 <b>NUS</b> National University of Singapore	<b>NUS Safety &amp; Health Manual</b>		Procedure No:	OSHE/SOP/CS/02
	Title: <b>CHEMICAL WEAPONS (PROHIBITION) ACT – STORAGE, USE AND DISPOSAL REQUIREMENTS</b>		Rev No	000
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<b>Soh Wen Tse Jesslyn</b> Prepared By	<b>Dr Peck Thian Guan</b> Approved By	<b>16 June 2005</b> Review Date		

## 1.0 OBJECTIVE

The purpose of this procedure is to ensure that the chemicals declared under the Chemical Weapons (Prohibition) Act in the laboratories in National University of Singapore (NUS) are stored, used and disposed of in accordance with the requirements of these regulations.

## 2.0 SCOPE

All National University of Singapore (NUS) laboratories where chemicals scheduled in the National Authority (Chemical Weapons Convention) are stored or used.

## 3.0 RESPONSIBILITIES

### 3.1 Principal Investigator

The Principal Investigator is responsible for notifying Office of Safety, Health and Environment of his intention of using or storing any chemicals listed under the schedules of the Chemical Weapons (Prohibition) Act. He or she is responsible for the safe and secure storage, use and disposal of such chemicals as stipulated in this procedure. He must ensure that staff or research personnel handling these chemicals are adequately trained.

### 3.2 Staff/Research Personnel

The staff/research personnel shall be responsible for complying with the safe storage, use and disposal guidelines defined in this procedure.

### 3.3 Faculty Safety Officer/Department Safety Representative

The faculty safety officer or department safety representative shall be responsible for the training and enforcement of this procedure.


### 3.4 Office of Safety, Health and Environment

OSHE will be applying a license on behalf of the University. OSHE will conduct periodic inspections to ensure compliance to the Chemical Weapons (Prohibition) Act. OSHE will have the authority to cease research activities (close laboratories) of PIs for non compliance to this SOP or the Act.

## 4.0 DEFINITION

**National Authority (Chemical Weapons Convention):** The national body that oversees and ensures effective implementation of the Chemical Weapons Convention in Singapore. The Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction and includes the Annexes to the Convention and any amendments to, or substitutions of, the Convention or the Annexes that are binding on Singapore.

**Chemical Weapon:** A toxic chemical and its precursors, ammunition or device, specifically designed to cause death or other harm through the toxic properties of a toxic chemical, or any equipment specifically designed for use directly in connection with the employment of a munition or device.

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## 5.0 PROCEDURES

### 5.1 Approval to purchase Scheduled Chemical

- a. The Principal Investigator (PI) will seek approval by OSHE prior to the purchase of any chemicals listed under the Chemical Weapons (Prohibition) Act. The list of chemicals under the Chemical Weapons (Prohibition) Act can be found at the following website:  
[http://www.nacwc.gov.sg/chemcialunder\\_index.htm](http://www.nacwc.gov.sg/chemcialunder_index.htm).
- b. The PI should first complete and submit the Request for Licence / Purchase for Chemical Weapon form (OSHE/F/CS/01 See Annex 1.) to OSHE (website?)
- c. OSHE may conduct a site inspection and interview PIs, staff and students to ensure prior to ensure the facilities are appropriate for the safe storage, use and disposal of these chemicals.
- d. The Principal Investigator will attach a copy of the MSDS of the chemical to be purchased.

### 5.2 Ownership

- a. The PI shall not be engaged in the large scale proliferation/production of these chemicals.
- b. PI must inform OSHE if he or she intends to use the chemicals of purposes either than those stipulated in the initial application

### 5.3 Storage of Scheduled Chemicals


- a. These chemicals must be kept in a storage cabinet or fridge under lock and key.
- b. The key shall be kept by the Principal Investigator.
- c. Only personnel authorized by the Principal Investigator will be allowed to use the chemical weapon.

### 5.4 Inventory Control of Scheduled Chemicals

- a. The logbook system is implemented for each chemical weapon that is used in the laboratory.
- b. Inventory records shall be regularly updated
- c. The Chemical Weapon Logbook must contain the following information:
  - i. Name of chemical weapon in both common name and scientific name
  - ii. Chemical weapon formula or composition
  - iii. Date of purchase
  - iv. Original quantity of chemical weapon purchased
  - v. Date of usage of the chemical weapon
  - vi. Quantity of usage of the chemical weapon
  - vii. Name of personnel using the chemical weapon
  - viii. Activity level of the chemical weapon (radioactive source) and date of measurement if applicable
  - ix. Location where the chemical weapon is kept
  - x. Name of person responsible of the chemical weapon
  - xi. Name of person responsible for the key to where the chemical weapon is kept
  - xii. Transfer of ownership or location record

### 5.5 Disposal of Chemical Weapon

- a. The Principal Investigator must complete and submit to OSHE a Request for Disposal of Chemical Weapon form (OSHE/F/CS/02 – Annex 2).

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- b. The Principal Investigator can arrange to dispose the chemical weapons through licensed toxic waste collectors. The list can be found on OSHE website: <http://www.nus.edu.sg/osh/programme/envmgt/toxiclist.htm>
- c. After the disposal of the chemical weapon, the Principal Investigator must provide OSHE a copy of the consignment note from the toxic waste collector.

#### **5.6 MSDS of Scheduled Chemicals**

A copy of the MSDS provided by the supplier must be made available in hardcopy in the laboratory at all times.

#### **5.7 Movement of Scheduled Chemicals**

The Principal Investigator must inform OSHE of the transfer of ownership of the scheduled chemicals. The Principal Investigator must inform OSHE of the loss of any scheduled chemicals within 24 hours.

### **6.0 REFERENCES**

- 6.1** National Authority (Chemical Weapons Convention) (<http://www.nacwc.gov.sg>)
- 6.2** Chemical Weapons (Prohibition) Act (<http://agcvldb4.agc.gov.sg>)
- 6.3** OSHE/SOP/U/03 Hazardous Substance Inventory Record
- 6.4** OSHE/SOP/CS/01 Chemical Disposal Procedures

### **7.0 APPENDICES**

- 7.1** A copy of the act can be downloaded from the website at [http://statutes.agc.gov.sg/non\\_version/html/homepage.html](http://statutes.agc.gov.sg/non_version/html/homepage.html)

### **8.0 ANNEX**

1. Request for Licence / Purchase of Scheduled Chemicals Listed under the Chemicals Weapons Prohibition (Act) (OSHE/F/CS/01)
2. Request for Disposal of Chemical Weapon form (OSHE/F/CS/02)
3. Chemical Weapon Logsheet

OSHE/F/CS/01

**REQUEST FOR LICENCE / PURCHASE OF SCHEDULED CHEMICALS LISTED UNDER THE CHEMICALS WEAPON PROIBITION (ACT)**

<b>Part I – To be Completed by Principal Investigator</b>						
<b>A. Requester's Details</b>						
Name (Mr/ Mdm/ Ms/ Dr / Assoc. Prof / Prof)		Faculty		Department		
Contact		Email		Building & Unit Number		
<b>B. Details</b>						
IUPAC Name and Common Trade Name	CAS No.	Purity (%)	Amount	Chemical Structure	New licence or purchase under existing licence?	Schedule 1, 2 or 3
<b>C. Supplier's Details</b>						
Name of Supplier and Contact:						
<b>E. Briefly Describe The Use of the Chemical (Completed by the Principal Investigator)</b>						
<b>G. Personnel Using Scheduled Chemical(s)</b>						
<b>Name</b>	<b>Designation</b>			<b>Contact</b>		
<b>H. Acknowledgement by Head of Department</b>						
Name (Mr/ Mdm/ Ms/ Dr / Assoc. Prof / Prof)		Signature		Contact		
Department		Email		Date		

OSHE/F/CS/02

## NOTIFICATION OF DISPOSAL OF SCHEDULED CHEMICALS LISTED UNDER THE CHEMICAL WEAPONS (PROBIHITION) ACT

Part I – To be Completed by Principal Investigator					
A. Requester's Details					
Name (Mr/ Mdm/ Ms/ Dr / Assoc. Prof / Prof)		Faculty		Department	
Contact		Email		Building & Unit Number	
B. Chemical Weapon Details					
Schedule	IUPAC Name and Common Trade Name	CAS No.	Purity (%)	Amount (Kg)	Chemical Structure
C. Disposal Details					
Toxic Waste Collector Name and Contact:					
Date:		Time:		Place:	
H. Acknowledgement by Head of Department					
Name (Mr/ Mdm/ Ms/ Dr / Assoc. Prof / Prof)		Signature		Contact	
Department		Email		Date	

PLEASE PASTE A PHOTOCOPY OF THE CONSIGNMENT NOTE HERE

