that was previously not covered by such legislation, will now be incorporated into such legislation.

The following article appeared in the May 2009 American Water Works Association (AWWA) Washington D.C. Report:

"Word from Capitol Hill is that agreement has been reached among leadership of the House Committee on Energy and Commerce and the Committee on Homeland Security regarding chemical facility legislation to be introduced soon.

Notwithstanding earlier reports to the contrary, it now appears that EPA may be the lead agency for drinking water security. AWWA has been meeting with staff of both House committees and has taken a clear stand that no chemical facility security legislation should mandate inherently safer technologies on drinking water systems, or give federal, officials "shutdown" authority over a water system."

It is anticipated that the legislation will come into affect shortly after August 2009.

CFATS (CHEMICAL FACILITY ANTI-TERRORISM STANDARDS) SECURITY LEGISLATION AS IT IS LIKELY TO APPLY TO THE WATER & WASTEWATER INDUSTRIES

Components of CFATS:

Currently, the administration of the CFATS legislation is handled by the DHS on a Federal basis with more than two hundred (200) inspectors assigned to compliance and enforcement of the legislation requirements.

Facilities that have chemicals above threshold must submit information to DHS using internet-based Chemical Security Assessment Tool (CSAT)

CSAT has five segments being:

- Registration
- Top-Screen
- Security Vulnerability Assessment
- Site Security Plan
- Personnel Surety Portal

Initial Registration Phase

Each facility must register CSAT Users as follows:

Authorizer - Verify and validate the appropriate individuals are assigned the appropriate CSAT User Roles

Submitter - Verify and validate information being submitted is correct and accurate

Preparer - Complete the Top-Screen based upon their intimate knowledge of the facility

Reviewer - Support for the Preparer, Submitter, or Authorizer (optional)

DHS validates facility and user information before providing user names and passwords

Facilities that possess any “chemicals of interest” above threshold quantities must register and provide specified information to DHS. Essentially any water or wastewater facility that uses, stores, transports, or is otherwise associated with quantities of COI above the threshold limits will be required to register with the DHS or EPA. (It is possible that the EPA may take over responsibility for the administration and compliance activity of CFATS as it pertains to water and wastewater, but this has not been determined as of this date.)

**CFATS (CHEMICAL FACILITY ANTI-TERRORISM STANDARDS)
SECURITY LEGISLATION AS IT IS LIKELY TO APPLY TO THE
WATER & WASTEWATER INDUSTRIES**

Second COI Submittal Phase

The facility is then required to carry-out and submit a Top Screen which asks information on quantity of chemicals on site, how they are stored, where the facility is located, and importance of the facility.

DHS evaluates the information to identify those facilities that appear to be high-risk facilities, and will then issue a letter to each facility with the preliminary determination of risk (Tiers I through 4) or the determination the facility is not high risk. Along with the risk tier, DHS identifies chemicals to address in SVA and the security issues associated with the chemicals.

Please see Appendices A, B, and C providing a listing of COI (Chemicals of Interest), examples of minimum threshold quantities, sample Top Screen questions.

Third Phase (SVA Utilizing DHS CSAT SVA Methodology)

The DHS or EPA will advise a facility by letter as to whether they are required to proceed to the next phase of the legislation. The letter will inform the facility which Primary Security Issue they are considered to be. This may be one or more of the following:

Toxic Release
Flammable Release
Explosive Release
Theft/Diversion – Explosive/IEDP

Theft/Diversion – WME
Theft/Diversion – CW/CWP
Sabotage/Contamination

Based on the one or more Primary Security Issues, and specific chemicals identified in the DHS letter, the facility is then required to conduct an SVA utilizing the DHS CSAT methodology.

It should also be noted that very strict rules apply to the securing of data related to CFATS legislation, particularly concerning data produced during the CSAT SVA Phase. Data cannot be disclosed to anyone who is not DHS CVI certified, and meetings cannot take place in areas where there are non-CVI certified individuals.

The CSAT SVA is divided into segments designed to capture the following data:

**CFATS (CHEMICAL FACILITY ANTI-TERRORISM STANDARDS)
SECURITY LEGISLATION AS IT IS LIKELY TO APPLY TO THE
WATER & WASTEWATER INDUSTRIES**

Third Phase (SVA Utilizing DHS CSAT SVA Methodology)

Data Segments

Facility Information - This is general information related to the name of the facility, its address, location city, etc., and whether it is planned to use an alternative methodology for the SVA where permitted.

Facility Security Information - This section requests information related to the specific primary security issue, and the one or more chemicals of concern (COI) that are associated with the facility, and as identified in the DHS letter

This section also requests information on existing security measures, inventory control measures, access control measures, shipping and receiving measures, etc. Also required in this section are details of Asset Characterization.

Vulnerability - In this segment, the facility is asked to submit data addressing each of the DHS defined attack scenarios applicable to the primary security issue. These range through aircraft, and maritime, to vehicle, and assault teams.

Computer Systems - This final part of the CSAT SVA documentation is related to computer systems and existing cyber security.

The facility is now required to submit the Security Vulnerability Assessment (SVA) addressing identified chemicals and security issues on-line to the DHS or EPA. The DHS will approve or reject the SVA, and assign a final tier, together with asset-specific security issues.

Fourth Phase Site Security Plan

This fourth phase requires a Site Security Plan (SSP) to be submitted by the facility to the DHS or EPA addressing applicable risk-based performance standards (RBPS) applicable to the facility risk tier and asset-specific security issues.

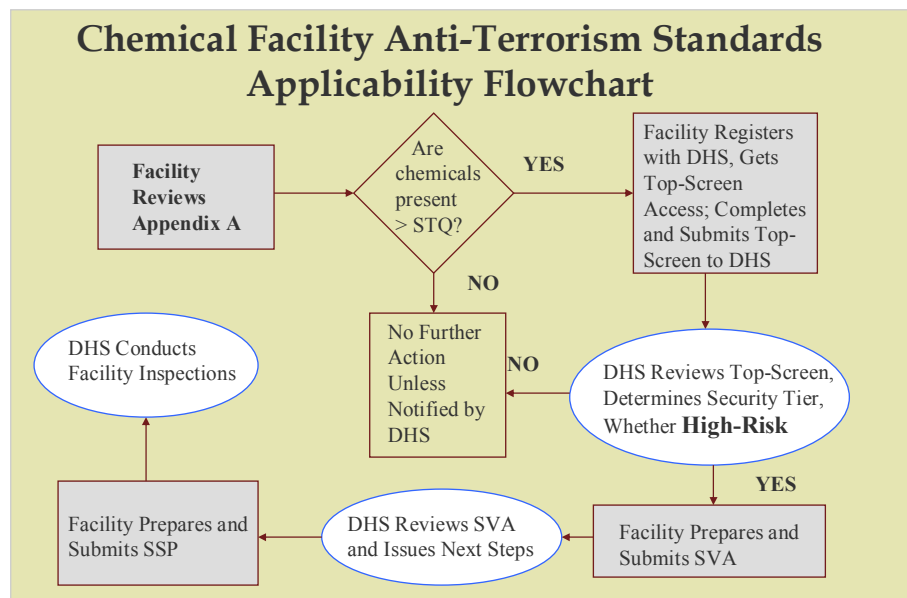
Again, the SSP will be accepted or rejected by the authorities, and if approved, DHS inspectors will then monitor implementation of the SSP. Failure to meet the approved SST will result in substantial fines.

CFATS (CHEMICAL FACILITY ANTI-TERRORISM STANDARDS) SECURITY LEGISLATION AS IT IS LIKELY TO APPLY TO THE WATER & WASTEWATER INDUSTRIES

Fourth Phase Site Security Plan

Under the current CFATS legislation as it applies to chemical concerns, the DHS also have the power to close a facility, but it is believed that this extreme measure will not apply to water and wastewater facilities.

The full CFATS cycle is outlined below:



Factors of Importance for Water & Wastewayter Facilities

- 1). Unlike the EPA mandated vulnerability assessments where a Threat Assessment section was conducted by the assessment team, the DHS have already defined the Threat Level for each facility as being a **Terrorist Attack**.
- 2). Furthermore, the DHS will decide the Primary Security Issue for each facility based on the Top Screen program, and which chemicals are considered at risk.
- 3). Based on the Primary Security Issue determined by the DHS for a specific facility, the DHS have also defined the attack scenarios which can be very expensive to protect against.

**CFATS (CHEMICAL FACILITY ANTI-TERRORISM STANDARDS)
SECURITY LEGISLATION AS IT IS LIKELY TO APPLY TO THE
WATER & WASTEWATER INDUSTRIES**

Factors of Importance for Water & Wastewater Facilities

- 4). The SSP (Site Security Plan) being the manner in which each facility plans to provide a level of protection adequate for securing the site against the attack scenarios pertinent to an individual facility, will only be approved by the DHS if considered adequate.
- 5). It should also be noted that an implementation schedule will be monitored by the DHS inspectors to ensure compliance.

What can a facility do at this time to prepare for such legislation and requirements?

From experience, there are a number of actions that a facility should give consideration to in preparing for the advent of CFATS. These actions will, at the very least, provide possible options to the facility that will be significantly limited once the legislation is in force.

**Suggested Actions That Might Be Taken Prior To The Enactment of CFATS
Legislation For Water And Wastewater Facilities**

A). Understand Legislation Fully

It is recommended that a facility fully understand the intent and process of the CFATS legislation. Generally speaking, access to the precise legislation requirements and procedures is restricted to a facility until they register which cannot take place until water and wastewater are incorporated under the CFATS legislation.

However, it would be possible to provide appropriate seminars, based on CFATS experience to date, that will educate and prepare facility personnel as to the nature and requirements of the CFATS legislation.

B). Security Oversight

A further action that can be taken is to conduct a brief, low cost, security oversight of the facility that would identify those assets and security measures likely to be required to meet CFATS requirements.

Understanding the likely requirements that the facility will be required to adopt in compliance with the CFATS legislation, allows that same facility to assess its options ahead of legislation, and to plan accordingly.

**CFATS (CHEMICAL FACILITY ANTI-TERRORISM STANDARDS)
SECURITY LEGISLATION AS IT IS LIKELY TO APPLY TO THE
WATER & WASTEWATER INDUSTRIES**

**Suggested Actions That Might Be Taken Prior To The Enactment of CFATS
Legislation For Water And Wastewater Facilities**

C). Grant Funding

There are a variety of monies available through the “Stimulus”, “Omnibus”, and recently passed Federal budget that provide grant funding for many diverse purposes including Security, Environment, Technical Development, Land & Water Preservation, Safety, Infrastructure Replacement, Sustainability, Green Technology. Many of these can be incorporated into Water and Wastewater Security projects.

As a specific example, there is a pot of funds available in Pennsylvania as a result of a bond issue, to address water/wastewater infrastructure, but the total project must be at least \$500,000. If a water or wastewater system was applying for another larger project they could incorporate the CFATS review as a line item.

It is suggested that the sooner plans are developed to meet the new legislation, the sooner it will be possible to seek funding assistance.

It should also be remembered that leaving issues until the advent of a legal notice advising a facility that it is required to meet new legislation, reduces the options available to a facility if they move quickly ahead of the pending legislation.

For more information on available services, please contact Wivenhoe Management Group at www.wivenhoegroup.com or call (609)-208-0112.

**CFATS (CHEMICAL FACILITY ANTI-TERRORISM STANDARDS)
SECURITY LEGISLATION AS IT IS LIKELY TO APPLY TO THE
WATER & WASTEWATER INDUSTRIES**

APPENDIX – CHEMICALS OF INTEREST (COI)

**Chemical Facility Anti-Terrorism Standards
Proposed Appendix A: DHS Chemicals of Interest**

Chemical of Interest	Chemical Abstract Service (CAS) Number	Release of Toxics	Release of Flammables	Release of Explosives	Theft/Diversio n of IEPD	Theft/Diversio n of WME	Theft/Diversio n of CW/CWP	Sabotage/Contaminati on
1,1,3,3,3-pentafluoro-2-(trifluoromethyl)-1-propene	382-21-8						X	
1,1-Dimethylhydrazine	57-14-7		X					
1,2-bis(2-chloroethylthio)ethane	3563-36-8						X	
1,3-bis(2-chloroethylthio)-n-propane	63905-10-2						X	
1,3-Butadiene	106-99-0		X					
1,3-Pentadiene	504-60-9		X					
1,4-bis(2-chloroethylthio)-n-butane	142868-93-7						X	
1,5-bis(2-chloroethylthio)-n-pentane	142868-94-8						X	
1-Butene	106-98-9		X					
1-Chloropropylene	590-21-6		X					
1H-Tetrazole	16681-77-9			X	X			
1-Pentane	109-67-1		X					
2,2-Dimethylpropane	463-82-1		X					
2-Butene	107-01-7		X					
2-Butene-cis	590-18-1		X					
2-Butene-trans	624-64-6		X					

Chemical of Interest	Chemical Abstract Service (CAS) Number	Release of Toxics	Release of Flammables	Release of Explosives	Theft/Diversio n of IEPD	Theft/Diversio n of WME	Theft/Diversio n of CW/CWP	Sabotage/Contaminati on
2-chloroethylchloromethylsulfide	2625-76-5						X	
2-Chloropropylene	557-98-2		X					
2-Chlorovinylchloroarsine	541-25-3						X	
2-Methyl-1-butene	563-46-2		X					
2-Methylpropene	115-11-7		X					
2-Pentene, (Z)-	627-20-3		X					
2-Pentene,(E)-	646-04-8		X					
3,3-dimethyl-2-butanol	464-07-3						X	
3-Methyl-1-butene	563-45-1		X					
3-Quinuclidinyl benzilate (BZ)	62869-69-6						X	
5-Nitrobenzotriazol	2338-12-7			X	X			
Acetaldehyde	75-07-0		X					
Acetone	67-64-1				X			
Acetone cyanohydrin, stabilized	75-86-5							X
Acetyl bromide	506-96-7							X
Acetyl chloride	75-36-5							X
Acetyl iodide	507-02-8							X
Acetylene	74-86-2		X					
Acrolein	107-02-8	X						
Acrylonitrile	107-13-1		X					
Acrylyl chloride	814-68-6		X					
Allyl alcohol	107-18-6	X						
Allylamine	107-11-9		X					

Chemical of Interest	Chemical Abstract Service (CAS) Number	Release of Toxics	Release of Flammables	Release of Explosives	Theft/Diversio n of IEPD	Theft/Diversio n of WME	Theft/Diversio n of CW/CWP	Sabotage/Contaminati on
Allyltrichlorosilane, stabilized	107-37-9							X
Aluminum bromide, anhydrous	7727-15-3							X
Aluminum chloride, anhydrous	7446-70-0							X
Aluminum phosphide	20859-73-8							X
Ammonia (anhydrous)	7664-41-7	X				X		
Ammonia (conc. 20% or greater)	7664-41-7	X				X		
Ammonium nitrate	6484-52-2			X	X			
Ammonium perchlorate	7790-98-9			X	X			
Ammonium picrate	131-74-8			X	X			
Amyltrichlorosilane	107-72-2							X
Antimony pentafluoride	7783-70-2							X
Arsenous trichloride	7784-34-1	X					X	
Arsine	7784-42-1	X				X		
Barium azide	18810-58-7			X	X			
bis(2-chloroethyl)ethylamine	538-07-8						X	
bis(2-chloroethyl)methylamine	51-75-2						X	
bis(2-chloroethyl)sulfide	505-60-2						X	
bis(2-chloroethylthio)methane	63869-13-6						X	
bis(2-chloroethylthioethyl)ether	63918-89-8						X	
bis(2-chloroethylthiomethyl)ether	63918-90-1						X	
bis(2-chlorovinyl)chloroarsine	40334-69-8						X	
Boron tribromide	10294-33-4							X

Chemical of Interest	Chemical Abstract Service (CAS) Number	Release of Toxics	Release of Flammables	Release of Explosives	Theft/Diversio n of IEPD	Theft/Diversio n of WME	Theft/Diversio n of CW/CWP	Sabotage/Contaminati on
Boron trichloride	10294-34-5	X				X		
Boron trifluoride	7637-07-2	X				X		
Boron trifluoride compound with methyl ether (1:1)	353-42-4	X						
Bromine	7726-95-6	X						
Bromine chloride	13863-41-7					X		
Bromine pentafluoride	7789-30-2							X
Bromine trifluoride	7787-71-5							X
Bromotrifluorethylene	598-73-2		X					
Butane	106-97-8		X					
Butene	25167-67-3		X					
Butyltrichlorosilane	7521-80-4							X
Calcium dithionite	15512-36-4							X
Calcium hydrosulfite	15512-36-4							X
Calcium phosphide	1305-99-3							X
Carbon disulfide	75-15-0	X						
Carbon monoxide	630-08-0					X		
Carbon oxysulfide	463-58-1		X					
Carbonyl fluoride	353-50-4					X		
Carbonyl sulfide	463-58-1					X		
Chlorine	7782-50-5	X				X		
Chlorine dioxide	10049-04-4	X						X
Chlorine monoxide	7791-21-1		X					

Chemical of Interest	Chemical Abstract Service (CAS) Number	Release of Toxics	Release of Flammables	Release of Explosives	Theft/Diversio n of IEPD	Theft/Diversio n of WME	Theft/Diversio n of CW/CWP	Sabotage/Contaminati on
Chlorine pentafluoride	13637-63-3					X		
Chlorine trifluoride	7790-91-2					X		
Chloroacetyl chloride	79-04-9							X
Chloroform	67-66-3	X						
Chloromethyl ether	542-88-1	X						
Chloromethyl methyl ether	107-30-2	X						
Chloropicrin	76-06-2						X	
Chlorosulfonic acid	7790-94-5							X
Chromium oxychloride	7803-51-2							X
Crotonaldehyde	4170-30-3		X					
Crotonaldehyde, (E)-	123-73-9		X					
Cyanogen	460-19-5		X			X		
Cyanogen chloride	506-77-4	X				X	X	
Cyclohexylamine	108-91-8	X						
Cyclohexyltrichlorosilane	98-12-4							X
Cyclopropane	75-19-4		X					
Cyclotetramethylenetetranitramine	2691-41-0			X	X			
Diazodinitrophenol	87-31-0			X	X			
Diborane	19287-45-7	X				X		
Dichlorosilane	4109-96-0		X			X		
Diethyl ethylphosphonate	78-38-6						X	
Diethyl N,N-dimethylphosphoramidate	2404-03-7						X	
Diethyl phosphate	762-04-9						X	
Diethyldichlorosilane	1719-53-5							X
Diethyleneglycol dinitrate	693-21-0			X	X			

Chemical of Interest	Chemical Abstract Service (CAS) Number	Release of Toxics	Release of Flammables	Release of Explosives	Theft/Diversio n of IEPD	Theft/Diversio n of WME	Theft/Diversio n of CW/CWP	Sabotage/Contaminati on
Difluoroethane	75-37-6		X					
Dimethyl ethylphosphonate	6163-75-3						X	
Dimethyl methylphosphonate	756-79-6						X	
Dimethyl phosphate	868-85-9						X	
Dimethylamine	124-40-3		X					
Dimethyldichlorosilane	75-78-5		X					X
Dimethylphosphoramidodichloridate	677-43-0						X	
Dinitrogen tetroxide	10544-72-6					X		
Dinitroglycoluril	55510-04-8			X	X			
Dinitrophenol	25550-58-7			X	X			
Dinitroresorcinol	35860-51-6			X	X			
Dinitrosobenzene	25550-55-4				X			
Diphenyl-2-hydroxyacetic acid (aka benzilic acid)	76-93-7						X	
Diphenyldichlorosilane	80-10-4							X
Dipicryl sulfide	2217-06-3			X	X			
Dodecyltrichlorosilane	4484-72-4							X
Epichlorohydrin	106-89-8	X						
Ethane	74-84-0		X					
Ethyl acetylene	107-00-6		X					
Ethyl chloride	75-00-3		X					
Ethyl ether	60-29-7		X					
Ethyl mercaptan	75-08-1		X					
Ethyl nitrite	109-95-5		X					
Ethyl phosphonyl dichloride	1066-50-8						X	
Ethyl phosphonyl difluoride	753-98-0						X	

Chemical of Interest	Chemical Abstract Service (CAS) Number	Release of Toxics	Release of Flammables	Release of Explosives	Theft/Diversio n of IEPD	Theft/Diversio n of WME	Theft/Diversio n of CW/CWP	Sabotage/Contaminati on
Ethylamine	75-04-7		X					
Ethyldiethanolamine	139-87-7						X	
Ethylene	74-85-1		X					
Ethylene oxide	75-21-8		X			X		
Ethylenediamine	107-15-3	X						
Ethyleneimine	151-56-4		X					
Ethyltrichlorosilane	115-21-9							X
Fluorine	7782-41-4	X				X		
Fluorosulfonic acid	7789-21-1							X
Formaldehyde (solution)	50-00-0	X						
Furan	110-00-9		X					
Germane	7782-65-2					X		
Germanium tetrafluoride	7783-58-6					X		
Guanyl nitrosaminoguanlydene hydrazine				X	X			
Guanyl nitrosaminoguanlyltetrazene	109-27-3			X	X			
Hexaethyl tetraphosphate and compressed gas mixtures	757-58-4					X		
Hexafluoroacetone	684-16-2					X		
Hexanitrodiphenylamine	35860-31-2			X	X			
Hexanitrostilbene	20062-22-0			X	X			
Hexolite	121-82-4			X	X			
Hexotonal	107-15-3			X	X			
Hexyltrichlorosilane	928-89-2 6							X
Hydrazine	302-01-2		X					

Chemical of Interest	Chemical Abstract Service (CAS) Number	Release of Toxics	Release of Flammables	Release of Explosives	Theft/Diversio n of IEPD	Theft/Diversio n of WME	Theft/Diversio n of CW/CWP	Sabotage/Contaminati on
Hydrochloric acid (conc. 37% or greater)	7647-01-0	X						
Hydrocyanic acid	74-90-8	X						
Hydrogen	1333-74-0		X					
Hydrogen bromide, anhydrous	10035-10-6					X		
Hydrogen chloride (anhydrous)	7647-01-0	X				X		
Hydrogen cyanide	74-90-8						X	
Hydrogen fluoride/Hydrofluoric acid (conc. 50% or greater)	7664-39-3	X						
Hydrogen iodide, anhydrous	10034-85-2					X		
Hydrogen peroxide (concentration of at least 30%)	7722-84-1				X			
Hydrogen selenide	7783-07-5		X			X		
Hydrogen sulfide	7783-06-4	X				X		
Iodine pentafluoride	7783-66-6							X
Iron, pentacarbonyl-	13463-40-6		X					
Isobutane	75-28-5		X					
Isobutyronitrile	78-82-0	X						
Isopentane	78-78-4		X					
Isoprene	78-79-5		X					
Isopropyl chloride	75-29-6		X					
Isopropyl chloroformate	108-23-6	X						
Isopropylamine	75-31-0		X					
Lead azide	13424-46-9			X	X			
Lead styphnate	15245-44-0			X	X			
Lithium amide	7782-89-0							X
Lithium nitride	26134-62-3							X
Magnesium aluminum phosphide								X

Chemical of Interest	Chemical Abstract Service (CAS) Number	Release of Toxics	Release of Flammables	Release of Explosives	Theft/Diversio n of IEPD	Theft/Diversio n of WME	Theft/Diversio n of CW/CWP	Sabotage/Contaminati on
Magnesium diamide	7803-54-5							X
Magnesium phosphide	12057-74-8							X
Mannitol hexanitrate, wetted	15825-70-4			X	X			
Mercury fulminate	628-86-4			X	X			
Methacrylonitrile	126-98-7	X						
Methane	74-82-8		X					
Methyl bromide	74-83-9					X		
Methyl chloride	74-87-3		X					
Methyl chloroformate	79-22-1		X					
Methyl ether	115-10-6		X					
Methyl formate	107-31-3		X					
Methyl hydrazine	60-34-4	X						
Methyl isocyanate	624-83-9	X						
Methyl mercaptan	74-93-1		X			X		
Methyl phosphonyl dichloride	676-97-1						X	
Methyl phosphonyl difluoride	676-99-3						X	
Methyl thiocyanate	556-64-9	X						
Methylamine	74-89-5		X					
Methylchlorosilane	993-00-0					X		
Methyldichlorosilane	75-54-7							X
Methyldiethanolamine	105-59-9						X	
Methylphenyldichlorosilane	149-74-6							X
Methyltrichlorosilane	75-79-6		X					X
N,N-diisopropyl-2-aminoethyl chloride hydrochloride	4261-68-1						X	
N,N-diisopropyl-β-aminoethanol	96-80-0						X	

Chemical of Interest	Chemical Abstract Service (CAS) Number	Release of Toxics	Release of Flammables	Release of Explosives	Theft/Diversio n of IEPD	Theft/Diversio n of WME	Theft/Diversio n of CW/CWP	Sabotage/Contaminati on
N,N-diisopropyl-β-aminoethyl chloride	96-79-7						X	
Nickel Carbonyl	13463-39-3		X					
Nitric acid	7697-37-2	X			X			
Nitric oxide	10102-43-9	X				X		
Nitro urea	556-89-8			X	X			
Nitrocellulose	9004-70-0			X	X			
Nitrogen trioxide	10544-73-7					X		
Nitroglycerine	55-63-0			X	X			
Nitroguanidine	556-88-7			X	X			
Nitromethane	75-52-5				X			
Nitrostarch	9056-38-6			X	X			
Nitrosyl chloride	2696-92-6					X		
Nitrotriazolone	932-64-9			X	X			
Nonyltrichlorosilane	5283-67-0							X
o,o-diethyl S-[2-(diethylamino)ethyl] phosphorothiolate	78-53-5						X	
Octadecyltrichlorosilane	112-04-9							X
Octolite	68610-51-5			X	X			
Octonal	124-13-0			X	X			
Octyltrichlorosilane	5283-66-9							X
o-ethyl-N,N-dimethylphosphoramido-cyanidate	77-81-6						X	
o-ethyl-o-2-diisopropylaminoethyl methylphosphonite	57856-11-8						X	

Chemical of Interest	Chemical Abstract Service (CAS) Number	Release of Toxics	Release of Flammables	Release of Explosives	Theft/Diversio n of IEPD	Theft/Diversio n of WME	Theft/Diversio n of CW/CWP	Sabotage/Contaminati on
o-ethyl-S-2-diisopropylaminoethyl methyl phosphonothiolate	50782-69-9						X	
o-isopropyl methylphosphonochloridate	1445-76-7						X	
o-isopropyl methylphosphonofluoridate	107-44-8						X	
Oleum (Fuming Sulfuric acid)	8014-95-7	X						
o-pinacolyl methylphosphonochloridate	7040-57-5						X	
o-pinacolyl methylphosphonofluoridate	96-64-0						X	
Oxygen difluoride	7783-41-7					X		
Pentaerythrite tetranitrate or PETN	78-11-5			X	X			
Pentane	109-66-0		X					
Pentolite	8066-33-9			X	X			
Peracetic acid	79-21-0		X					
Perchloromethylmercaptan	594-42-3	X						
Perchloryl fluoride	7616-94-6					X		
Phenyltrichlorosilane	98-13-5							X
Phosgene	75-44-5	X				X	X	
Phosphine	7803-51-2		X			X		
Phosphorus	7723-14-0					X		
Phosphorus oxychloride	10025-87-3	X					X	X
Phosphorus pentachloride	10026-13-8						X	X
Phosphorus pentasulfide	1314-80-3							X
Phosphorus trichloride	7719-12-2	X					X	X
Piperidine	110-89-4		X					
Potassium chlorate	3811-04-9				X			

Chemical of Interest	Chemical Abstract Service (CAS) Number	Release of Toxics	Release of Flammables	Release of Explosives	Theft/Diversio n of IEPD	Theft/Diversio n of WME	Theft/Diversio n of CW/CWP	Sabotage/Contaminati on
Potassium cyanide	151-50-8							X
Potassium nitrate	7757-79-1				X			
Potassium perchlorate	7778-74-7				X			
Potassium phosphide	20770-41-6							X
Propadiene	463-49-0		X					
Propane	74-98-6		X					
Propionitrile	107-12-0	X						
Propyl chlorofromate	109-61-5		X					
Propylene	115-07-1		X					
Propylene oxide	75-56-9		X					
Propyleneimine	75-55-8	X						
Propyltrichlorosilane	141-57-1							X
Propyne	74-99-7		X					
Quinuclidine-3-ol	1619-34-7						X	
RDX and HMX mixtures	121-82-4			X	X			
Selenium hexafluoride	7783-79-1					X		
Silane	7803-62-5		X					
Silicon tetrachloride	10026-04-7					X		X
Silicon tetrafluoride	7783-61-1					X		
Sodium chlorate	7775-09-9				X			
Sodium cyanide	143-33-9							X
Sodium dinitro-o-cresolate	25641-53-6				X			
Sodium dithionite	7775-14-6							X

Chemical of Interest	Chemical Abstract Service (CAS) Number	Release of Toxics	Release of Flammables	Release of Explosives	Theft/Diversio n of IEPD	Theft/Diversio n of WME	Theft/Diversio n of CW/CWP	Sabotage/Contaminati on
Sodium hydrosulfite	7775-14-6							X
Sodium nitrate	7631-99-4				X			
Sodium phosphide	7558-80-7							X
Sodium picramate	831-52-7				X			
Stibine	7803-52-3					X		
Strontium phosphide	13450-99-2							X
Sulfur dichloride	10545-99-0						X	
Sulfur dioxide (anhydrous)	7446-09-5	X				X		
Sulfur monochloride	10025-67-9						X	
Sulfur tetrafluoride	7783-60-0	X				X		
Sulfur trioxide	7446-11-9	X						
Sulfuryl chloride	7791-25-5							X
Sulfuryl fluoride	2699-79-8					X		
Tellurium hexafluoride	7783-80-4					X		
Tetrafluoroethylene	116-14-3		X					
Tetramethyllead	75-74-1	X						
Tetramethylsilane	75-76-3		X					
Tetranitroaniline	53014-37-2			X	X			
Tetranitromethane	509-14-8		X					
Tetrazol-1-acetic acid	21732-17-2				X			
Thiodiglycol	111-48-8						X	
Thionyl chloride	7719-09-7						X	X
Titanium tetrachloride	7550-45-0	X						X

Chemical of Interest	Chemical Abstract Service (CAS) Number	Release of Toxics	Release of Flammables	Release of Explosives	Theft/Diversio n of IEPD	Theft/Diversio n of WME	Theft/Diversio n of CW/CWP	Sabotage/Contaminati on
Toluene 2,4-diisocyanate	584-84-9	X						
Toluene 2,6-diisocyanate	91-08-7	X						
Toluene diisocyanate (unspecified isomer)	26471-62-5	X						
Trichlorosilane	10025-78-2		X					X
Triethanolamine	102-71-6						X	
Triethanolamine hydrochloride	637-39-8							
Triethyl phosphite	122-52-1						X	
Trifluoroacetyl chloride	354-32-5					X		
Trifluorochloroethylene	79-38-9		X			X		
Trimethyl phosphite	121-45-9						X	
Trimethylamine	75-50-3		X					
Trimethylchlorosilane	75-77-4		X					X
Trinitroaniline	26952-42-1			X	X			
Trinitroanisole	606-35-9			X	X			
Trinitrobenzene	99-35-4			X	X			
Trinitrobenzenesulfonic acid	2508-19-2			X	X			
Trinitrobenzoic acid	129-66-8			X	X			
Trinitrochlorobenzene	88-88-0			X	X			
Trinitrofluorenone	129-79-3			X	X			
Trinitro-meta-cresol	602-99-3			X	X			
Trinitronaphthalene	558101-17-8			X	X			
Trinitrophenetole	4732-14-3			X	X			
Trinitrophenol	88-89-1			X	X			
Trinitroresorcinol	82-71-3			X	X			
Trinitrotoluene	118-96-7			X	X			

Chemical of Interest	Chemical Abstract Service (CAS) Number	Release of Toxics	Release of Flammables	Release of Explosives	Theft/Diversio n of IEPD	Theft/Diversio n of WME	Theft/Diversio n of CW/CWP	Sabotage/Contaminati on
Tris(2-chloroethyl)amine	555-77-1						X	
Tris(2-chlorovinyl)arsine	40334-70-1						X	
Tritonal	54413-15-9			X	X			
Tungsten hexafluoride	7783-82-6					X		
Uranium hexafluoride	7783-81-5					X		
Urea	57-13-6				X			
Urea nitrate	124-47-0			X	X			
Vinyl acetate monomer	108-05-4		X					
Vinyl actylene	689-97-4		X					
Vinyl chloride	75-01-4		X					
Vinyl ethyl ether	109-92-2		X					
Vinyl fluoride	75-02-5		X					
Vinyl methyl ether	107-25-5		X					
Vinylidene chloride	75-35-4		X					
Vinylidene fluoride	75-38-7		X					
Vinyltrichlorosilane	75-94-5							X
Zinc dithionite	7779-86-4							X
Zinc hydrosulfite	7779-86-4							X
Zirconium picramate	63868-82-6				X			

**CFATS (CHEMICAL FACILITY ANTI-TERRORISM STANDARDS)
SECURITY LEGISLATION AS IT IS LIKELY TO APPLY TO THE
WATER & WASTEWATER INDUSTRIES**

APPENDIX 2 – EXAMPLES OF THRESHOLD QUANTITIES

<u>CHEMICALS OF INTEREST (COI)</u>	CHEMICAL ABSTRACT SERVICE (CAS)#	<u>SCREENING THRESHOLD MINIMUM QUANTITIES IN POUNDS</u>
Butane	106-97-8	10,000
Ethylamine	75-04-7	10,000
Chlorine	7782-50-5	2,500
Fluorine	7782-41-4	1,000
Ammonia	7664-41-7	10,000
Sulfur trioxide	7446-11-9	10,000
Hydrogen	1333-74-0	10,000
Isobutane	75-26-5	10,000
Methane	74-82-8	10,000
Propane	74-98-6	60,000
Ammonium Nitrate	6484-52-2	2,000

**CFATS (CHEMICAL FACILITY ANTI-TERRORISM STANDARDS)
SECURITY LEGISLATION AS IT IS LIKELY TO APPLY TO THE
WATER & WASTEWATER INDUSTRIES**

APPENDIX 3 – EXAMPLES TOP SCREEN QUESTIONS

**Example CSAT Top-Screen
Toxic Chemical of Interest**

Facility Name:	Starwars Chemical - Anywhere Facility
NAICS Code for the Facility:	33370
Facility DUNS Number:	222998812
Facility Type:	<input checked="" type="checkbox"/> Chemical manufacturing, usage, storage, and distribution <input type="checkbox"/> Petroleum refining <input type="checkbox"/> LNG storage
Facility Address:	209 Flamingo Blvd.
Facility City, State, Zip:	Anywhere, New Jersey,07726
Facility Latitude:	88.62
Facility Longitude:	-126.27
County or Equivalent Jurisdiction:	Monmouth
Owner of the Facility:	Starwars Chemical
Operator of the Facility:	Starwars Chemical

**Example CSAT Top-Screen
Toxic Chemical of Interest**

MTSA:	<input type="checkbox"/> Yes, the facility is regulated. <input checked="" type="checkbox"/> No, the facility is not regulated. <input type="checkbox"/> Partially. The facility includes a portion regulated by MTSA and a portion not regulated by MTSA.
Public Water System:	<input type="checkbox"/> Yes, the facility is a Public Water System. <input checked="" type="checkbox"/> No, the facility is not a Public Water System. <input type="checkbox"/> Partially. The facility includes a portion that is a Public Water System and a portion that is not a Public Water System.
Treatment Works:	<input type="checkbox"/> Yes, the facility is a Treatment Works. <input checked="" type="checkbox"/> No, the facility is not a Treatment Works. <input type="checkbox"/> Partially. The facility includes a portion that is a Treatment Works and a portion that is not a Treatment Works.

APPENDIX 3 – EXAMPLES TOP SCREEN QUESTIONS

Example CSAT Top-Screen Toxic Chemical of Interest

Department of Defense:	<input type="checkbox"/> Yes, the facility is owned or operated by the Department of Defense. <input checked="" type="checkbox"/> No, the facility is not owned or operated by the Department of Defense.
Department of Energy:	<input type="checkbox"/> Yes, the facility is owned or operated by the Department of Energy. <input checked="" type="checkbox"/> No, the facility is not owned or operated by the Department of Energy.
Nuclear Regulatory Commission:	<input type="checkbox"/> Yes, the facility is regulated by the Nuclear Regulatory Commission. <input checked="" type="checkbox"/> No, the facility is not regulated by the Nuclear Regulatory Commission.

Example CSAT Top-Screen Toxic Chemical of Interest

EPA RMP Covered Processes:	<input checked="" type="checkbox"/> Yes, the facility operates an EPA RMP covered process. EPA Facility Identifier: <u>22456789028</u> <input type="checkbox"/> No, the facility does not operate any EPA RMP covered processes.
Co-Location:	<input type="checkbox"/> The facility is host to a co-located tenant facility. Tenant Name: _____ Tenant EPA Facility Identifier: _____ <input type="checkbox"/> The facility is a co-located tenant facility. Host Name: _____ Host EPA Facility Identifier: _____ <input checked="" type="checkbox"/> Not applicable.
Full Time Employees:	240
Parent Company Name:	
Parent Company DUNS Number:	

APPENDIX 3 – EXAMPLES TOP SCREEN QUESTIONS

**Example CSAT Top-Screen
Toxic Chemical of Interest**

Theft/Diversion of Weapons-of-Mass-Effect (WME) Chemicals of Concern Present at or above Screening Threshold Quantity:	Chemical Name: <u>Anhydrous Ammonia</u> CAS#: <u>7664-41-7</u>
WME Chemicals Storage:	<input type="checkbox"/> Man-Portable <input type="checkbox"/> Bulk Transport

**Example CSAT Top-Screen
Toxic Chemical of Interest**

Mission Critical Production (Petroleum Refinery, LNG Storage, and Chemical Manufacturing Facilities ONLY):	What is the total value of products shipped and other receipts from the facility? _____ 5000000 _____ (dollars)
	Does this facility account for 20% or more of the domestic production of any one chemical to one or more critical infrastructure sectors (Defense Industrial Base, Energy – electric generation only, Public Health and Healthcare, or Public Drinking Water)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

APPENDIX 3 – EXAMPLES TOP SCREEN QUESTIONS

Example CSAT Top-Screen Toxic Chemical of Interest

Economically Critical Chemicals:	Excluding production for critical infrastructure sector(s), does this facility account for 35% or more of the domestic production of any one chemical for the other sectors of the US market. Do not include production to the critical infrastructure sectors defined as Defense Industrial Base, Energy (electric generation only), Public Health and Healthcare, or Public Drinking Water. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
----------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Example CSAT Top-Screen Toxic Chemical of Interest

Finish:	Do you want a copy of the letter with the preliminary tiering to be sent to the Preparer in addition to the Submitter? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
---------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------