**Department of Homeland Security Chemicals of Interest List (COI)**

On November 2, 2007, the Department of Homeland Security (DHS) released a final list of 300 chemicals that, if a facility possesses in certain quantities, triggers a requirement for an assessment, known as Top Screen, to be completed. DHS will use the Top Screens to determine whether the facility should be regulated as a high-level risk.

<http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&SID=65889784a49874d0c06df97bf085acaa&rgn=div5&view=text&node=6:1.0.1.1.10&idno=6>

To determine the type and quantity of chemicals that will be subject to the preliminary screening process, DHS examined the following three security issues:
1. Release – quantities of toxic, flammable, or explosive chemicals that have the potential to create significant adverse consequences for human life or health if intentionally released or detonated;
2. Theft and diversion – chemicals that have the potential, if stolen or diverted, to be used or converted into weapons; and
3. Sabotage and contamination – chemicals that, if mixed with other readily available materials, have the potential to create significant adverse consequences for human life or health.

The department identified these chemicals in the specific amounts for preliminary screening based on their potential to create significant human life or health consequences.

**College and University Laboratories**
All facilities that possess chemicals listed in Appendix A in quantities at or above the STQs will have to complete and submit a Top-Screen. The Appendix A requirements for Top-Screen may require colleges and universities to comply

**Chemicals of Interest List**

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| **Acetaldehyde** |
| **Acetone cyanohydrin, stabilized** |
| **Acetyl bromide** |
| **Acetyl chloride** |
| **Acetyl iodide** |
| **Acetylene** |
| **Acrolein** |
| **Acrylonitrile** |
| **Acrylyl chloride** |
| **Allyl alcohol** |
| **Allylamine** |
| **Allyltrichlorosilane, stabilized** |
| **Aluminum (powder)** |
| **Aluminum bromide, anhydrous** |
| **Aluminum chloride, anhydrous** |
| **Aluminum phosphide** |
| **Ammonia (anhydrous)** |
| **Ammonia (conc. 20% or greater)** |
| **Ammonium nitrate, [with more than 0.2 percent combustible substances, including any organic substance calculated as carbon, to the exclusion of any other added substance]** |
| **Ammonium nitrate, solid [nitrogen concentration of 23% nitrogen or greater]** |
| **Ammonium perchlorate** |
| **Ammonium picrate** |
| **Amyltrichlorosilane** |
| **Antimony pentafluoride** |
| **Arsenic trichloride** |
| **Arsine** |
| **Barium azide** |
| **1,4-Bis(2-chloroethylthio)-nbutane** |
| **Bis(2-chloroethylthio)methane** |
| **Bis(2-chloroethylthiomethyl)ether** |
| **1,5-Bis(2-chloroethylthio)-npentane** |
| **1,3-Bis(2-chloroethylthio)-npropane** |
| **Boron tribromide** |
| **Boron trichloride** |
| **Boron trifluoride** |
| **Boron trifluoride compoundwith methyl ether (1:1)** |
| **Bromine** |
| **Bromine chloride** |
| **Bromine pentafluoride** |
| **Bromine trifluoride** |
| **Bromotrifluorethylene** |
| **1,3-Butadiene** |
| **Butane** |
| **Butene** |
| **1-Butene** |
| **2-Butene** |
| **2-Butene-cis** |
| **2-Butene-trans** |
| **Butyltrichlorosilane** |
| **Calcium hydrosulfite** |
| **Calcium phosphide** |
| **Carbon disulfide** |
| **Carbon oxysulfide** |
| **Carbonyl fluoride** |
| **Carbonyl sulfide** |
| **Chlorine** |
| **Chlorine dioxide** |
| **Chlorine monoxide** |
| **Chlorine pentafluoride** |
| **Chlorine trifluoride** |
| **Chloroacetyl chloride** |
| **2-Chloroethylchloromethylsulfide** |
| **Chloroform** |
| **Chloromethyl ether** |
| **Chloromethyl methyl ether** |
| **1-Chloropropylene** |
| **2-Chloropropylene** |
| **Chlorosarin** |
| **Chlorosoman** |
| **Chlorosulfonic acid** |
| **Chromium oxychloride** |
| **Crotonaldehyde** |
| **Crotonaldehyde, (E)-** |
| **Cyanogen** |
| **Cyanogen chloride** |
| **Cyclohexylamine** |
| **Cyclohexyltrichlorosilane** |
| **Cyclopropane** |
| **DF** |
| **Diazodinitrophenol** |
| **Diborane** |
| **Dichlorosilane** |
| **N,N-(2-diethylamino)ethanethiol** |
| **Diethyldichlorosilane** |
| **o,o-Diethyl S-[2-(diethylamino)ethyl] phosphorothiolate** |
| **Diethyleneglycol dinitrate** |
| **Diethyl methylphosphonite** |
| **N,N-Diethyl phosphoramidic dichloride** |
| **N,N-(2-diisopropylamino)ethanethiol N,N-diisopropyl-(beta)-aminoethane thiol** |
| **Difluoroethane** |
| **N,N-Diisopropyl phosphoramidic dichloride** |
| **1,1-Dimethylhydrazine** |
| **Dimethylamine** |
| **N,N-(2-dimethylamino)ethanethiol** |
| **Dimethyldichlorosilane** |
| **N,N-Dimethyl phosphoramidic dichloride Dimethylphosphoramidodichloridate** |
| **2,2-Dimethylpropane** |
| **Dingu** |
| **Dinitrogen tetroxide** |
| **Dinitrophenol** |
| **Dinitroresorcinol** |
| **Diphenyldichlorosilane** |
| **Dipicryl sulfide** |
| **Dipicrylamine [or] Hexyl** |
| **N,N-(2-dipropylamino)ethanethiol** |
| **N,N-Dipropyl phosphoramidic dichloride** |
| **Dodecyltrichlorosilane** |
| **Epichlorohydrin** |
| **Ethane** |
| **Ethyl acetylene** |
| **Ethyl chloride** |
| **Ethyl ether** |
| **Ethyl mercaptan** |
| **Ethyl nitrite** |
| **Ethyl phosphonyl difluoride** |
| **Ethylamine** |
| **Ethyldiethanolamine** |
| **Ethylene** |
| **Ethylene oxide** |
| **Ethylenediamine** |
| **Ethyleneimine** |
| **Ethylphosphonothioic dichloride** |
| **Ethyltrichlorosilane** |
| **Fluorine** |
| **Fluorosulfonic acid** |
| **Formaldehyde (solution)** |
| **Furan** |
| **Germane** |
| **Germanium tetrafluoride** |
| **Guanyl nitrosaminoguanylidene hydrazine** |
| **Hexaethyl tetraphosphate and compressed gas mixtures** |
| **Hexafluoroacetone** |
| **Hexanitrostilbene** |
| **Hexolite** |
| **Hexyltrichlorosilane** |
| **HMX** |
| **HN1 (nitrogen mustard-1)** |
| **HN2 (nitrogen mustard-2)** |
| **HN3 (nitrogen mustard-3)** |
| **Hydrazine** |
| **Hydrochloric acid (conc. 37% or greater)** |
| **Hydrocyanic acid** |
| **Hydrofluoric acid (conc. 50% or greater)** |
| **Hydrogen** |
| **Hydrogen bromide (anhydrous)** |
| **Hydrogen chloride (anhydrous)** |
| **Hydrogen cyanide** |
| **Hydrogen fluoride (anhydrous)** |
| **Hydrogen iodide, anhydrous** |
| **Hydrogen peroxide (concentration of at least 35%)** |
| **Hydrogen selenide**  |
| **Hydrogen sulfide** |
| **Iodine pentafluoride** |
| **Iron, pentacarbonyl-** |
| **Isobutane** |
| **Isobutyronitrile** |
| **Isopentane** |
| **Isoprene** |
| **Isopropyl chloride** |
| **Isopropyl chloroformate** |
| **Isopropylamine** |
| **Isopropylphosphonothioic dichloride** |
| **Isopropylphosphonyl difluoride** |
| **Lead azide** |
| **Lead styphnate** |
| **Lewisite 1** |
| **Lewisite 2** |
| **Lewisite 3** |
| **Lithium amide** |
| **Lithium nitride** |
| **Magnesium (powder)** |
| **Magnesium diamide** |
| **Magnesium phosphide** |
| **MDEA** |
| **Mercury fulminate** |
| **Methacrylonitrile** |
| **Methane** |
| **2-Methyl-1-butene** |
| **3-Methyl-1-butene** |
| **Methyl chloride** |
| **Methyl chloroformate** |
| **Methyl ether** |
| **Methyl formate** |
| **Methyl hydrazine** |
| **Methyl isocyanate** |
| **Methyl mercaptan** |
| **Methyl thiocyanate** |
| **Methylamine** |
| **Methylchlorosilane** |
| **Methyldichlorosilane** |
| **Methylphenyldichlorosilane** |
| **Methylphosphonothioic dichloride** |
| **2-Methylpropene** |
| **Methyltrichlorosilane** |
| **Sulfur mustard (Mustard gas(H))** |
| **O-Mustard (T)** |
| **Nickel Carbonyl** |
| **Nitric acid** |
| **Nitric oxide** |
| **Nitrobenzene** |
| **5-Nitrobenzotriazol** |
| **Nitrocellulose** |
| **Nitrogen mustard hydrochloride** |
| **Nitrogen trioxide** |
| **Nitroglycerine** |
| **Nitromannite** |
| **Nitromethane** |
| **Nitrostarch** |
| **Nitrosyl chloride** |
| **Nitrotriazolone** |
| **Nonyltrichlorosilane** |
| **Octadecyltrichlorosilane** |
| **Octolite** |
| **Octonal** |
| **Octyltrichlorosilane** |
| **Oleum (Fuming Sulfuric acid)** |
| **Oxygen difluoride** |
| **1,3-Pentadiene** |
| **Pentane** |
| **1- Pentene** |
| **2-Pentene, (E)-** |
| **2-Pentene, (Z)-** |
| **Pentolite** |
| **Peracetic acid** |
| **Perchloromethylmercaptan** |
| **Perchloryl fluoride** |
| **PETN** |
| **Phenyltrichlorosilane** |
| **Phosgene** |
| **Phosphine** |
| **Phosphorus** |
| **Phosphorus oxychloride** |
| **Phosphorus pentabromide** |
| **Phosphorus pentachloride** |
| **Phosphorus pentasulfide** |
| **Phosphorus trichloride** |
| **Picrite** |
| **Piperidine** |
| **Potassium chlorate** |
| **Potassium cyanide** |
| **Potassium nitrate** |
| **Potassium perchlorate** |
| **Potassium permanganate** |
| **Potassium phosphide** |
| **Propadiene** |
| **Propane** |
| **Propionitrile** |
| **Propyl chloroformate** |
| **Propylene [1-Propene]** |
| **Propylene oxide** |
| **Propyleneimine** |
| **Propylphosphonothioic dichloride** |
| **Propylphosphonyl difluoride** |
| **Propyltrichlorosilane** |
| **Propyne** |
| **QL** |
| **RDX** |
| **RDX and HMX mixtures** |
| **Sarin** |
| **Selenium hexafluoride** |
| **Sesquimustard** |
| **Silane** |
| **Silicon tetrachloride** |
| **Silicon tetrafluoride** |
| **Sodium azide** |
| **Sodium chlorate** |
| **Sodium cyanide** |
| **Sodium hydrosulfite** |
| **Sodium nitrate** |
| **Sodium phosphide** |
| **Soman** |
| **Stibine** |
| **Strontium phosphide** |
| **Sulfur dioxide (anhydrous)** |
| **Sulfur tetrafluoride** |
| **Sulfur trioxide** |
| **Sulfuryl chloride** |
| **Tabun** |
| **Tellurium hexafluoride** |
| **Tetrafluoroethylene** |
| **Tetramethyllead** |
| **Tetramethylsilane** |
| **Tetranitroaniline** |
| **Tetranitromethane** |
| **Tetrazene** |
| **1H-Tetrazole** |
| **Thiodiglycol** |
| **Thionyl chloride** |
| **Titanium tetrachloride** |
| **TNT** |
| **Torpex** |
| **Trichlorosilane** |
| **Triethanolamine** |
| **Triethanolamine hydrochloride** |
| **Triethyl phosphate** |
| **Trifluoroacetyl chloride** |
| **Trifluorochloroethylene** |
| **Trimethylamine** |
| **Trimethylchlorosilane** |
| **Trimethyl phosphate** |
| **Trinitroaniline** |
| **Trinitroanisole** |
| **Trinitrobenzene** |
| **Trinitrobenzenesulfonic acid** |
| **Trinitrobenzoic acid** |
| **Trinitrochlorobenzene** |
| **Trinitrofluorenone** |
| **Trinitro-meta-cresol** |
| **Trinitronaphthalene** |
| **Trinitrophenetole** |
| **Trinitrophenol** |
| **Trinitroresorcinol** |
| **Tritonal** |
| **Tungsten hexafluoride** |
| **Vinyl acetate monomer** |
| **Vinyl acetylene** |
| **Vinyl chloride** |
| **Vinyl ethyl ether** |
| **Vinyl fluoride** |
| **Vinyl methyl ether** |
| **Vinylidene chloride** |
| **Vinylidene fluoride** |
| **Vinyltrichlorosilane** |
| **VX** |
| **Zinc hydrosulfite** |

[**http://www.dhs.gov/xlibrary/assets/chemsec\_appendixa-chemicalofinterestlist.pdf**](http://www.dhs.gov/xlibrary/assets/chemsec_appendixa-chemicalofinterestlist.pdf)