WFSM ENVIRONMENTAL HEALTH & SAFETY PARTICULARLY HAZARDOUS CHEMICALS	
Approved by: David A. Brown, Director, EH&S	*Effective Date:* February 13, 2008 *Revised Date:* March 21, 2012

I. PURPOSE
II. SCOPE
III. AUTHORITIES AND REFERENCES
IV. CHEMICAL SAFETY PROTOCOL SUBMITTAL AND APPROVAL PROCESS
V. REGULATED CHEMICALS
VI. TABLE OF REGULATED CHEMICALS

PURPOSE

This document provides a list of particularly hazardous chemicals which require a Chemical Safety Protocol and approval from Wake Forest School of Medicine (WFSM) Chemical Safety Committee. Particularly hazardous chemicals are carcinogens, reproductive toxins, highly acute toxicity, select agent toxins, hazardous drugs, air or water reactive and nanomaterials.

SCOPE

The information contained in this document applies to all research conducted at WFSM.

AUTHORITIES AND REFERENCES

OSHA 29 CFR 1910.1450	Occupational Exposure to Hazardous Chemicals in Laboratories

CHEMICAL SAFETY PROTOCOL SUBMITTAL AND APPROVAL PROCESS

The Chemical Safety Committee is charged with reviewing and approving Chemical Safety Protocols. Chemical Safety Protocols are drafted and submitted using Environmental Health & Safety's Chemical Safety Protocol website. A valid Medctr ID and password are required to enter the site.

1. Drafting a Chemical Safety Protocol

Prior to drafting a Chemical Safety Protocol, a Principal Investigator, or his/her designee, shall contact Environmental Health & Safety to have the chemical requiring a protocol added to their electronic chemical inventory (CMIS). *An electronic Chemical Safety Protocol cannot be created without the chemical first being in the PI's inventory.*

The Chemical Safety Protocol has eight mandatory sections that must be completed by the PI and one section that is completed by EH&S. The sections include:

1. Materials - what chemical is being used in the protocol
2. General Info – contact information for the PI
3. Rules – a listing of lab rules already in place

4. Description – a synopsis of how the chemical will be used
5. Employees – list of employees who will be working under the protocol
6. Locations – locations where the chemical will be used
7. Engineering Controls – list engineering controls for locations where chemical will be used
8. First Aid – explanation of first aid procedures for chemical exposure
9. EH&S monitoring – completed by EH&S

A tenth section, titled Animal, must be completed if the PI plans to use the chemical with research animals.

After completing each section, all employees listed on the protocol will need to electronically sign that they agree to the terms of the protocol.

2. Submitting a Chemical Safety Protocol

After all employees listed on the protocol have electronically signed and agreed to terms, then the protocol is ready to be submitted. The PI, or his/her designee, submits the protocol to EH&S electronically via the protocol website. The Occupational Hygiene Officer will then assign Chemical Safety Committee members to review the protocol. All comments, concerns, edits are displayed electronically and communicated back to the PI for his/her review.

3. Approving and Renewing a Chemical Safety Protocol

After the PI addresses any Committee concerns, the protocol is finalized and approved for an initial period of three years. After the initial three year period, EH&S will notify the PI of their need to renew, amend, or terminate the protocol. *Thus, each Chemical Safety Protocol is updated every three years.*

Chemical Safety Protocol Approval and Renewal Timeline:

1. Initial approval of protocol for three years
2. Option to renew, amend or terminate protocol after the initial three year period.
3. Renewed or amended protocols are approved for an additional three years.

REGULATED CHEMICALS

1. Chemicals with Standard Operating Procedures

A **Chemical Safety Protocol is not required** when a Standard Operating Procedure exists. Standard Operating Procedures are in place for the following commonly used chemicals:

- 5-Bromo-2-Deoxyuridine
- Acetaldehyde
- Acetic Anhydride
- Acrylamide
- Acrylonitrile
- Allyl Alcohol
- Allyl Chloride
- Aniline and Homolog Compounds
- Amine Compounds
- Benzene
- Cadmium Chloride
- Carbon Disulfide
- Chloramphenicol Crystalline
- Chlorinated Solvents
- Cobalt Chloride Hexahydrate
- Compressed Gases
- Corrosive
- Diaminobenzidine (DAB)
- Dimethyl Sulfoxide
- DMBA
- Ethylene Oxide
- Ethidium Bromide
- Flammable and Combustible Liquids
- Formaldehyde
- Formic Acid
- Glycol Ethers
- High Level Disinfectants (Glutaraldehyde, Cidex OPA)
- Hydrazine Anhydrous
- Hydroquinone
- Hydroxyurea
- Hydrofluoric Acid
- Inhalation Anesthetics for Animals
- Nicotine Hydrogen Tartrate
- Osmium Tetroxide
- Oxalic Acid
- Oxidizers
- Perchloric Acid
- Peroxides
- Phenol
- Picric Acid
- Pyridine
- Reactive Chemicals
- Sodium Orthovanadate
- Toluene
- Ultraviolet Lights
- Urethane
- Xylene

2. **Anesthetic materials** (enflurane, halothane, isoflurane) **do not require a Chemical Safety Protocol**. Standard Operating Procedures may be found for Inhalation Anesthetics for Animals.

3. **Controlled Agents (Drugs)**

   Controlled agents (drugs) **do not require a Chemical Safety Protocol**. However, if the controlled agent is being used in conjunction with a particularly hazardous chemical, a Chemical Safety Protocol may be required.

4. **Select Agent Toxins**

   If the chemical or agent that the researcher wishes to use is a chemical or biological warfare agent, then it is subject to the regulation of the Chemical Safety Committee.

   The following common **Select Agent Toxins require the submission of a Chemical Safety Protocol.** A complete list of select agents that require Chemical Safety Protocols can be found here.

COMMON SELECT AGENTS	
Abrin	Saxitoxin
Botulinum neurotoxins	Shigatoxin and Shiga-like inactivating proteins
Conotoxins	Staphylococcal enterotoxin
Diacetoxyscripenol	Tetrodotoxin
Ricin	T-2 toxin

5. Pharmaceuticals

The following pharmaceutical materials, which may have carcinogenic or reproductive hazards associated with their use, **do not require a Chemical Safety Protocol** so long as they are used in a common pharmaceutical form:

CHEMICAL/GENERIC NAME	
Aminopterin	Antithyroid Drugs
Coumarin Anticoagulants	Diazepam
Metronidazole	Methylaminopterin
Nitroglycerin	Oxymetholone
Penicillamine	Tetracyclines

If chemicals or agents that a researcher wishes to use are not listed below, but the supplier of the chemical has designated it meets the criteria of being a particularly hazardous chemical, then a Chemical Safety Protocol is necessary.

If the chemicals or agents that a researcher wishes to use are not listed below, but the perspective user of chemical has knowledge that it meets the criteria of being a particularly hazardous chemical, then a Chemical Safety Protocol is necessary.

5. Hazardous Drugs

The following Hazardous Drugs **require the submission of a Chemical Safety Protocol.**

CHEMICAL/GENERIC NAME		
Altretamine	Estramustine	Mercaptopurine
Aminoglutethimide	Etoposide	Methotrexate
Azathioprine	Floxuridine	Mitomycin
Bleomycin	Fluorouracil	Mitotane
Busulfan	Flutamide	Mitoxantrone
Carboplatin	Ganciclovir	Nafarelin
Carmustine	Idarubicin	Pipobroman
Chlorambucil	Ifosfamide	Plicamycin
Chlorotianisene	Interferon-A	Procarbazine
Chlorozotocin	Isotretinoin	Ribavirin
Cisplatin	L-Asparaginase	Streptozocin
Cyclophosphamide	Leuprolide	Testolactone
Cyclosporin	Levamisole	Thioguanine
Cytarrabine	Lomustine	Thiotepa
Dacarbazine	Mechlorethamine	Uracil Mustard

Dactinomycin	Medroxyprogesterone	Vidarabine
Daunorubicin	Megestrol	Vinblastine
Doxorubicin	Melphalan	Vincristine
		Zidovudine

6. Hormonal Drugs

The following hormonal drugs **require the submission of a Chemical Safety Protocol.**

CHEMICAL/GENERIC NAME	
Androgenic (Anabolic) Steroids	Ethinyl Estradiol
Conjugated Estrogens	Progesterone
Diethylstilbestrol (Diethylstilboestrol)	Tamoxifen
Estrogens (Not Conjugated): Estradiol-17beta, Estrone, Ethinylestradiol, Mestranol	

7. Air and Water Reactive Chemicals

The following air or water reactive chemicals require a Chemical Safety Protocol:

WATER REACTIVE CHEMICALS
Alkali metals, such as Sodium, Potassium, and Lithium.
Alkali metal hydrides and alkali metal amides, such as Lithium aluminum hydride or sodium amide.
Anhydrous metal halides of Aluminum, Antimony, Arsenic, Iron, Phosphorous, Sulfur, Silicon, Tin, Titanium, and Zirconium; such as Aluminum chloride, Titanium trichloride (very reactive), Titanium dichloride, Zirconium tetrachloride, and Stannic chloride.
Calcium carbide
Halides of nonmetals, such as Boron Trichloride, Boron Fluoride, Phosphorous trichloride, Phosphorus Pentachloride, Sulfur Chloride, Silicon Tetrachloride.
Inorganic acid halides, such as Phosphorus oxychloride, Thionyl chloride, Sulfuryl Chloride, or Sulfur Oxychloride, and Phosphorus oxychloride and phosphorus pentoxide.
Metal alkyls, such as lithium alkyls , aluminum and magnesium alkyls (Grignard reagents)
Metal hydrides of Aluminum, Boron, Calcium, Potassium, Lithium, Sodium, like Aluminum hydride, Lithium hydride, and Sodium hydride.
Organic acid halides and anhydrides of low molecular weight, like acetyl chloride and acetic anhydride

AIR REACTIVE CHEMICALS
Alkali metals, such as Lithium, Potassium, and Sodium.
Grignard reagents (RMgX), R= alkyl, X= Halides, like phenylmagnesium bromide

Metal alkyls and aryls, such as alkyl Lithium, alkyl Sodium, alkyl Aluminum, and alkyl Zinc (i.e., tributylaluminum, butyllithium, etc.).
Metal carbonyls, such as Nickel Carbonyl, Iron Carbonyl, Cobalt Carbonyl.
Metal powders, such as Aluminum, Cobalt, Iron, Magnesium, Manganese, Palladium, Platinum, Tin, Titanium, Zinc, and Zirconium.
Metal hydrides, such as Sodium hydride, and Lithium Aluminum Hydride.
Non-metal hydrides, such Diborane and other boranes, Phosphene, Arsine.
Non-metal alkyls, such as alkyl Boron, alkyl Phosphorus, Alkyl silver.
Phosphorus (white)

8. Nanomaterials

A Chemical Safety Protocol is required for the use of all nanomaterials.

9. Listed Chemicals

A Chemical Safety Protocol is required for the following listed chemicals.

Chemical Agent	CASRN
(2-CHLOROETHYL-3-(4-METHYLCYCLOHEXYL-1-NITROSOUREA (MeCCNU)	13909-09-6
(N,N-DIMETHYLANILINE)	121-69-7
1-(2-CHLOROETHYL)-3-CYCLOHEXYL-1-NITROSOUREA (CCNU)	13010-47-4
1,1-DIMETHYLHYDRAZINE	57-14-7
1,2,3-TRICHLOROPROPANE	96-18-4
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	106-93-4
1,2-DICHLOROETHANE	107-06-2
1,3-BUTADIENE	106-99-0
1,3-DICHLORO-5, 5-DIMETHYL HYDANTOIN	118-52-5
1,3-DICHLOROPROPENE (TECHNICAL GRADE)	542-75-6
1,3-PROPANE SULTONE	1120-71-4
1,4-DICHLOROBENZENE	106-46-7
1,4-DIOXANE	123-91-1
13-CIS-RETINOIC ACID (ISOTRETINOIN AND ACCUTANE)	
1-AMINO-2-METHYLANTHRAQUINONE	82-28-0
2,3,7,8-TETRACHLORODIBENZO-PARA-DIOXIN	1746-01-6
2,4,5-T	
2,4,6-TRICHLOROPHENOL	88-06-2
2,4-DIAMINOANISOLE SULFATE	39156-41-7
2,4-DIAMINOTOLUENE	95-80-7
2-ACETYLAMINOFLUORENE	53-96-3
2-AMINOANTHRAQUINONE	117-79-3
2-AMINOPYRIDINE	504-29-0
2-METHYLAZIRIDINE (PROPYLENEIMINE)	75-55-8
2-NAPHTHYLAMINE	91-59-8
2-NITROPROPANE	79-46-9

Chemical Agent	CASRN
3,3'-DICHLOROBENZIDINE	91-94-1
3,3'-DICHLOROBENZIDINE 2HCl	612-83-9
3,3'-DIMETHOXYBENZIDINE	119-90-4
3,3'-DIMETHOXYBENZIDINE 2HCl	20325-40-0
3,3'-DIMETHYLBENZIDINE	119-93-7
3-CHLORO-2-METHYLPROPENE	563-47-3
4-(N-NITROSOMETHYL-AMINO)-1-(3-PYRIDYL)-1-BUTANONE (NNK)	64091-91-4
4,4´-METHYLENE BIS(2-CHLOROANILINE) (MOCA)	101-14-4
4,4'-METHYLENEBIS(N,N-DIMETHYLBENZENAMINE)	101-61-1
4,4'-METHYLENEDIANILINE AND ITS DIHYDROCHLORIDE	101-77-9 and 13552-44-8
4,4'-OXYDIANILINE	101-80-4
4-AMINOBIPHENYL	92-67-1
4-CHLORO-o-PHENYLENEDIAMINE	95-83-0
4-DIMETHYLAMINO-AZOBENZENE	60-11-7
4-NITROBIPHENYL	
4-VINYL-1-CYCLOHEXENE DIEPOXIDE	106-87-6
5-METHOXYPSORALEN	484-20-8
8-METHOXYPSORALEN (METHOXSALEN)	298-81-7
ACETYLENE TETRABROMIDE	79-27-6
A-CHLOROACETOPHENONE (PHENACYL CHLORIDE)	532-27-4
ACROLEIN	107-02-8
ADRIAMYCIN	23214-92-8
AFLATOXINS	1402-68-2
ALDRIN	309-00-2
ALLYL GLYCIDYL ETHER (AGE)	106-92-3
ALLYL PROPYL DISULFIDE	2179-59-1
ALPHA-NAPHTHYLAMINE	
AMITROLE	61-82-5
ANISIDINE (O-,P-ISOMERS)	29191-52-4
ANTIMONY AND COMPOUNDS (AS SB)	7440-36-0
ARSENIC AND ARSENIC COMPOUNDS	7440-38-2
ARSINE	7784-42-1
AZACITIDINE	320-67-2
AZATHIOPRINE	446-86-6
AZINPHOS-METHYL	86-50-0
BENZIDINE	92-87-5
BENZIDINE-BASED DYES	
BENZOTRICHLORIDE	98-07-7
BENZYL CHLORIDE	100-44-7
BERYLLIUM AND COMPOUNDS	7440-41-7
BETA- NAPHTHYLAMINE	91-59-8
BETA-PROPRIOLACTONE	57-57-8
BISCHLOROETHYL NITROSOUREA (BCNU)	154-93-8
BIS-CHLOROMETHYL ETHER	542-88-1
BORON TRIFLUORIDE	7637-07-2
BROMINE	7726-95-6
BROMODICHLOROMETHANE	75-27-4
BROMOFORM	75-25-2

Chemical Agent	CASRN
BUTYLATED HYDROXYANISOLE	25013-16-5
C.I. BASIC RED 9 MONOHYDROCHLORIDE	569-61-9
CADMIUM AND COMPOUNDS	7440-43-9
CAPTAFOL	2425-06-1
CARBARYL (SEVIN)	63-25-2
CHLORDANE	57-74-9
CHLORENDIC ACID	115-28-6
CHLORINATED CAMPHENE	8001-35-2
CHLORINATED DIPHENYL OXIDE	55720-99-5
CHLORINATED PARAFFINS (C12, 60% CHLORINE)	108171-26-2
CHLORINE TRIFLUORIDE	7790-91-2
CHLOROACETALDEHYDE	107-20-0
CHLOROBIPHENYLS	
CHLORODIPHENYL (42% CHLORINE)(PCB)	53469-21-9
CHLORODIPHENYL (54% CHLORINE)(PCB)	11097-69-1
CHLOROMETHYL METHYL ETHER, TECH-GRADE	107-30-2
CHLOROPICRIN	76-06-2
CHLOROPRENE "S"	
CLOPIDOL (RESPIRABLE FRACTION)	2971-90-6
COBALT AND COMPOUNDS	7440-48-4
CRAG HERBICIDE (SESONE) (RESPIRABLE FRACTION	136-78-7
CRESOL, ALL ISOMERS	1319-77-3
CROTONALDEHYDE	123-73-9
CUPFERRON	135-20-6
CYANIDES (AS CN)	(4)
DACARBAZINE	4342-03-4
DECABORANE	17702-41-9
DEMETON (SYSTOX)	8065-48-3
DIAZOMETHANE	334-88-3
DIBENZANTHRACENE	53-70-3
DIBORANE	19287-45-7
DIBROMO-3-CHLOROPROPANE,1,2-	
DIBUTYL PHOSPHATE	107-66-4
DIBUTYL PHTHALATE	84-74-2
DICHLORODIPHENYLTRICHLOROETHANE (DDT)	50-29-3
DICHLORVOS (DDVP)	62-73-7
DICYCLOPENTADIENYL IRON (RESPIRABLE FRACTION)	102-54-5
DIELDRIN	60-57-1
DIEPOXYBUTANE	1464-53-5
DIETHYL SULFATE	64-67-5
DIGLYCIDYL ETHER (DGE)	2238-07-5
DIGLYCIDYL RESORCINOL ETHER	101-90-6
DIMETHYL SULFATE	77-78-1
DIMETHYL-1,2-DIBROMO-2, 2-DICHLOROETHYL PHOSPHATE	300-76-5
DIMETHYLCARBAMOYL CHLORIDE	79-44-7
DIMETHYLVINYL CHLORIDE	513-37-1
DINITROBENZENE (ALL ISOMERS)	

Chemical Agent	CASRN
DINITRO-O-CRESOL	534-52-1
DIPHENYL (BIPHENYL)	92-52-4
DIPHENYLHYDANTOIN AND TRIMETHADIONE	
DIRECT BLACK 38	1937-37-7
DIRECT BLUE 6	2602-46-2
ENDRIN	72-20-8
EPICHLOROHYDRIN	106-89-8
ERIONITE	66733-21-9
ETHYL ACRYLATE	140-88-5
ETHYL METHANESULFONATE	62-50-0
ETHYLENE CHLOROHYDRIN	107-07-3
ETHYLENE DIBROMIDE	106-93-4
ETHYLENE GLYCOL DINITRATE	628-96-6
ETHYLENE THIOUREA	96-45-7
ETHYLENEIMINE	
ETRETINATE	
FERROVANADIUM DUST	12604-58-9
FLUORINE	7782-41-4
FURFURAL	98-01-1
GLYCIDOL	556-52-5
HEPTACHLOR	76-44-8
HEXACHLOROBENZENE	118-74-1
HEXACHLOROETHANE	67-72-1
HEXACHLORONAPHTHALENE	1335-87-1
HEXAMETHYL-PHOSPHORAMIDE	680-31-9
HYDRAZINE SULFATE	10034-93-2
HYDRAZOBENZENE	122-66-7
IQ (2-AMINO-3-METHYLIMIDAZO4,5-FQUINOLINE)	76180-96-6
KEPONE (CHLORDECONE)	143-50-0
LEAD AND COMPOUNDS	
LINDANE AND OTHER HEXACHLOROCYCLOHEXANE ISOMERS	58-89-9
MALONONITRILE	2698-41-1
MERCURY AND COMPOUNDS	7439-97-6
METHIMAZOLE	
METHYL CHLOROMETHYL ETHER	
METHYL HYDRAZINE (MONOMETHYL HYDRAZINE)	60-34-4
METHYL ISOCYANATE	624-83-9
METHYL METHANESULFONATE	66-27-3
METHYLENE BISPHENYL ISOCYANATE (MDI)	101-68-8
METHYLENEDIANILINE	
MIREX	2385-85-5
MOLYBDENUM AND COMPOUNDS	7439-98-7
MONOMETHYL ANILINE	100-61-8
MUSTARD GAS (SULFUR MUSTARD)	505-60-2
N,N-BIS(2-CHLOROETHYL)-2-NAPHTHYLAMINE (CHLORNAPHAZINE)	494-03-1
NAPHTHYL METHYLCARBAMATE	
N-ETHYLMALEIMIDE	128-53-0
N-ETHYL-N-NITROSOUREA	759-73-9
N-METHYLMALEIMIDE	930-88-1

Chemical Agent	CASRN
NITRILOTRIACETIC ACID	139-13-9
NITROBENZENE	98-95-3
NITROFEN	1836-75-5
NITROGEN MUSTARD	51-75-2
NITROGEN MUSTARD HYDROCHLORIDE	55-86-7
NITROTOLUENE (ALL ISOMERS)	
N-METHYL-N´-NITRO-N-NITROSOGUANIDINE (MNNG)	70-25-7
N-METHYL-N-NITROSOUREA	684-93-5
NITROSAMINE COMPOUNDS INCLUDING BUT NOT LIMITED TO: N-NITROSODIETHANOLAMINE	 1116-54-7
N-NITROSODIETHYLAMINE	55-18-5
N-NITROSODIETHYLAMINE	55-18-5
N-NITROSODIMETHYLAMINE	62-75-9
N-NITROSODI-N-BUTYLAMINE	924-16-3
N-NITROSODI-N-PROPYLAMINE	621-64-7
N-NITROSOMETHYL-VINYLAMINE	4549-40-0
N-NITROSOMORPHOLINE	59-89-2
N-NITROSO-N-ETHYLUREA	759-73-9
N-NITROSO-N-METHYLUREA	684-93-5
N-NITROSONORNICOTINE	16543-55-8
N-NITROSOPIPERIDINE	100-75-4
N-NITROSOPYRROLIDINE	930-55-2
N-NITROSOSARCOSINE	13256-22-9
NORETHISTERONE	68-22-4
o-AMINOAZOTOLUENE	97-56-3
o-ANISIDINE HYDROCHLORIDE	134-29-2
OCHRATOXIN A	303-47-9
OXYGEN DIFLUORIDE	7783-41-7
OZONE	10028-15-6
PARA-CHLORO-ORTHO-TOLUIDINE AND ITS STRONG ACID SALTS `	95-69-2
PARAMETHADIONE	
PARAQUAT (RESPIRABLE DUST)	4685-14-7 1910-42-5 2074-50-2
PARATHION	56-38-2
p-CRESIDINE	120-71-8
PENTABORANE	19624-22-7
PENTACHLORONAPHTHALENE	1321-64-8
PENTACHLOROPHENOL	87-86-5
PERCHLOROMETHYL MERCAPTAN	594-42-3
PERCHLORYL FLUORIDE	7616-94-6
PHENACETIN	62-44-2
PHENAZOPYRIDINE HYDROCHLORIDE	136-40-3
PHENOXYBENZAMINE HYDROCHLORIDE	63-92-3
PHENYL ETHER-BIPHENYL MIXTURE, VAPOR	
PHOSGENE (CARBONYL CHLORIDE)	75-44-5
PHOSPHINE	7803-51-2
PHOSPHORUS (YELLOW)	7723-14-0
PHOSPHORUS PENTACHLORIDE	10026-13-8

Chemical Agent	CASRN
PHOSPHORUS PENTASULFIDE	1314-80-3
PHOSPHORUS TRICHLORIDE	7719-12-2
PHTHALIC ANHYDRIDE	85-44-9
PICLORAM	1918-02-1
PINDONE (2-PIVALYL-1, 3-INDANDIONE)	83-26-1
P-NITROANILINE	100-01-6
P-NITROCHLOROBENZENE	100-00-5
POLYBROMINATED BIPHENYLS	
POLYCHLORINATED BIPHENYLS	
POLYCYCLIC AROMATIC HYDROCARBON (PAH) COMPOUNDS. INCLUDING BUT NOT LIMITED TO:	
ACENAPHTHENE	
ACENAPHTHYLENE	
ANTHRACENE	
BENZO(A)ANTHRACENE	56-55-3
BENZOAPYRENE	50-32-8
BENZO(B)FLUORANTHENE	
BENZO(K)FLUORANTHENE	
BENZO(G,H,I)PERYLENE	
CHRYSENE	
DIBENZ(A,H)ANTHRACENE	
FLUORANTHENE	
FLUORENE	
INDENO(1,2,3-CD)PYRENE	
PHENANTHRENE	
PYRENE	
P-PHENYLENE DIAMINE	106-50-3
PROCARBAZINE HYDROCHLORIDE	366-70-1
PROPYLENE IMINE	75-55-8
PROPYLENE OXIDE	75-56-9
PROPYLTHIOURACIL	51-52-5
PYRETHRUM	8003-34-7
RESERPINE	50-55-5
RETINOIC ACID, 1,3-CIS-	
SAFROLE	94-59-7
STRYCHNINE	57-24-9
STYRENE	100-42-5
STYRENE-7,8-OXIDE	96-09-3
SULFALLATE	95-06-7
SULFUR DIOXIDE	7446-09-5
SULFUR PENTAFLUORIDE	5714-22-7
SULFURYL FLUORIDE	2699-79-8
TELLURIUM HEXAFLUORIDE (AS TE)	7783-80-4
TEPP (TETRAETHYL PYROPHOSPHAATE)	107-49-3
TERT-BUTYL CHROMATE	1189-85-1
TETRACHLOROETHYLENE (PERCHLOROETHYLENE)	127-18-4
TETRACHLORONAPHTHALENE	1335-88-2
TETRAMETHYL SUCCINONITRILE	3333-52-6
TETRANITROMETHANE	509-14-8
THALIDOMIDE	
THIOUREA	62-56-6

Chemical Agent	CASRN
THIRAM	137-26-8
THORIUM DIOXIDE	1314-20-1
TOLUENE DIISOCYANATE	26471-62-5
TOLUENE-2, 4-DIISOCYANATE (TDI)	584-84-9
TRICHLORONAPHTHALENE	1321-65-9
TRIMETHADIONE	
TRIORTHOCRESYL PHOSPHATE	78-30-8
TRIPHENYL PHOSPHATE	115-86-6
TRIS(2,3-DIBROMOPROPYL) PHOSPHATE	126-72-7
VALPROIC ACID	
VANADIUM AND COMPOUNDS	1314-02-1
VINYL BROMIDE	593-60-2
VINYL CHLORIDE	75-01-4
VINYL FLUORIDE	75-02-5
XYLIDINE	1300-73-8
YTTRIUM	7440-65-5