
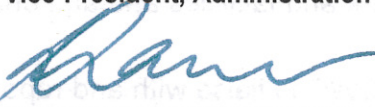


Complete Program Title: <b>Control Program for Substances Regulated Under the Chemical Weapons Convention Program</b>	Risk Management Manual (RMM) Number: <b>503</b>
Approved by:  <b>Vice-President, Administration</b>  <b>President and Vice-Chancellor</b>	Date of Most Recent Approval: <b>February 2015</b>
Date of Original Approval: <b>July 2002</b>	Supersedes/Amends Program dated: <b>June 2009</b>
Responsible Executive: <b>Vice-President, Administration</b>	Enquiries: <b>Environmental and Occupational Health Support Services (EOHSS) <a href="mailto:eohts@mcmaster.ca">eohts@mcmaster.ca</a></b>
<b>DISCLAIMER:</b> <i>If there is a discrepancy between this electronic program and the written copy held by the program owner, the written copy prevails.</i>	

**1 Purpose**

- 1.1 To ensure compliance with the Chemical Weapons Convention Implementation Act; an Act to Implement the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and Their Destruction.

**2 Scope**

- 2.1 People, who use, process, consume, store, import or export substances regulated under the Chemical Weapons Convention.

**3 Related Documents**

- 3.1 Chemical Weapons Convention Implementation Act.  
3.2 Export and Import Permit Act.  
3.3 Occupational Health and Safety Act.  
3.4 McMaster University Risk Management Manual #300 Safety Orientation and Training Program.  
3.5 McMaster University Risk Management Manual #309 Laboratory Safety Manual.

- 3.6 McMaster University Risk Management Manual #501 Hazardous Materials Management Systems.
- 3.7 McMaster University Risk Management Manual #502 Hazardous Waste Management Program.
- 3.8 McMaster University Risk Management Manual #505 Transportation of Dangerous Goods Program.

#### 4 Definitions

- 4.1 **Supervisor:** Person who has control over assigned work and facilities and authority over the persons conducting the work.
- 4.2 **Canadian National Authority:** Established under the CWC to liaise with and report to the Organization for the Prohibition of Chemical Weapons in The Hague, Netherlands. Canadian, National Authority is located in the Department of Foreign Affairs and International Trade.
- 4.3 **Schedule 1 Chemicals:** Chemicals known to be chemical warfare agents and their precursors. These chemicals have little or no use other than in the production of chemical weapons. There are, however, some in use in Canada for nonmilitary research purposes e.g. nitrogen mustards, saxitoxin and ricin are being used for pharmaceutical medical research and diagnostic purposes.
- 4.4 **Schedule 2 Chemicals:** Chemicals and compounds that are key precursors to chemical warfare agents but have some commercial utility. These chemicals are, with a few exceptions, not produced in large commercial quantities for purposes not prohibited under the convention. In Canada, main commercial use involves thiodiglycol and dimethyl methyl phosphate.
- 4.5 **Schedule 3 Chemicals:** Chemicals that can be used for the production of chemical warfare agents, but are produced in large quantities for commercial use. In Canada, the most common are triethanolamine, methyldiethanolamine, and chloropicrin.
- 4.6 **Worker:** means any of the following, but does not include an inmate of a correctional institution or like institution or facility who participates inside the institution or facility in a work project or rehabilitation program:
  - 1. A person who performs work or supplies services for monetary compensation.
  - 2. A secondary school student who performs work or supplies services for no monetary compensation under a work experience program authorized by the school board that operates the school in which the student is enrolled.
  - 3. A person who performs work or supplies services for no monetary compensation under a program approved by a college of applied arts and technology, university or other post-secondary institution.
  - 4. A person who receives training from an employer, but who, under the *Employment Standards Act, 2000*, is not an employee for the purposes of that Act because the conditions set out in subsection 1 (2) of that Act have been met.

5. Such other persons as may be prescribed who perform work or supply services to an employer for no monetary compensation; (“travailleur”)

4.7 **Import:** shall be understood to mean the physical movement of scheduled chemicals into the territory or any other place under the jurisdiction or control of a State Party from the territory or any other place under the jurisdiction or control of another State, excluding transit operations.

4.8 **Export:** shall be understood to mean the physical movement of scheduled chemicals out of the territory or any other place under the jurisdiction or control of a State Party into the territory or any other place under the jurisdiction or control of another State, excluding transit operations.

4.9 **Acronyms:**

- CWC – Chemical Weapons Convention
- EOHSS – Environmental and Occupational Health Support Services
- FHS safety office – Faculty of Health Sciences Safety Office
- JHSC – Joint Health and Safety Committee
- SDS –Safety Data Sheets
- SOP – Standard Operating Procedure

## 5 Responsibilities

5.1 **Role of Senior Managers (Deans / Directors / Chairs):**

Senior Managers shall:

- Provide the support and direction necessary to ensure compliance with this Control Program and the CWC: and
- Complete the declaration in each of the attached appendices and file with EOHSS.

5.2 **Role of Supervisor:**

Supervisors shall:

- obtain approval and direction from the Department Chair and EOHSS prior to obtaining, storing, using or discarding Schedule 1 Chemicals;
- ensure that all Schedule 1, 2 and 3 Chemicals are received and stored in secured areas;
- provide an SOP which includes a hygiene plan, security plan, emergency plan and SDS for CWC scheduled chemicals;

- ensure that all persons working with CWC scheduled chemicals are trained in security and reporting requirements and the safety requirements outlined in the SOP (See McMaster University Safety Orientation and Training Program);
- review the SOPs annually for legislative requirements and the consistent application of best practices;
- document employee training;
- maintain a written inventory of all CWC scheduled chemicals and maintain such inventory in a secured area; and
- provide EOHSS with the information necessary to meet the requirement of the Canadian National Authority that all scheduled chemicals held by the employer be reported on an annual basis.

### 5.3 **Role of Worker / Student:**

The worker / Student shall:

- follow the procedures outlined in the SOP and SDS for the safe handling, storage and disposal of CWC scheduled chemicals; and
- adhere to the required security protocols for the storage of CWC listed chemicals.

### 5.4 **Role of CJHSC**

**The CJHSC shall:**

- review the Chemical Weapons control Program on a scheduled basis

### 5.5 **Role of JHSC's:**

The JHSC's shall:

- be provided, upon request with a list of all CWC scheduled chemicals used or stored within their area of responsibility.

### 5.6 **Role of Security Services:**

Security Services shall:

- obtain a copy of the locations where CWC Schedule 1 chemicals are stored; and
- conduct periodic audits of the security practices in such area.

### 5.7 **EOHSS:**

EOHSS shall:

- approve the use, storage and disposal of all CWC Schedule 1 Chemicals;
- inform Security Services of the location of all CWC Schedule 1 Chemicals;
- coordinate the record keeping for all CWC Schedule 1, 2 and 3 chemicals;
- approve the SOP's for the use, storage, and disposal of all CWC Scheduled Chemicals;
- conduct periodic audits of the safety practices in locations where CWC Scheduled chemicals are used and/or stored; and
- appoint a person to coordinate the annual reporting of CWC scheduled chemicals to the Canadian National Authority.

## 6 Procedural Guidelines

Recognizing that, in the interest of Canadian and global security, the intent of the Chemical Weapons Implementation Convention is to deny others the capability to make chemical weapons. The following procedural guidelines shall be followed for CWC Scheduled Chemicals. **(See Appendix A Schedule of CWC Regulated Chemicals).**

- Schedule 1 CWC controlled chemicals may be obtained, stored, used or discarded only with the approval of EOHSS.
- Schedule 2 CWC controlled chemicals require an approved SOP outlining safe handling, work, storage, security, emergency and disposal procedures.
- The responsibilities outlined in this program must be reviewed and accepted by all persons involved in the handling, use, storage or disposal of CWC regulated chemicals.
- Persons working with CWC scheduled chemicals shall be trained in the security and reporting requirements of the CWC as well as the safe handling, work, storage, emergency and disposal procedures outlined in an SOP. Such training shall be documented by the supervisor (See McMaster University, Safety Orientation and Training Program).
- Periodic safety and security audits of areas utilizing CWC regulated chemicals shall be conducted by EOHSS and Security Services.

## 7 Records

- 7.1 Supervisors will maintain and secure updated inventories of all CWC regulated chemicals and records of the disposal of such chemicals.

- 7.2 Supervisors will maintain a record of CWC related training provided to employees and students.
- 7.3 EOHSS shall retain a central inventory of all CWC regulated chemicals and coordinate annual declarations to the Canadian National Authority.

**Appendix A****Schedule of CWC Regulated Chemicals: (As listed in the Declaration of Production Activities for Chemical Weapons Purpose document)**

## Section 2.4 SCHEDULE 1 CHEMICALS

(2.4) Please indicate those chemicals described below that we produced, processed, consumed acquired, imported, retained, transferred or exported in ANY QUANTITY by your business or institution during previous calendar year.

1A – TOXIC CHEMICALS	CAS REGISTRY NUMBER
1. O-Alkyl ( £ C10, incl. Cycloalkyl ) alkyl (Me, Et, n-Pr or I-Pr ) – phosphonofluoridates	
Sarin: O – Isopropyl methylphosphonofluoridate	(107-44-8)
Soman: O- Pinacolyl methylphosphonofluoridate	(96-64-0)
Other :	
Other :	
2. O – Alkyl ( £ C10, incl. Cycloalkyl ) N,N-dialkyl (Me, n-Pr or I-Pr) phosphoramidocyanidates e.g.	
Tabun: O- Ethyl N,N-dimethyl phosphoramidocyanidate	(77 –81-6)
Other:	
Other:	
3.O –Alkyl (H or £ C10, incl. Cycloalkyl) S-2-dialkyl (Me, Et, n-PR or I-Pr) aminoethyl Alkyl (Me, n-Pr or I-Pr) phosphonothiolates, and corresponding alkylated or protonated salts e.g.	
VX: O-Ethyl S-2 diisopropylaminoethyl methyl phosphonothiolate	(50782-69-9)
Other:	
Other:	
4. SulphurMustards:	
2 – Chloroethylchloromethylsulfide	(2625-76-5)
Mustard gas : Bis (2-chloroethyl)sulfide	(505-60-2)
Bis ( 2-chloroethylthio) methane	(63869-13-6)
Sesquimustards:	
1, 2-Bis( 2-chloroethylthio) ethane	(3563-36-8)
1,3-Bis (2-chloroethylthio) n-propane	(63905-10-2)
1,4-Bis(2-chloroethylthio) n-butane	(142868-93-7)
1,5-Bis(2-chloroethylthio) n-pentane	(142868-94-8)
Bis (2-chloroethylthiomethyl) ether	(63918-90-1)
O-Mustard: Bus (2-chloroethylthioethyl) ether	(63918-89-8)

5. Lewisites:	
Lewisite 1: 2-Chlorovinyl dichloroarsine	(541-25-3)
Lewisite 2: Bis (2-chlorovinyl) chloroarsine	(40334-69-8)
Lewisite 3: Tris (2-chlorovinyl) arsine	(40334-70-1)
6. Nitrogen Mustards	
HN1: Bis (2-chloroethyl) ethylamine	(538-07-8)
HN2: Bis (2-chloroethyl) methylamine	(51-75-2)
HN3 : Tri (2-chloroethyl) amine	(555-77-1)
7. Saxitoxin	(35523-89-8)
8. Ricin	(9009-86-3)

Please complete A or B, and C below.

Declaration: -

A. ( ) Names of individuals supervising activities Weapons Convention toxic chemicals or precursors are listed below:

- |    |    |
|----|----|
| 1. | 2. |
| 3. | 4. |

B. ( ) There are no toxic chemicals or precursors as listed by the Chemical Weapons Convention at McMaster University locations under my jurisdiction.

C. Chair's name \_\_\_\_\_

Department. \_\_\_\_\_

Chair's signature \_\_\_\_\_

Date \_\_\_\_\_



## SECTION 2.1 SCHEDULE 2 CHEMICALS

(2.1) Please indicate those chemicals below that were produced, processed, consumed, imported or exported by your business or Institution in ANY Quantity during previous calendar year.

2A TOXIC CHEMICALS	CAS REGISTRY NUMBER
1. Amiton: O, O-Diethyl S-{2-(diethylamino)ethyl} phosphorothiolate and corresponding alkylated or protonated salts	(78-53-5)
Other:	
2. PFIB: 1,1,3,3,3- Pentafluoro-2-(trifluoromethyl) – I-propene	(382-21-8)
3. * BZ: 3 – Quinuclidinyl benzilate	(6581-06-2)
2B. PRESURSORS	
4. Chemicals, except for those in Schedule 1, contain a phosphorus atom to which is bonded one methyl, ethyl (normal or iso) group but not further atoms e.g.	
Methylphosphonyl dichloride	(676-97-1)
Dimethyl methylphosphonate	(756-79-6)
Other:	
Other:	
Exemption: Fonofos: O-Ethyl S-phenyl ethylphosphonothiolothionate	(944-22-9)
5. N,N- Dialkyl (Me,Et, n-Pr or I-Pr) phosphoramidic dihalides	
Other :	
Other:	
6. Dialkyl (Me,Et, n-Pr or I-Pr) N,N-dialkyl (Me, Et, n-Pr or I-Pr) Phosphoramidates	
Other :	
Other:	
7. Arsenic trichloride	(7784-34-1)
8. 2,2-Diphenyl-2-hydroxyacetic acid	(76-93-7)
9. Quinuclidin-3-ol	(1619-34-7)
10. N,N-Dialkyl (Me,Et, n-Pr or I-Pr) aminoethyl-2-chlorides and corresponding protonated salts	
Other :	
Other:	

2B PRECURSORS – continued ..2

11. N,N-Dialkyl (Me,Et, n-Pr or I-Pr) amino ethane 2-ols and corresponding protonated salts	
Exemption : N, N-Dimethylaminoethanol and corresponding protonated salts	(108-01-0)
Exemption : N, N-Diethylaminoethanol and other protonated salts	(100-37-8)
Other:	
Other:	
12.N, N-Dialkyl (Me, Et, n-Pr-I-Pr) aminoethane-2-thiols and corresponding Protonated salts	
Other:	
Other:	
13. Thiodiglycol: Bis (2- hydroxyethyl) sulfide	(111-48-8)
14. Pinacolyl alcohol: 3.3-Dimethylbutane 2-ol	(464-07-3)

Please complete A or B, and C below.

Declaration: -

A.  Names of individuals supervising activities with Chemical Weapons Convention toxic chemicals or precursors are listed below:-

- |    |    |
|----|----|
| 1. | 2. |
| 3. | 4. |

B.  There are no toxic chemicals or precursors as listed by the Chemical Weapons Convention at McMaster University under my jurisdiction

C. Chair's name \_\_\_\_\_

Department. \_\_\_\_\_

Chair's signature \_\_\_\_\_

Date \_\_\_\_\_

SECTION 2.2 SCHEDULE 3 CHEMICALS

1. Please indicate those chemicals described below that were produced, imported or exported by your business or institution in ANY QUANTITY during previous calendar year.

3A. – TOXIC CHEMICALS	CAS REGISTRY NUMBER
1. Phosgene: Carbonyl dichloride	(75-44-5)
2. Cyanogen chloride	(506-77-4)
3. Hydrogen cyanide	(74-90-8)
4. Chloropicrin Trichloronitromethane	(76-06-2)
3B. PERCURSORS	
5. Phosphorus oxychloride	(10025-87-3)
6. Phosphorus trichloride	(7719-12-2)
7. Phosphorus pentachloride	(10026-13-8)
8. Trimethyl phosphite	(121-45-9)
9. Triethyl phosphite	(122-52-1)
10. Dimethyl phosphite	(868-85-9)
11. Diethyl phosphite	(762-04-9)
12. Sulphur monochloride	(10025-67-9)
13. Sulphur dichloride	(10545-99-0)
14. Thionyl chloride	(7719-09-7)
15. Ethyldiethanolamine	(139-87-7)
16. Methyldiethanolamine	(105-59-9)
17. Triethanolamine	(102-71-6)

Please complete A or B, and C below.

Declaration: -

A. ( ) Names of individuals supervising activities with Chemical Weapons Convention toxic chemicals or precursors are listed below:

- |    |    |
|----|----|
| 1. | 2. |
| 3. | 4. |

B. ( ) There are no toxic chemicals of precursors as listed by the Chemical Weapons Convention at McMaster University locations under my jurisdiction.

C. Chair's name: \_\_\_\_\_ Signature: \_\_\_\_\_

Department: \_\_\_\_\_

Date: \_\_\_\_\_