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Our ref: CIB CR 14/46/6/1

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16 October 2002

Miss Salumi Chan
Clerk to Bills Committee
Legislative Council Secretariat
8 Jackson Road
Central
Hong Kong

Dear Miss Chan,

Bills Committee on
Chemical Weapons (Convention) Bill

Follow-up to the second meeting on 16 July 2002

Thank you for your letter of 16 July 2002. Please find enclosed a note that provides supplementary information on the relationship of the Chemical Weapons (Convention) Bill (CWC Bill) with a number of other ordinances, the implications of Clause 8 of the CWC Bill and the two surveys conducted by the Administration. I will forward the Chinese version of the note as soon as possible.

At the last meeting, the Administration also undertook to review the appeal channel provided under Clause 38 of the CWC Bill. We are still considering the matter and shall revert to the Bills Committee as soon as possible.

Yours sincerely,

(Ellen Choy)
for Secretary for Commerce, Industry and Technology

Chemical Weapons (Convention) Bill
Supplementary Information on Issues Raised
at the Second Meeting of the Bills Committee
on 16 July 2002

This note provides supplementary information on issues raised by Members at the second meeting of the Bills Committee on the Chemical Weapons (Convention) Bill (CWC Bill) held on 16 July 2002.

Control over chemicals under existing legislation

2. Members asked whether the chemicals listed in the three schedules to the Chemical Weapons Convention ("Scheduled chemicals") and the "unscheduled discrete organic chemicals" (UDOCs) as defined in the CWC Bill were already subject to control under a number of existing ordinances that impose some form of control over chemicals. In a note forwarded to the Assistant Legal Adviser on 12 October 2002, we have set out the scopes of control of these ordinances, and comment on the possible overlapping in control with the CWC Bill. Relevant parts of that note are reproduced at Annex A for easy reference.

When a permit is required

3. In a note forwarded to the LegCo Secretariat on 17 May 2002, we set out the Administration's views on the implications of the permit and documentation requirements proposed under the CWC Bill. The relevant assessment is reproduced in Annex B for Members' easy reference. In short, having regard to the properties and normal usage of the chemicals concerned, the findings of the surveys conducted in 1998 and 2001 (see details below), as well as past licensing data, we believe the proposed permit and documentation requirements will not have any material burden on the general public or establishments that need to acquire, use or produce chemicals.

4. As we pointed out before, the proposed permit system is modelled on and almost identical to that provided for in Australia's Chemical Weapons (Prohibition) Act 1994. Clause 8 of the CWC Bill is almost a word-by-word repetition of section 16 of the Australian Act.

5. We have sought information from the Australian government regarding the types of establishments to which it has granted permits, under its Chemical Weapons (Prohibition) Act, for the production and use of "Scheduled chemicals". As of September 2002, in respect of "Schedule 1 chemicals" the

Australian authority has granted one permit to a facility for the production of "Schedule 1 chemicals" for Australia's own defensive and protective purposes, as well as a few permits to tertiary and other institutions that are involved in the analysis of water samples for research or medical purposes. In respect of "Schedule 2 chemicals", the Australian government has not granted any permit for the production of "Schedule 2 chemicals" but has granted permits to less than 10 facilities in the textiles and paint industries for the use of such chemicals as a flame retardant. In respect of "Schedule 3 chemicals", the Australian authority has granted permits to four facilities for the production of "Schedule 3 chemicals" as end-products or as intermediates in chemical production processes.

6. The information provided by the Australian government is generally in line with our expectation that only a small number of establishments such as tertiary and research institutions and chemical production facilities will be subject to the permit requirements under Clause 8 of the CWC Bill.

Industry surveys conducted in 1998 and 2001

7. As explained in the note forwarded to the LegCo Secretariat on 17 May 2002, we do not envisage the ban on activities involving chemical weapons to have any material impact on the general public. Having regard to the properties and normal usage of the "Scheduled chemicals", as well as the high threshold for the notification requirement for production of UDOCs under the CWC Bill (see Annex B for details), we do not envisage the proposed permit and notification requirements to have any material impact on the general public either. We therefore do not see the need to conduct a general public consultation.

8. The two rounds of surveys conducted in November 1998 and June 2001 were intended to ascertain the impact of the proposed permit and notification requirements on establishments which were known or expected to use or produce chemicals. The coverage of the two surveys included all establishments of the manufacturing sector classified under the "chemicals and chemical products" industry group[1] (Classification Code: 351-352) by the Census and Statistics Department, all testing laboratories listed in the Directory of the Hong Kong Laboratory Accreditation Scheme, all hospitals and specialist

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[1] This class includes manufacturers of basic industrial chemicals; fertilizers and pesticides; synthetic resins, plastic materials and synthetic fibres; paints, varnishes and lacquers; drugs and medicines; soap and cleaning preparation, perfumes, cosmetics and other toilet preparations; candles; and other chemical products.

clinics administered by the Hospital Authority and private hospitals, as well as the eight University Grant Council-funded and two privately-funded tertiary institutions. The 2001 survey also covered establishments which had applied for import/export licences in respect of "Scheduled chemicals" in the preceding year[2]. The questionnaires sent in 1998 and 2001 are at Annexes C and D respectively.

9. As set out in the note forwarded to the LegCo Secretariat on 17 May 2002, in the 1998 survey, questionnaires were sent to a total of 638 establishments and 506 (80%) responded. In the 2001 survey, a total of 527 establishments were surveyed, among which 458 (87%) responded. Having regard to the wide coverage and high response rates of the two surveys, we believe the survey results provide a good basis for ascertaining the possible impact of the permit and notification requirements.

10. Separately, following the publication of the CWC Bill in the gazette, the Trade and Industry Department issued a circular (see Annex E), and in conjunction with the then Commerce and Industry Bureau and the Government Laboratory, conducted a seminar in December 2001 to introduce the key requirements of the Chemical Weapons Convention as well as the CWC Bill. Representatives of some 30 establishments attended the seminar, during which they mainly sought factual and technical clarifications relating to the requirements of the Convention and the CWC Bill. They did not express any particular concern.

Commerce, Industry and Technology Bureau
October 2002

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[2] For illustration, the 2001 survey covered 371 establishments in the chemical and chemical products industry (note: questionnaires were originally sent to 429 establishments, out of which 9 had advised that they had ceased businesses and 49 could not be contacted by mail or courier), 41 testing laboratories, 10 tertiary institutes, 77 hospitals and clinics, 28 establishments which had applied for import/export licences. The total sample size was 527.

Annex A

Control over Chemicals under Existing Legislation

Import and Export Ordinance

- All "Scheduled chemicals" and certain organic compounds that may fall within the definition of "unscheduled discrete organic chemicals" (UDOCs) under the CWC Bill are listed in the Schedules to the Import and Export (Strategic Commodities) Regulations, and thereby are subject to import and export licensing control under the Import and Export Ordinance. (The CWC Bill does not provide for such licensing control and hence no overlapping in this aspect.)

Weapons of Mass Destruction (Control of Provision of Services) Ordinance

- The Weapons of Mass Destruction (Control of Provision of Services) Ordinance prohibits the *provision of services* that will or may assist the development, production, acquisition and stockpiling of chemical, biological and nuclear weapons or that will or may assist the means of delivery of such weapons. It does not impose control on the use, production or possession of "Scheduled chemicals" or UDOCs, which the CWC Bill does.

Other legislation that impose certain control over chemicals

- See attached table.

Legislation which Imposes Control over Chemicals

Description	**Are "Scheduled chemicals" subject to control under the Ordinance?**	**Are unscheduled discrete organic chemicals (UDOCs) subject to control under the Ordinance?**
1. Control of Chemicals Ordinance (Cap. 145)		
In very general terms, the Control of Chemicals Ordinance imposes licensing control over the *import or export, and manufacture* of certain specified chemicals which can be used in the production of narcotic drugs or psychotropic substances. The controlled chemicals are listed in the three schedules to the Ordinance.	None of the "Scheduled chemicals" is included in any of the schedules to the Control of Chemicals Ordinance.	Some organic compounds that fall within the meaning of UDOCs under the Chemical Weapons (Convention) Bill (CWC Bill) are included in the schedules to the Control of Chemicals Ordinance. Given the very high threshold for the notification requirement for production of UDOCs under the CWC Bill (200 or 30 tonnes depending on the types of chemicals), it is very unlikely that a facility operator who needs to have a licence to produce certain organic compounds under the Control of Chemicals Ordinance will need to make a notification under the CWC Ordinance as well.

Description	Are "Scheduled chemicals" subject to control under the Ordinance?	Are unscheduled discrete organic chemicals (UDOCs) subject to control under the Ordinance?
2. Dangerous Drugs Ordinance (Cap. 134)		
The Dangerous Drugs Ordinance requires a person who is involved in the manufacture, traffic, possession and use of a dangerous drug to obtain a licence from the Director of Health. Dangerous drug refers to the drugs or substances specified in Part I of the First Schedule to the Ordinance.	None of the "Scheduled chemicals" is included in Part I of the First Schedule to the Dangerous Drugs Ordinance.	Some organic compounds that fall within the meaning of UDOCs under the CWC Bill are included in Part I of the First Schedule to the Dangerous Drugs Ordinance. Given the very high threshold for the notification requirement for production of UDOCs under the CWC Bill (200 or 30 tonnes depending on the types of chemicals), it is very unlikely that a facility operator who needs to have a licence to produce certain organic compounds under the Dangerous Drugs Ordinance will need to make a notification under the CWC Ordinance as well.

Description	**Are "Scheduled chemicals" subject to control under the Ordinance?**	**Are unscheduled discrete organic chemicals (UDOCs) subject to control under the Ordinance?**
3. Dangerous Goods Ordinance (Cap. 295)		
The Dangerous Goods Ordinance requires a person who *manufactures, stores, conveys or uses* any dangerous goods to obtain a licence. Such goods include all explosives, compressed gases, petroleum and other substances giving off inflammable vapours, substances giving off poisonous gas or vapour, corrosive substances, substances which become dangerous by interaction with water or air, substances liable to spontaneous combustion or of a readily combustible nature, as well as radioactive material.	15 "Scheduled chemicals" are controlled by the Dangerous Goods Ordinance, among which 2 are "Schedule 2 chemicals" and 13 are "Schedule 3 chemicals". According to the 1998 and 2001 surveys, only one research institute indicated that it had used two "Schedule 2 chemicals" for research purpose, and only one factory indicated that it had produced a "Schedule 3 chemical". Of the three chemicals concerned, only one "Schedule 2 chemical" used for research purpose is controlled by the Dangerous Goods Ordinance. However, the threshold for the permit requirement for the production or use of the "Schedule 2 chemical" under the CWC Bill is 1 tonne. It is very unlikely that the research institute using that chemical for research purpose will need to obtain a permit under the CWC Ordinance.	Some organic compounds that fall within the meaning of UDOCs under the CWC Bill are controlled by the Dangerous Goods Ordinance. Given the very high threshold for the notification requirement for production of UDOCs under the CWC Bill (200 or 30 tonnes depending on the types of chemicals), it is very unlikely that a facility operator which needs to have a licence to produce certain organic compounds under the Dangerous Goods Ordinance will need to make a notification under the CWC Ordinance as well.

Description	Are "Scheduled chemicals" subject to control under the Ordinance?	Are unscheduled discrete organic chemicals (UDOCs) subject to control under the Ordinance?
4. Pharmacy and Poisons Ordinance (Cap. 138)		
To protect public health and safety, the Pharmacy and Poisons Ordinance requires registration of pharmacists and of persons engaged in the business as an importer or exporter of pharmaceutical products. It also requires a person who manufactures pharmaceutical products and sells poisons to obtain a licence issued by the Pharmacy and Poisons Board.	None of the "Scheduled chemicals" is subject to the control of the Pharmacy and Poisons Ordinance.	Some organic compounds that fall within the meaning of UDOCs under the CWC Bill are controlled by the Pharmacy and Poisons Ordinance. Given the very high threshold for the notification requirement for production of UDOCs under the CWC Bill (200 or 30 tonnes depending on the types of chemicals), it is very unlikely that a facility operator who needs to have a license to produce certain organic compounds under the Pharmacy and Poisons Ordinance will need to make a notification under the CWC Ordinance as well.
5. Waste Disposal Ordinance (Cap. 354)		
To ensure public safety and to protect the environment, the Ordinance requires places and persons connected with the production, storage, collection and disposal of waste (including chemical waste[1]) to be licensed and registered with the Director of Environmental Protection.	A facility operator who produces, uses, processes etc "Scheduled chemicals" might be required to register with the Environmental Protection Department as a waste producer if in the course of the above activities chemical waste is generated.	A facility operator who produces UDOCs might be required to register with the Environmental Protection Department as a waste producer if in the course of the above activities chemical waste is generated.

[1] Under the Waste Disposal Ordinance, chemical waste refers to any substance being scrap material, effluent and unwanted substance or by product arising from the application of or in the course of any process or trade activity, if such substance may cause pollution or constitute a danger to health or risk of pollution to the environment.

Annex B

Implications of the Permit and Notification Requirements Proposed under the CWC Bill

Schedule 1 chemicals

Requirements

- A facility operator needs to obtain a permit, make periodic reports and keep records if, in a year, he is **likely to:**
  - **produce** any Schedule 1 chemicals **irrespective of the quantity;** or
  - **acquire, retain, use or transfer Schedule 1 chemicals** and the total amount of these chemicals **exceeds 100 grams**.

Implications

- Schedule 1 chemicals are hardly accessible by members of the public and it is highly unlikely that an ordinary person would need to acquire or use Schedule 1 chemicals for non-professional purposes. No impact on the general public envisaged.
- We are not aware of any production of Schedule 1 chemicals in Hong Kong. And from information available, over the past few years only a handful of establishments (including research institutes, trading companies and a government department) imported and/or used two Schedule 1 chemicals for medical and research end-uses, and the amounts involved were very small (in the range of milligrams). No or little impact on industrial and other establishments envisaged.

Schedule 2 chemicals

Requirements

- A facility operator needs to obtain a permit, make periodic reports and keep records if he is **likely to produce, process, or consume** a Schedule 2 chemical in a year and the total amount of the chemical **exceeds the relevant threshold**[1].

[1] The threshold for toxic chemicals listed in Schedule 2 is 100 kilograms (except one the threshold for which is 1 kilogram), and the threshold for precursors listed in the same schedule is 1 tonne.

Implications

- Schedule 2 chemicals are not readily accessible by members of the public, and it is unlikely that an ordinary person would need to acquire or use Schedule 2 chemicals for non-professional purposes. No impact on the general public envisaged.
- In both 1998 and 2001 surveys, only one (same) research institute indicated that it had used two Schedule 2 chemicals for research purpose. Little impact on industrial and other establishments envisaged.

Schedule 3 chemicals

Requirements

- A facility operator needs to obtain a permit, make periodic reports and keep records if he is **likely to produce** a Schedule 3 chemical in a year and the total amount **exceeds 30 tonnes**.

Implications

- The proposed requirement only kicks in when a Schedule 3 chemical exceeding 30 tonnes is to be produced. No impact on the general public envisaged.
- In the 1998 survey, only one factory indicated that it had produced a Schedule 3 chemical (but the amount produced was below 30 tonnes). In the 2001 survey, no establishment indicated that it had produced a Schedule 3 chemical. Little impact on industrial establishments envisaged.

Unscheduled discrete organic chemicals

**Discrete organic chemicals are chemicals belonging to the class of chemical compounds consisting of all compounds of carbon except for its oxides, sulfides and metal carbonates.*

Requirements

- A facility operator needs to make a notification and keep records if he produced in the preceding year:
  - any unscheduled discrete organic chemicals and the total amount **exceeded 200 tonnes;**
  - unscheduled discrete organic chemicals that **contain phosphorus,**

sulphur or fluorine and the total amount **exceeded 30 tonnes**.

Implications

- The notification requirement will only be triggered when a large amount of discrete organic chemicals was produced. No impact on the general public envisaged.
- The 1998 and 2001 surveys revealed that three factories had produced unscheduled discrete organic chemicals in the year before[2]. Only in one case, the total amount exceeded the threshold. Little impact on industrial establishments envisaged.

[2] In the 1998 and 2001 surveys, 6 and 2 factories respectively indicated that they had produced hydrocarbons or inorganic gaseous chemicals (which are not subject to the controls under the Chemical Weapons Convention or the CWC Bill). If these factories expand their products to include Scheduled chemicals or unscheduled discrete organic chemicals, they might need to obtain a permit or make a notification depending on the types and quantities of the chemicals.

Annex C

政府化驗所
香港九龍何文田忠孝街八十八號
何文田政府合署七樓

GOVERNMENT LABORATORY
7TH FLOOR, HO MAN TIN GOVERNMENT OFFICES
88 CHUNG HAU STREET, HOMANTIN
KOWLOON, HONG KONG.

本處檔號 OUR REF. : GL/CR 3/T(A&AS/4 Pt.3)
來函檔號 YOUR REF. :
電話 TEL : 2762 3883
圖文傳真 FAX : 2714 4083

30 October 1998

Dear Sir / Madam,

Chemical Weapons Convention - 1998 Industry Survey

This letter is to introduce to you the background of the "Chemical Weapons Convention - 1998 Industry Survey" and to invite your co-operation in answering the survey questionnaire that is attached herewith.

The Chemical Weapons Convention is an international treaty which seeks to ban chemical weapons. The Government of the Hong Kong Special Administrative Region (the HKSARG) will enact local legislation in 1999 to fully implement the Convention.

The civilian chemical industry and other related sectors may be affected by the implementation of the Convention. This is because the Convention has imposed various verification requirements for activities related to a range of industrial chemicals that also find applications in the production of chemical weapons. Hence, the HKSARG needs to conduct this survey, namely the "Chemical Weapons Convention - 1998 Industry Survey", in order to make a realistic estimate on the possible impact of the implementation of the Convention in the HKSAR. The success of this survey will depend critically on your co-operation in supplying us with accurate information. It would be highly appreciated if you would take some time to read the enclosed "Explanatory Notes", fill out the questionnaire in either English or Chinese and return it to the Government Laboratory on or before 20 November 98.

I would be pleased to answer any query you may have regarding the questionnaire. Furthermore, in case your return does not reach this Laboratory by 13 November 98, officers from the Customs & Excise Department may contact you to see if you need any assistance in completing the questionnaire. Thank you in advance for your co-operation.

With best regards

Yours sincerely,

(S.K. TSUI)
for Government Chemist

Encl.:

(1) Questionnaire for the "Chemical Weapons Convention - 1998 Industry Survey"
(2) Explanatory Notes for the "Chemical Weapons Convention - 1998 Industry Survey"

Chemical Weapons Convention (CWC) - 1998 Industry Survey Questionnaire

This industry survey is conducted to enable the Hong Kong Special Administrative Region Government (HKSARG) of the People's Republic of China to estimate to what extent the local chemical industry and other related sectors will be affected by the Chemical Weapons Convention (the Convention) , which is scheduled to be implemented in the HKSAR in 1999. Please **read the Explanatory Notes** that comes with this questionnaire before answering the questions below. Please also note that **1 tonne is equal to 1000 kg**. Furthermore, the questions below **only relate to plants and facilities located within the HKSAR**. If you have any query about this questionnaire, you can contact Mr. S.K. TSUI, Senior Chemist of the Government Laboratory, at Tel. No. 2762 3883.

Points to note

The provision of personal data by means of this questionnaire is voluntary. Any personal data provided by means of this questionnaire will be retained by the Government Laboratory and disclosed to other bureaux and departments of the HKSAR solely for the purpose of estimating the extent to which the local chemical industry and other related sectors will be affected by the Chemical Weapons Convention. The personal data provided by means of this questionnaire will not be used for purpose other than mentioned above unless you have given voluntary and express consent or such use is permitted by the laws of the HKSAR.

Name of your organisation: _____

Address: _____

_____

Contact person: _____ Position Held: _____ Tel.: _____ Fax: _____

1. During the year 1997, has your organisation produced any Discrete Organic Chemicals ? (Please refer to Explanatory Notes 4 to 5 and its Appendix for information on Discrete Organic Chemicals and Explanatory Notes 9 for definition of "production")

☐ Yes ☐ No

If the answer is no, please skip Questions 2 to 4.

2. Does the total quantity of all the Discrete Organic Chemicals produced by your organisation in 1997 exceed 200 tonnes?

☐ Yes ☐ No

3. Among the Discrete Organic Chemicals produced by your organisation in 1997, is there any chemical which contains the element phosphorus, sulfur or fluorine and has reached a total production quantity greater than 30 tonnes?

☐ Yes ☐ No

4. Does the Discrete Organic Chemicals produced by your organisation in 1997 consist exclusively of hydrocarbons or explosives?

☐ Yes ☐ No

5. During the year 1997, has your organisation produced any CWC Schedule 3 chemicals ? (Please refer to Explanatory Notes 6 and its Appendix for information on CWC Schedule 3 chemicals and Explanatory Note 9 for definition of "production")

☐ Yes ☐ No

If the answer is no, please skip Question 6.

6. Please fill out the following table in connection with the Schedule 3 chemicals produced by your organisation in 1997 (Please attach additional sheet if necessary):

	Name of the Schedule 3 chemical produced	Is the quantity produced in 1997 more than 30 tonnes?	
a.		☐ Yes	☐ No
b.		☐ Yes	☐ No
c.		☐ Yes	☐ No
d.		☐ Yes	☐ No

7. During the year 1997, has your organisation produced, processed or consumed any CWC Schedule 2 chemicals ? (Please refer to Explanatory Notes 7 and its Appendix for information on CWC Schedule 2 chemicals and Explanatory Notes 9 for definition of "production", "processing" and "consumption")

☐ Yes ☐ No

If the answer is no, please skip Questions 8 to 10

8. Has your organisation produced, processed or consumed more than 1 kg of 3-Quinuclidinyl benzilate (also known as BZ) in 1997?

☐ Yes ☐ No

9. Has your organisation produced, processed or consumed more than 100 kg of Amiton (including its alkylated or protonated salts) or Perfluoroisobutylene (also known as PFIB) in 1997?

☐ Yes ☐ No

10. Apart from BZ, Amiton and PFIB, has your organisation produced, processed, or consumed more than 1 tonne of any CWC Schedule 2 chemicals in 1997?

☐ Yes ☐ No

11. During 1997, has your organisation produced, acquired (including extraction from natural sources), used (including usage for medical, pharmaceutical or research purposes) or otherwise handled, stocked, or traded any CWC Schedule 1 chemicals ? (Please refer to Explanatory Notes 8 and its Appendix for information on CWC Schedule 1 chemicals and Explanatory Notes 9 for definition of "acquisition".)

☐ Yes ☐ No

12. During 1997, has your organisation imported or exported any of the chemicals listed in the CWC Schedule 1, 2 or 3?

☐ Yes ☐ No

13. Please indicate which of the following activities are carried out by your organisation (tick more than one item if appropriate).

☐ Any form of chemical reactions

☐ Blending or formulation of chemicals

☐ Import/export of chemicals

☐ Production of explosives only

☐ Distribution/wholesaling of chemicals

☐ Scientific research

☐ Production of hydrocarbons only

☐ Production of polymers only (not involving the production of any monomers, even as intermediates)

☐ Others, please specify:

_____

_____

14. Please indicate the current number of employees in your organisation: _____

END

Chemical Weapons Convention (CWC) - 1998 Industry Survey
Explanatory Notes

Introduction

1. The HKSARG is preparing legislation to implement the Chemical Weapons Convention in the HKSAR. The Convention is an international treaty that seeks to ban the development, production, possession and use of chemical weapons, and requires the destruction of existing chemical weapons. It also requires member States to submit annual report and forecast on activities relating to chemicals scheduled to the Convention and certain unscheduled discrete organic chemicals. The Convention is administered by an international organisation called the Organization for the Prohibition of Chemical Weapons (OPCW).

2. The Convention requires each State Party to adopt the necessary measures to implement the requirements of the Convention anywhere on its territory or in any other place under its jurisdiction. The People's Republic of China is one of the signatories. Central People's Government (CPG) has extended the application of the Convention to the HKSAR according to Article 153 of the Basic Law. We will implement the Convention through our own law and systems of licensing and enforcement in accordance with the principle of "One country, two systems". As traders may be aware, the HKSARG has already imposed licensing controls over the import and export of chemicals controlled by the Convention. We also prohibit services knowingly provided to assist the development and production of chemical weapons. However, there are certain requirements of the Convention (for examples, collecting information on activities relating to the chemicals scheduled to the Convention for making reports to OPCW and allowing inspections of chemical production facilities by staff of OPCW) which require the making of empowering legislation before they can be implemented in the HKSAR. The HKSARG intends to enact such legislation in 1999. Full compliance with the Convention does not only help the CPG fulfil its international obligation but will also help our continued access to advanced technologies and chemical products for industrial, trading, medical, and research purposes. This is critical for sustaining the growth of our industry and economy.

3. Numerous chemicals produced or used for normal industrial, medical or research activities can also find applications in the production of chemical weapons, either as the toxic agent of chemical weapons or their precursors. Hence, the Convention has imposed control measures in the form of reporting and inspection requirements for such chemicals to ensure that their production and application are for peaceful purposes only. The chemicals thus controlled under the Convention include three schedules of chemicals as detailed in the Appendix and almost all organic chemicals which are not included in the three schedules. This last group of organic chemicals is referred to as the Discrete Organic Chemicals (DOC) in the Convention. Some examples of DOC are also listed in the Appendix for illustrative purposes.

Discrete Organic Chemicals (please refer to the Appendix for examples of DOC)

4. "Discrete Organic Chemicals (DOC)" , as it is defined in the Convention, includes all organic compounds not listed in the three schedules with the exception of long chain polymers (e.g. polystyrene, PVC, polythene, polyurethane, etc) and oligomers. Facilities producing any DOC containing the elements phosphorus, sulfur or fluorine will be subject to the reporting and inspection requirements of the Convention if the quantity produced is more than 30 tonnes a year. Facilities producing other DOC will have to comply with these requirements if the aggregate quantity of all DOC produced is more than 200 tonnes a year.

5. It should however be noted that facilities producing exclusively hydrocarbons or explosives are exempted from the reporting and inspection requirements.

Schedule 3 chemicals (please refer to the Appendix for the detailed list of chemicals)

6. Schedule 3 includes toxic chemicals and precursors that may pose a risk to the objectives of the Convention but which have wide ranging peaceful industrial applications such as pharmaceuticals, pesticides, fertilisers, dyes, perfumes and surfactants, etc. Facililties producing any Schedule 3 chemical above 30 tonnes a year as well as facilities importing or exporting them are subject to the reporting and inspection requirements of the Convention.

Schedule 2 chemicals (please refer to the Appendix for the detailed list of chemicals)

7. Schedule 2 includes those toxic chemicals and precursors that pose a significant risk to the objectives of the Convention but also have peaceful uses on the other hand. Some chemicals under item 4 of Schedule 2B (e.g. methylphosphonic acid) are used in flame retardants. Perfluoroisobutylene (PFIB) is a by-product in the production of fluorocarbons. Other peaceful uses of Schedule 2 chemicals include pharmaceuticals, lubricants, dye carriers, etc. Facilities producing, processing or consuming any Schedule 2 chemicals above the thresholds stipulated in the Convention as well as facilities importing or exporting them are subject to the reporting and inspection requirements of the Convention.

Schedule 1 chemicals (please refer to the Appendix for the detailed list of chemicals)

8. Chemicals placed under Schedule 1 are those that pose a high risk to the objectives of the Convention. There is little or no known industrial uses for these chemicals. Chemicals such as Ricin and Saxitoxin are known to be used in small quantities in scientific research. Ricin and the nitrogen mustards also find some limited use in medical treatment. The reporting and inspection requirements of the Convention are applicable to facilities producing, acquiring, retaining, using or transferring any Schedule 1 chemicals.

Definition of certain important terms

9. The definition of some important terms in the Convention are highlighted below to bring about a better understanding of its provisions:

i) Production: production of a chemical is defined as its formation through chemical reaction. Note that the formation of intermediates in a multi-stage chemical process as well as the formation of by-products in any chemical process are also included under this definition.

ii) Processing: processing of a chemical is defined as a physical process, such as formulation, extraction and purification, in which a chemical is not converted into another chemical. It includes the process in which the chemical is added as an ingredient in a formulation.

iii) Consumption: consumption of a chemical is defined as its conversion into another chemical via chemical reaction. Note that it includes the conversion of the chemical into other environmentally friendly chemicals in a waste management or disposal system.

iv) Acquisition of Schedule 1 chemicals includes the extraction of these chemicals from natural sources. Typical examples are the extraction of Ricin and Saxitoxin from castor bean and certain types of shellfish respectively.

Implementation of the Convention

10. New legislation will be enacted by the Government for implementing the Convention in the HKSAR. An industry awareness campaign will soon be launched to promote and explain the provisions of the Convention to the industry and other related sectors. The first step in preparing for this new initiative will be the estimation of the extent to which we will be affected by the Convention. Your co-operation in supplying us with accurate information about your organisation is critical for accomplishing this task. It will be highly appreciated if you would take some time out of your busy schedule to answer the attached questionnaire and either fax or mail it back to the following address on or before 20 November 1998:

The Government Laboratory
(Attn: Mr. SK TSUI)
7/F, Homantin Government Offices,
88, Chung Hau Street,
Homantin, Kowloon.
Fax: 27144083

APPENDIX (PART A)

Examples of Discrete Organic Chemicals (DOCs) used in Chemical Industry

DOCs which contain the elements phosphorus, sulfur, or fluorine (PSF chemical)

Drugs and Medicines

(1) Acetylcysteine
(2) Amoxicillin
(3) Biotin
(4) Cloxacillin sodium
(5) Cyclophosphamide
(6) Dichlorvos
(7) Dihydroergotamine mesylate
(8) Echothiophate iodide
(9) Etidronate disodium
(10) Fenfluramine hydrochloride
(11) Flunarizine hydrochloride
(12) Flunitrazepam
(13) Fluocinolone acetonide
(14) Fluorouracil

Synthesis resins, plastic materials and synthetic fibres except glass

(1) Benzothiazole
(2) Chlorotrifluoroethylene
(3) Tetrafluoroethylene
(4) Thiadiazole
(5) Vinyl fluoride
(6) Vinylidene fluoride

Soap and cleaning preparations, perfumes, cosmetics and other toilet preparations

(1) Acylisethionates**
(2) Acyltaurines**
(3) Alkyl ether sulfates**
(4) Alkyl phosphates**
(5) Alkyl sulfates**
(6) Alkylaryl phosphates**
(7) Alkylaryl sulfonates**
(8) Amide ether sulfates**
(9) Ammonium thioglycolate
(10) Thioglycolic acid
(11) Zinc pyrithione

Fertilizers and Pesticides

(1) Acephate
(2) Aldicarb
(3) Asulam
(4) Bensulide
(5) Bromophos
(6) CGA 184927
(7) Chlorpyrifos
(8) Diazinon
(9) Dimethoate
(10) Fenthion
(11) Fluazifop-butyl

Basic industrial chemicals and other chemical products

(1) Acid violet
(2) Alizarin red
(3) Amaranth
(4) 2-Aminobenzothiazole
(5) Benzenesulfonamide
(6) Halons** or Fully halogenated chlorofluorocarbons**
(7) Calcium glycerophosphate
(8) Chlorofluorocarbons**
(9) Hydrobromofluorocarbons**
(10) Hydrochlorofluorocarbons**
(11) Trifluoroacetic acid

Other DOCs

Drugs and Medicines

(1) Acetaminophen
(2) Atropine
(3) Camphor
(4) Chlorpheniramine maleate
(5) Cholecalciferol
(6) Cinnamaldehyde
(7) Cinnamol
(8) Hyoscine
(9) Matrine
(10) Menthol
(11) Methadone
(12) Oil of Eucalytus
(13) Phenylephrine
(14) Prednisolone
(15) Propoxyphene
(16) Salbutamol
(17) Tetracycline
(18) Tetrahydropalmatine
(19) Thymol

Synthesis resins, plastic materials and synthetic fibres except glass

(1) Ethylene glycol
(2) Urethane
(3) Vinyl acetate
(4) Vinyl alcohol
(5) Vinyl chloride
(6) Vinylpyrrolidone

Soap and cleaning preparations, perfumes, cosmetics and other toilet preparations

(1) Alkyl myristate**
(2) Benzaldehyde
(3) Castor oil
(4) Citronella oils
(5) Clove oil
(6) Coconut oil
(7) Dialkyl phthalate**
(8) Methyl salicylate
(9) Myristica fragrans houtt. oil
(10) Oil of camphor sassafrassy
(11) Oil of Lavender
(12) Polyglycol fatty acid ester**
(13) Sodium lauryl ether sulfate

Fertilizers and Pesticides

(1) Acetochlor
(2) Aldrin
(3) Allethrin
(4) Carbaryl
(5) Carbofuran
(6) Chlorobenzilate
(7) 2,4-D
(8) Dieldrin
(9) Dinoseb
(10) Diquat dibromide
(11) Fenbutatin oxide
(12) Formaldehyde

Basic industrial chemicals and other chemical products

(1) Benzoic acid
(2) Citric acid
(3) Dehydroacetic acid
(4) Ethanol
(5) Glycerine
(6) p-Hydroxybenzoic acid
(7) Propylene glycol
(8) Salicylic acid
(9) Sorbic acid
(10) Sorbitol
(11) Stearic acid
(12) Tartaric acid
(13) Urea

[Note: ** These items refer to a group of chemicals with related structures.]

CWC Scheduled Chemicals

Schedule 3

(1) Phosgene: Carbonyl dichloride
(2) Cyanogen chloride
(3) Hydrogen cyanide
(4) Chloropicrin: Trichloronitromethane
(5) Phosphorus oxychloride
(6) Phosphorus trichloride
(7) Phosphorus pentachloride
(8) Trimethyl phosphite
(9) Triethyl phosphite
(10) Dimethyl phosphite
(11) Diethyl phosphite
(12) Sulfur monochloride
(13) Sulfur dichloride
(14) Thionyl chloride
(15) Ethyldiethanolamine
(16) Methyldiethanolamine
(17) Triethanolamine

Schedule 2A

(1) Amiton: O,O-Diethyl S-[2-(diethylamino)ethyll phosphorothiolate
and corresponding alkylated or protonated salts
(2) PFIB: 1,1,3,3,3-Pentafluoro-2-(trifluoromethyl) 1-propene**
(3) BZ: 3-Quinuclidinyl benzilate

Schedule 2B

(4) Chemicals, except for those listed in Schedule 1, containing a phosphorus atom to which is bonded one methyl, ethyl or propyl (normal or iso) group but not further carbon atoms,

e.g. Methylphosphonyl dichloride
Dimethyl methylphosphonate
Ethyl Phosphinyl Dichloride
Ethyl Phosphonyl Dichloride
Diethyl methylphosphonate
Dimethyl ethylphosphonate
Diethyl ethylphosphonate
Diphenyl methylphosphonate
Ethyl Phosphinyl Difluoride
Methyl Phosphinyl Difluoride
Methylphosphonic acid
Phosphonic acid, methyl-, compd. with (aminoiminomethyl)urea (1:1)
Phosphonothioic dichloride, ethyl-

Exemption: Fonofos: O-Ethyl S-phenyl ethylphosphonothiolothionate

(5) N,N-Dialkyl (Me, Et, n-Pr or i-Pr) phosphoramidic dihalides
(6) Dialkyl (Me, Et, n-Pr or i-Pr) N,N-dialkyl (Me, Et, n-Pr or i-Pr)-phosphoramidates
(7) Arsenic trichloride
(8) 2,2-Diphenyl-2-hydroxyacetic acid
(9) Quinuclidine-3-ol
(10) N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethyl-2-chlorides and corresponding protonated salts
(11) N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-ols and corresponding protonated salts
Exemptions: N,N-Dimethylaminoethanol and corresponding protonated salts
N,N-Diethylaminoethanol and corresponding protonated salts
(12) N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-thiols and corresponding protonated salts
(13) Thiodiglycol: Bis(2-hydroxyethyl) sulfide
(14) Pinacolyl alcohol: 3,3-Dimethylbutane-2-ol

Schedule 1

(1) O-Alkyl (≤C 10, incl. cycloalkyl) alkyl (Me, Et, n-Pr or i-Pr)-phosphonofluoridates
e.g. Sarin: O-Isopropyl methylphosphonofluoridate
Soman: O-Pinacolyl methylphosphonofluoridate
(2) O-Alkyl (≤C 10, incl. cycloalkyl) N,N-dialkyl (Me, Et, n-Pr or i-Pr) phosphoramidocyanidates
e.g. Tabun: O-Ethyl N,N-dimethyl phosphoramidocyanidate
(3) O-Alkyl (H or ≤C 10, incl. cycloalkyl) S-2-dialkyl (Me, Et, n-Pr or i-Pr)-aminoethyl alkyl (Me, Et, n-Pr or i-Pr) phosphonothiolates and corresponding alkylated or protonated salts
e.g. VX: O-Ethyl S-2-diisopropylaminoethyl methyl phosphonothiolate
(4) Sulfur mustards:
2-Chloroethylchloromethylsulfide
Mustard gas: Bis(2-chloroethyl)sulfide
Bis(2-chloroethylthio)methane
Sesquimustard: 1,2-Bis(2-chloroethylthio)ethane
1,3-Bis(2-chloroethylthio)-n-propane
1,4-Bis(2-chloroethylthio)-n-butane
1,5-Bis(2-chloroethylthio)-n-pentane
Bis(2-chloroethylthiomethyl)ether
O-Mustard: Bis(2-chloroethylthioethyl)ether
(5) Lewisites:
Lewisite 1: 2-Chlorovinyldichloroarsine
Lewisite 2: Bis(2-chlorovinyl)chloroarsine
Lewisite 3: Tris(2-chlorovinyl)arsine
(6) Nitrogen mustards:
HN1: Bis(2-chloroethyl)ethylamine
HN2: Bis(2-chloroethyl)methylamine
HN3: Tris(2-chloroethyl)amine
(7) Saxitoxin
(8) Ricin
(9) Alkyl (Me, Et, n-Pr or i-Pr) phosphonyldifluorides
e.g. DF: Methylphosphonyldifluoride
(10) O-Alkyl (H or ≤C 10 incl. cycloalkyl) O-2-dialkyl (Me, Et, n-Pr or i-Pr)-aminoethyl alkyl (Me, Et, N-Pr or i-Pr) phosphonites and corresponding alkylated or protonated salts
e.g. QL: O-Ethyl O-2-diisopropylaminoethyl methylphosphonite
(11) Chlorosarin: O-Isopropyl methylphosphonochloridate
(12) Chlorosoman: O-Pinacolyl methylphosphonochloridate

[Note: ** This Chemical is also known as perfluoroisobutylene.]

Annex D

政府化驗所
香港九龍何文田忠孝街八十八號
何文田政府合署七樓

GOVERNMENT LABORATORY
7TH FLOOR, HO MAN TIN GOVERNMENT OFFICES
88 CHUNG HAU STREET, HOMANTIN
KOWLOON, HONG KONG.

本處檔號 OUR REF. : (26)1 in GL/CR 3/T(A&AS)/4 Pt 6
來函檔號 YOUR REF. :
電 話 TEL. : 2762 3893
圖文傳真 FAX : 2714 4083

18 June 2001

Dear Sir / Madam,

Chemical Weapons Convention - 2001 Industry Survey

I write to introduce to you the background of the "Chemical Weapons Convention - 2001 Industry Survey" and to invite your co-operation in answering the survey questionnaire attached herewith.

The Chemical Weapons Convention is an international treaty which seeks to ban chemical weapons. The Government of the Hong Kong Special Administrative Region (the HKSARG) will enact local legislation to fully implement the Convention.

The civilian chemical industry and other related sectors or organisations may be affected by the implementation of the Convention. This is because the Convention has imposed various verification requirements for activities related to a range of industrial chemicals that also find applications in the production of chemical weapons. In order to estimate the possible impact of the implementation of the Convention in the HKSAR on the industry, the HKSARG conducted an industry survey in 1998. The current survey, namely "Chemical Weapons Convention - 2001 Industry Survey", is a follow-up to the one conducted in 1998. The success of this survey will depend critically on your co-operation in supplying us with accurate information. It would be highly appreciated if you would take some time to read the enclosed "Explanatory Notes", fill out the questionnaire in either English or Chinese and return it to the Government Laboratory on or before 30 June 2001.

I would be pleased to answer any query you may have regarding the questionnaire. Furthermore, in case your return does not reach this Laboratory by 30 June 2001, officers from the Customs & Excise Department may contact you to see if you need any assistance in completing the questionnaire. Thank you in advance for your co-operation.

With best regards

Yours sincerely,

(C Y Au Yeung)
for Government Chemist

Encl.:

(1) Questionnaire for the "Chemical Weapons Convention - 2001 Industry Survey"
(2) Explanatory Notes for the "Chemical Weapons Convention - 2001 Industry Survey"

Chemical Weapons Convention (CWC) – 2001 Industry Survey Questionnaire

This industry survey is conducted to enable the Hong Kong Special Administrative Region Government (HKSARG) of the People's Republic of China to estimate to what extent the local chemical industry and other related sectors will be affected by the Chemical Weapons Convention (the Convention), which will be implemented in the HKSAR. Please **read the Explanatory Notes** that comes with this questionnaire before answering the questions below. Please also note that **1 tonne is equal to 1000 kg**. Furthermore, the questions below **only relate to plants and facilities located within the HKSAR**. If you have any query about this questionnaire, you may contact Mr. C.Y. AUYEUNG, Senior Chemist of the Government Laboratory, at Tel. No. 2762 3893.

Points to note

The provision of personal data by means of this questionnaire is voluntary. Any personal data provided by means of this questionnaire will be retained by the Government Laboratory and disclosed to other bureaux and departments of the HKSAR solely for the purposes of estimating the extent to which the local chemical industry and other related sectors will be affected by the Chemical Weapons Convention and the conduct of industry awareness programme. The personal data provided by means of this questionnaire will not be used for purpose other than mentioned above unless you have given voluntary and express consent or such use is permitted by the laws of the HKSAR.

Name of your organization: _____

Address: _____

_____

Contact person: _____ Position Held: _____

Tel.: _____ Fax: _____

1. During year 2000, has your organization produced any Unscheduled Discrete Organic Chemicals ? (Please refer to Explanatory Notes 4 to 5 and its Appendix for information on Unscheduled Discrete Organic Chemicals and Explanatory Notes 9 for definition of "production")

☐ Yes ☐ No

If the answer is no, please skip Questions 2 to 4.

2. Does the total quantity of all the Unscheduled Discrete Organic Chemicals produced by your organization in year 2000 exceed 200 tonnes?

☐Yes ☐No

3. Among the Unscheduled Discrete Organic Chemicals produced by your organization in year 2000, is there any chemical which contains the element phosphorus, sulfur or fluorine and has reached a total production quantity greater than 30 tonnes?

☐Yes ☐No

4. Does the Unscheduled Discrete Organic Chemicals produced by your organization in year 2000 consist exclusively of hydrocarbons or explosives?

☐ Yes ☐No

5. During year 2000, has your organization produced any CWC Schedule 3 chemicals ? (Please refer to Explanatory Notes 6 and its Appendix for information on CWC Schedule 3 chemicals and Explanatory Note 9 for definition of "production")

☐ Yes ☐No

If the answer is no, please skip Question 6.

6. Please fill out the following table in connection with the Schedule 3 chemicals produced by your organization in year 2000 (Please attach additional sheet if necessary):

	Name of the Schedule 3 chemical produced in year 2000	Is the quantity produced more than 30 tonnes?
a.		☐ Yes ☐ No
b.		☐ Yes ☐ No
c.		☐ Yes ☐ No
d.		☐ Yes ☐ No

7. During year 2000, has your organization produced, processed or consumed any CWC Schedule 2 chemicals ? (Please refer to Explanatory Notes 7 and its Appendix for information on CWC Schedule 2 chemicals and Explanatory Notes 9 for definition of "production", "processing" and "consumption")

☐ Yes ☐ No

If the answer is no, please skip Questions 8 and 9.

8. Please fill out the following table in connection with the Schedule 2, Part A chemicals produced, processed or consumed by your organization in year 2000:

	Name of the Schedule 2, Part A chemical produced, processed or consumed in year 2000	Quantity in kg
a.	Amiton and corresponding alkylated or protonated salts	
b.	PFIB: 1,1,3,3,3-Pentafluoro-2-(trifluoromethyl) 1-propene	
c.	BZ: 3-Quinuclidinyl benzilate	

9. Apart from Amiton, PFIB and BZ has your organization produced, processed, or consumed more than 1 tonne of any other CWC Schedule 2 chemicals in year 2000?

☐ Yes ☐ No

10. During year 2000, has your organization produced, acquired (including extraction from natural sources), used (including usage for medical, pharmaceutical or research purposes) or otherwise handled, stocked, or traded any CWC Schedule 1 chemicals ? (Please refer to Explanatory Notes 8 and its Appendix for information on CWC Schedule 1 chemicals and Explanatory Notes 9 for definition of "acquisition".)

☐ Yes ☐ No

11. During year 2000, has your organization imported or exported any of the chemicals listed in the CWC Schedule 1, 2 or 3 ?

☐ Yes ☐ No

12. Please indicate which of the following activities are carried out by your organization (tick more than one item if appropriate).

- ☐ Any form of chemical reactions
- ☐ Distribution/wholesaling of chemicals
- ☐ Blending or formulation of chemicals
- ☐ Scientific research
- ☐ Import/export of chemicals
- ☐ Production of hydrocarbons only
- ☐ Production of explosives only
- ☐ Production of polymers only (not involving the production of any monomers, even as intermediates)
- ☐ Others, please specify:

_____

_____

13. Please indicate the current number of employees in your organization:_____

END

Chemical Weapons Convention (CWC) – 2001 Industry Survey Explanatory Notes

Introduction

1. The HKSARG is preparing legislation to implement the Chemical Weapons Convention in the HKSAR. The Convention is an international treaty that seeks to ban the development, production, possession and use of chemical weapons, and requires the destruction of existing chemical weapons. It also requires member States to submit annual reports and forecasts on activities relating to chemicals scheduled to the Convention and certain unscheduled discrete organic chemicals. The Convention is administered by an international organization called the Organization for the Prohibition of Chemical Weapons (OPCW).

2. The Convention requires each State Party to adopt the necessary measures to implement the requirements of the Convention anywhere on its territory or in any other place under its jurisdiction. The People's Republic of China is one of the signatories. The Central People's Government (CPG) has extended the application of the Convention to the HKSAR according to Article 153 of the Basic Law. We will implement the Convention through our own law and systems of licensing and enforcement in accordance with the principle of "One Country, Two Systems". As traders may be aware, the HKSARG has already imposed licensing controls over the import and export of chemicals controlled by the Convention. We also prohibit services knowingly provided to assist the development and production of chemical weapons. However, there are certain requirements of the Convention (for examples, collecting information on activities relating to the chemicals scheduled to the Convention for making reports to OPCW and allowing inspections of chemical production facilities by staff of OPCW) which require the making of empowering legislation before they can be implemented in the HKSAR. Full compliance with the Convention does not only help the CPG fulfil its international obligation but will also help our continued access to advanced technologies and chemical products for industrial, trading, medical, and research purposes. This is critical for sustaining the growth of our industry and economy.

3. Numerous chemicals produced or used for normal industrial, medical or research activities can also find applications in the production of chemical weapons, either as the toxic agent of chemical weapons or their precursors. Hence, the Convention has imposed control measures in the form of reporting and inspection requirements for such chemicals to ensure that their production and application are for peaceful purposes only. The chemicals thus controlled under the Convention include three schedules of chemicals as detailed in the Appendix and almost all organic chemicals which are not included in the three schedules. This last group of organic chemicals is referred to as the Unscheduled Discrete Organic Chemicals (UDOC) in the Convention. Some examples of UDOC are also listed in the Appendix for illustrative purposes.

Unscheduled Discrete Organic Chemicals (please refer to the Appendix for examples of UDOC)

4. In the Convention, "Unscheduled Discrete Organic Chemicals (UDOC)" include all organic compounds not listed in the three schedules with the exception of long chain polymers (e.g. polystyrene, PVC, polythene, polyurethane, etc) and oligomers. Facilities producing any UDOC containing the elements phosphorus, sulfur or fluorine will be subject to the reporting

and inspection requirements of the Convention if the quantity produced is more than 30 tonnes a year. Facilities producing other UDOC will have to comply with these requirements if the aggregate quantity of all UDOC produced is more than 200 tonnes a year.

5. It should however be noted that facilities producing exclusively hydrocarbons or explosives are exempted from the reporting and inspection requirements.

Schedule 3 chemicals (please refer to the Appendix for the detailed list of chemicals)

6. Schedule 3 includes toxic chemicals and precursors that may pose a risk to the objectives of the Convention but which have wide ranging peaceful industrial applications such as pharmaceuticals, pesticides, fertilizers, dyes, perfumes and surfactants. Facilities producing any Schedule 3 chemicals above 30 tonnes a year as well as facilities importing or exporting them are subject to the reporting and inspection requirements of the Convention.

Schedule 2 chemicals (please refer to the Appendix for the detailed list of chemicals)

7. Schedule 2 includes those toxic chemicals and precursors that pose a significant risk to the objectives of the Convention but also have peaceful uses on the other hand. Some chemicals under item 4 of Schedule 2B (e.g. methylphosphonic acid) are used in flame retardants. Perfluoroisobutylene (PFIB) is a by-product in the production of fluorocarbons. Other peaceful uses of Schedule 2 chemicals include pharmaceuticals, lubricants, dye carriers, etc. Facilities producing, processing or consuming any Schedule 2 chemicals above the thresholds stipulated in the Convention as well as facilities importing or exporting them are subject to the reporting and inspection requirements of the Convention.

Schedule 1 chemicals (please refer to the Appendix for the detailed list of chemicals)

8. Chemicals placed under Schedule 1 are those that pose a high risk to the objectives of the Convention. There is little or no known industrial uses for these chemicals. Chemicals such as Ricin and Saxitoxin are known to be used in small quantities in scientific research. Ricin and the nitrogen mustards also find some limited use in medical treatment. The reporting and inspection requirements of the Convention are applicable to facilities producing, acquiring, retaining, using or transferring any Schedule 1 chemicals.

Definition of certain important terms

9. The definition of some important terms in the Convention are highlighted below to bring about a better understanding of its provisions:

i) Production: production of a chemical is defined as its formation through chemical reaction. Note that the formation of intermediates in a multi-stage chemical process as well as the formation of by-products in any chemical process are also included under this definition.

ii) Processing: processing of a chemical is defined as a physical process, such as formulation, extraction and purification, in which a chemical is not converted into another chemical. It includes the process in which the chemical is added as an ingredient in a formulation.

iii) Consumption: consumption of a chemical is defined as its conversion into another chemical via chemical reaction. Note that it includes the conversion of the chemical into other environmentally friendly chemicals in a waste management or disposal system.

iv) Acquisition of Schedule 1 chemicals includes the extraction of these chemicals from natural sources. Typical examples are the extraction of Ricin and Saxitoxin from castor bean and certain types of shellfish respectively.

Implementation of the Convention

10. New legislation will be enacted by the Government for implementing the Convention in the HKSAR. An industry awareness programme will also be launched to promote and explain the provisions of the Convention to the industry and other related sectors. To enable the Government to make a realistic assessment on the possible impact of the implementation of the Convention in the HKSAR, your co-operation in supplying us with accurate information about your organization is crucial. It will be highly appreciated if you would take some time out of your busy schedule to answer the attached questionnaire and either fax or mail it back to the following address on or before 30 June 2001:

Government Laboratory
(Attn: Mr. CY AUYEUNG)
7/F, Homantin Government Offices,
88, Chung Hau Street,
Homantin, Kowloon.
Fax: 2714 4083

Examples of Unscheduled Discrete Organic Chemicals (UDOCs) used in Chemical Industry

UDOCs which contain the elements phosphorus, sulfur, or fluorine (PSF chemical)

Drugs and Medicines
(1) Acetylcysteine
(2) Amoxicillin
(3) Biotin
(4) Cloxacillin sodium
(5) Cyclophosphamide
(6) Dichlorvos
(7) Dihydroergotamine mesylate
(8) Echothiophate iodide
(9) Etidronate disodium
(10) Fenfluramine hydrochloride
(11) Flunarizine hydrochloride
(12) Flunitrazepam
(13) Fluocinolone acetonide
(14) Fluorouracil

Synthetic resins, plastic materials and synthetic fibres except glass
(1) Benzothiazole
(2) Chlorotrifluoroethylene
(3) Tetrafluoroethylene
(4) Thiadiazole
(5) Vinyl fluoride
(6) Vinylidene fluoride

Soap and cleaning preparations, perfumes, cosmetics and other toilet preparations
(1) Acylisethionates**
(2) Acyltaurines**
(3) Alkyl ether sulfates**
(4) Alkyl phosphates**
(5) Alkyl sulfates**
(6) Alkylaryl phosphates**
(7) Alkylaryl sulfonates**
(8) Amide ether sulfates**
(9) Ammonium thioglycolate
(10) Thioglycolic acid
(11) Zinc pyrithione

Pesticides
(1) Acephate
(2) Aldicarb
(3) Asulam
(4) Bensulide
(5) Bromophos
(6) CGA 184927
(7) Chlorpyrifos
(8) Diazinon
(9) Dimethoate
(10) Fenthion
(11) Fluazifop-butyl

Basic industrial chemicals and other chemical products
(1) Acid violet
(2) Alizarin red
(3) Amaranth
(4) 2-Aminobenzothiazole
(5) Benzenesulfonamide
(6) Halons** or Fully halogenated chlorofluorocarbons**
(7) Calcium glycerophosphate
(8) Chlorofluorocarbons**
(9) Hydrobromofluorocarbons**
(10) Hydrochlorofluorocarbons**
(11) Trifluoroacetic acid

Other UDOCs

Drugs and Medicines
(1) Acetaminophen
(2) Atropine
(3) Camphor
(4) Chlorpheniramine maleate
(5) Cholecalciferol
(6) Cinnamaldehyde
(7) Cinnamol
(8) Hyoscine
(9) Matrine
(10) Menthol
(11) Methadone
(12) Oil of Eucalytus
(13) Phenylephrine
(14) Prednisolone
(15) Propoxyphene
(16) Salbutamol
(17) Tetracycline
(18) Tetrahydropalmatine
(19) Thymol

Synthetic resins, plastic materials and synthetic fibres except glass
(1) Ethylene glycol
(2) Urethane
(3) Vinyl acetate
(4) Vinyl alcohol
(5) Vinyl chloride
(6) Vinylpyrrolidone

Soap and cleaning preparations, perfumes, cosmetics and other toilet preparations
(1) Alkyl myristate**
(2) Benzaldehyde
(3) Castor oil
(4) Citronella oils
(5) Clove oil
(6) Coconut oil
(7) Dialkyl phthalate**
(8) Methyl salicylate
(9) Myristica fragrans houtt. oil
(10) Oil of camphor sassafrassy
(11) Oil of Lavender
(12) Polyglycol fatty acid ester**
(13) Sodium lauryl ether sulfate

Pesticides
(1) Acetochlor
(2) Aldrin
(3) Allethrin
(4) Carbaryl
(5) Carbofuran
(6) Chlorobenzilate
(7) 2,4-D
(8) Dieldrin
(9) Dinoseb
(10) Diquat dibromide
(11) Fenbutatin oxide
(12) Formaldehyde

Basic industrial chemicals and other chemical products
(1) Benzoic acid
(2) Citric acid
(3) Dehydroacetic acid
(4) Ethanol
(5) Glycerine
(6) p-Hydroxybenzoic acid
(7) Propylene glycol
(8) Salicylic acid
(9) Sorbic acid
(10) Sorbitol
(11) Stearic acid
(12) Tartaric acid
(13) Urea

(Note: ** These items refer to a group of chemicals with related structures.)

APPENDIX (PART B)

CWC Scheduled Chemicals

Schedule 3

(1) Phosgene: Carbonyl dichloride
(2) Cyanogen chloride
(3) Hydrogen cyanide
(4) Chloropicrin: Trichloronitromethane
(5) Phosphorus oxychloride
(6) Phosphorus trichloride
(7) Phosphorus pentachloride
(8) Trimethyl phosphite
(9) Triethyl phosphite
(10) Dimethyl phosphite
(11) Diethyl phosphite
(12) Sulfur monochloride
(13) Sulfur dichloride
(14) Thionyl chloride
(15) Ethyldiethanolamine
(16) Methyldiethanolamine
(17) Triethanolamine

Schedule 2A

(1) Amiton: O,O-Diethyl S-[2-(diethylamino)ethyll phosphorothiolate
and corresponding alkylated or protonated salts
(2) PFIB: 1,1,3,3,3-Pentafluoro-2-(trifluoromethyl) 1-propene**
(3) BZ: 3-Quinuclidinyl benzilate

Schedule 2B

(4) Chemicals, except for those listed in Schedule 1, containing a phosphorus atom to which is bonded one methyl, ethyl or propyl (normal or iso) group but not further carbon atoms.

e.g. Methylphosphonyl dichloride
Dimethyl methylphosphonate
Ethylphosphinyl dichloride
Ethylphosphonyl dichloride
Diethyl methylphosphonate
Dimethyl ethylphosphonate
Diethyl ethylphosphonate
Diphenyl methylphosphonate
Ethylphosphinyl difluoride
Methylphosphinyl difluoride
Methylphosphonic acid
Phosphonic acid, methyl-, compd. with (aminoiminomethyl)urea (1:1)
Phosphonothioic dichloride, ethyl-

Exemption: Fonofos: O-Ethyl S-phenyl ethylphosphonothiolothionate

(5) N,N-Dialkyl (Me, Et, n-Pr or i-Pr) phosphoramidic dihalides
(6) Dialkyl (Me, Et, n-Pr or i-Pr) N,N-dialkyl (Me, Et, n-Pr or i-Pr)-phosphoramidates
(7) Arsenic trichloride
(8) 2,2-Diphenyl-2-hydroxyacetic acid
(9) Quinuclidine-3-ol
(10) N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethyl-2-chlorides and corresponding protonated salts
(11) N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-ols and corresponding protonated salts
Exemptions: N,N-Dimethylaminoethanol and corresponding protonated salts
N,N-Diethylaminoethanol and corresponding protonated salts
(12) N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-thiols and corresponding protonated salts
(13) Thiodiglycol: Bis(2-hydroxyethyl) sulfide
(14) Pinacolyl alcohol: 3,3-Dimethylbutane-2-ol

Schedule 1

(1) O-Alkyl (≤C 10 , incl. cycloalkyl) alkyl (Me, Et, n-Pr or i-Pr)-phosphonofluoridates
e.g. Sarin: O-Isopropyl methylphosphonofluoridate
Soman: O-Pinacolyl methylphosphonofluoridate
(2) O-Alkyl (≤C 10 , incl. cycloalkyl) N,N-dialkyl (Me, Et, n-Pr or i-Pr) phosphoramidocyanidates
e.g. Tabun: O-Ethyl N,N-dimethyl phosphoramidocyanidate
(3) O-Alkyl (H or ≤C 10 , incl. cycloalkyl) S-2-dialkyl (Me, Et, n-Pr or i-Pr)-aminoethyl alkyl (Me, Et, n-Pr or i-Pr) phosphonothiolates and corresponding alkylated or protonated salts
e.g. VX: O-Ethyl S-2-diisopropylaminoethyl methyl phosphonothiolate
(4) Sulfur mustards:
2-Chloroethylchloromethylsulfide
Mustard gas: Bis(2-chloroethyl)sulfide
Bis(2-chloroethylthio)methane
Sesquimustard: 1,2-Bis(2-chloroethylthio)ethane
1,3-Bis(2-chloroethylthio)-n-propane
1,4-Bis(2-chloroethylthio)-n-butane
1,5-Bis(2-chloroethylthio)-n-pentane
Bis(2-chloroethylthiomethyl)ether
O-Mustard: Bis(2-chloroethylthioethyl)ether
(5) Lewisites:
Lewisite 1: 2-Chlorovinyldichloroarsine
Lewisite 2: Bis(2-chlorovinyl)chloroarsine
Lewisite 3: Tris(2-chlorovinyl)arsine
(6) Nitrogen mustards:
HN1: Bis(2-chloroethyl)ethylamine
HN2: Bis(2-chloroethyl)methylamine
HN3: Tris(2-chloroethyl)amine
(7) Saxitoxin
(8) Ricin
(9) Alkyl (Me, Et, n-Pr or i-Pr) phosphonyldifluorides
e.g. DF: Methylphosphonyldifluoride
(10) O-Alkyl (H or ≤C 10 incl. cycloalkyl) O-2-dialkyl (Me, Et, n-Pr or i-Pr)-aminoethyl alkyl (Me, Et , N-Pr or i-Pr) phosphonites and corresponding alkylated or protonated salts
e.g. QL: O-Ethyl O-2-diisopropylaminoethyl methylphosphonite
(11) Chlorosarin: O-Isopropyl methylphosphonochloridate
(12) Chlorosoman: O-Pinacolyl methylphosphonochloridate

[Note: ** This Chemical is also known as perfluoroisobutylene.]

Ref. : TRA CR 1015/9/7

4 October 2001

Dear Sirs,

Chemical Weapons (Convention) Bill

Introduction

This circular aims to familiarize the local chemical industry and related sectors of the requirements of the Chemical Weapons (Convention) Bill (the Bill) which was published in the Government Gazette on 28 September and will be introduced into the Legislative Council on 7 November 2001. The Bill seeks to provide the Government with the necessary legal authority to fully implement the "Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction" (the "Chemical Weapons Convention" or "the Convention") in the Hong Kong Special Administrative Region (Hong Kong).

The Chemical Weapons Convention

2. The Chemical Weapons Convention is an international treaty that aims to prohibit the development, production, acquisition, stockpiling, possession, transfer and use of chemical weapons (Note1). It also requires the destruction of existing chemical weapons. Development, production, acquisition, possession, transfer and use of toxic chemicals and their precursors which are intended for industrial, agricultural, research, medical, and other peaceful uses are, on the other hand, permitted under the Convention, but such activities are subject to declaration and inspection requirements under the Convention. Accordingly, the Convention requires State Parties to submit annual reports on past and anticipated activities related to the chemicals listed in the three Schedules to the Convention (scheduled chemicals). Declarations on past activities are also required for certain discrete organic chemicals (Note2) which are not listed in the Schedules to the Convention (unscheduled discrete organic chemicals or UDOCs).

Major Requirements under the Convention

3. The Convention lays down detailed requirements and obligations on its State Parties. The major requirements under the Convention include :
   a. General obligations : Each State Party is required to ban the use and development of chemical weapons and to destroy any chemical weapons or related production facilities in its possession or located in any place under its jurisdiction or control;
   b. Declarations : Each State Party is required to make annual declarations on its past and anticipated production, consumption, storage, transfer facilities used in such processes and other related activities concerning scheduled chemicals (see Appendix 1); and
   c. Inspection : Each State Party has the obligation to allow and

facilitate inspections of relevant sites and activities within its territory by an inspection team sent by the Secretariat of the Convention.

Implementation of the Convention in Hong Kong

4. The Convention came into force on 29 April 1997. The People's Republic of China is a signatory to the Convention and the Central People's Government has extended the application of the Convention to Hong Kong under Article 153 of the Basic Law. The Hong Kong Government will implement the Convention through its own law and its own control system in accordance with the principle of "One Country, Two Systems".
5. At present, the import and export of scheduled chemicals are subject to licensing control administered by the Trade and Industry Department (the Department) under the Import and Export Ordinance and the Import and Export (Strategic Commodities) Regulations. The Weapons of Mass Destruction (Control of Provision of Services) Ordinance also prohibits the provision of services intended to assist the development, production, acquisition and stockpiling of chemical, biological and nuclear weapons. The existing controls however fall short of the full requirements of the Convention, hence the need for the new legislation.

Prohibition on Use and Development of Chemical Weapons

6. The Bill prohibits the use, development, production, possession and transfer of chemical weapons and military preparation for their use. In addition, any person who finds an article which he believes to be a chemical weapon is required to notify the Customs and Excise Department.

Permit and Notification System

7. To monitor the production and related activities pertinent to scheduled chemicals and unscheduled discrete organic chemicals, the Bill empowers the Director-General of Trade and Industry (the Director) to administer a permit and notification system. Under the system, operators of facilities which deal with scheduled chemicals are required to obtain a permit from the Director for the operation of their facilities. In addition, operators who have obtained permits to operate their facilities are required to submit to the Director periodic reports regarding past and anticipated activities in their facilities, and to keep relevant records for not less than three years.
8. Operators of facilities shall notify the Director if they produce unscheduled discrete organic chemicals exceeding specified amounts. Such operators are also required to keep relevant records for not less than three years.
9. The permit and notification system as provided for in the bill is recapitulated at Appendix 2 for easy reference. In addition, in order to enable the Government to obtain the necessary information required for making declarations under the Convention, the Bill also empowers the Director to demand from any person information that is relevant to the preparation of a declaration required under the Convention and pertinent to the chemicals controlled under the Convention.

Enforcement and Inspection

10. The Bill empowers officers of the Customs and Excise Department and officers authorized by the Commissioner for Customs and Excise (the Commissioner) to enter, search, inspect and conduct investigations on facilities as required to ensure compliance with the provisions of the Bill. The Bill also empowers the Commissioner or a magistrate to issue authorization in respect of an inspection conducted by an inspection team sent by the Secretariat of the Convention.

Impact of the Bill on local trade and industry

11. The Bill will underline Hong Kong's commitment to internationally agreed arrangements on the ban of chemical weapons and on the monitoring of activities involving sensitive chemicals. It will help ensure Hong Kong's continued access to a full range of chemicals needed for local industrial, medical, research, and trading purposes.
12. In November 1998 and June 2001, the Government conducted two rounds of survey to ascertain the likely impact of the implementation of the Bill on the local chemical industry and related sectors. The result showed that a small number of establishments have been engaged in activities involving chemicals controlled by the Convention, and hence will/may be subject to the permit, notification and other declaration requirements under the Bill.
13. Interested parties and concerned sectors of the trade and industry are invited to keep in view circulars issued by the Department from time to time concerning the legislative process of the Bill, the operation of the permit and notification system and other information on the subject. The Department will also launch in due course a dedicated website on issues relating to the implementation of the Chemical Weapons Convention in Hong Kong to provide more information about the Convention and the Bill. Announcements will be made in the Trade and Industry Department website at http://www.tid.gov.hk when this website is ready. Interested parties may also visit the website at http://www.gov.hk/pd/egazette to make reference to the Bill published in the gazette on 28 September 2001 (Gazette No. 39 Vol. 5, Legal Supplement 3).

Enquiry

14. If you have any question on the content of this circular or need any advice on the subject, you are welcome to contact Miss Annie LOONG at tel no. 2398 5670 for further information/clarification. The Department will arrange consultation session to brief concerned parties as necessary.

Yours faithfully,

(Miss Angela Liu)

for Director-General of Trade and Industry

Scheduled Chemicals Controlled by the Chemical Weapons Convention (CWC)

Schedule 1

		(CAS registry number)
A.	Toxic chemicals :	
(1)	O-Alkyl ($\leq C_{10}$, incl. cycloalkyl) alkyl (Me, Et, n-Pr or i-Pr)-phosphonofluoridates	
	e.g. Sarin : O-Isopropyl methylphosphonofluoridate	(107-44-8)
	Soman : O-Pinacolyl methylphosphonofluoridate	(96-64-0)
(2)	O-Alkyl ($\leq C_{10}$, incl. cycloalkyl) N,N-dialkyl (Me, Et, n-Pr or i-Pr) phosphoramidocyanidates	
	e.g. Tabun : O-Ethyl N,N-dimethyl phosphoramidocyanidate	(77-81-6)
(3)	O-Alkyl (H or $\leq C_{10}$, incl. cycloalkyl) S-2-dialkyl (Me, Et, n-Pr or i-Pr)-aminoethyl alkyl (Me, Et, 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)
(4)	Sulfur mustards :	
	2-Chloroethylchloromethylsulfide	(2625-76-5)
	Mustard gas : Bis(2-chloroethyl)sulfide	(505-60-2)
	Bis(2-chloroethylthio)methane	(63869-13-6)
	Sesquimustard : 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 : Bis(2-chloroethylthioethyl)ether	(63918-89-8)
(5)	Lewisites :	
	Lewisite 1 : 2-Chlorovinyldichloroarsine	(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 : Tris(2-chloroethyl)amine (555-77-1)

(7) Saxitoxin (35523-89-8)

(8) Ricin (9009-86-3)

B. Precursors :

(9) Alkyl (Me, Et, n-Pr or i-Pr) phosphonyldifluorides

e.g. DF : Methylphosphonyldifluoride (676-99-3)

(10) O-Alkyl (H or $\leq C_{10}$, incl. cycloalkyl) O-2-dialkyl (Me, Et, n-Pr or i-Pr)-aminoethyl alkyl (Me, Et, n-Pr or i-Pr) phosphonites and corresponding alkylated or protonated salts

e.g. QL : O-Ethyl O-2-diisopropylaminoethyl methylphosphonite (57856-11-8)

(11) Chlorosarin : O-Isopropyl methylphosphonochloridate (1445-76-7)

(12) Chlorosoman : O-Pinacolyl methylphosphonochloridate (7040-57-5)

Schedule 2

A. Toxic chemicals :

(1) Amiton : O,O-Diethyl S-[2-(diethylamino)ethyl] phosphorothiolate and corresponding alkylated or protonated salts (78-53-5)

(2) PFIB : 1,1,3,3,3-Pentafluoro-2-(trifluoromethyl)-1-propene (382-21-8)

(3) BZ : 3-Quinuclidinyl benzilate (*) (6581-06-2)

B. Precursors :

(4) Chemicals, except for those listed in Schedule 1, containing a phosphorus atom to which is bonded one methyl, ethyl or propyl (normal or iso) group but not further carbon atoms,

e.g. Methylphosphonyl dichloride (676-97-1)
Dimethyl methylphosphonate (756-79-6)

Exemption : Fonofos : O-Ethyl S-phenyl ethylphosphonothiolothionate (944-22-9)

(5) N,N-Dialkyl (Me, Et, n-Pr or i-Pr) phosphoramidic dihalides

(6) Dialkyl (Me, Et, n-Pr or i-Pr) N,N-dialkyl (Me, Et, n-Pr or i-Pr)-phosphoramidates

(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

(11) N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-ols and corresponding protonated salts

Exemptions : N,N-Dimethylaminoethanol and corresponding protonated salts (108-01-0)
N,N-Diethylaminoethanol and corresponding protonated salts (100-37-8)

(12) N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-thiols and corresponding protonated salts

(13) Thiodiglycol : Bis(2-hydroxyethyl)sulfide (111-48-8)

(14) Pinacolyl alcohol : 3,3-Dimethylbutan-2-ol (464-07-3)

Schedule 3

A.	Toxic chemicals :	
(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)
B.	Precursors :	
(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)	Sulfur monochloride	(10025-67-9)
(13)	Sulfur 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)

The Permit and Notification System provided for under the Chemical Weapons (Convention) Bill

Permit Requirement

Pursuant to Clause 8 of the Chemical Weapons (Convention) Bill, the operator of a facility requires a permit issued by the Director in order to operate the facility during a particular calendar year if, in all the circumstances of the case, a reasonable person would conclude that -

a. Schedule 1 chemicals (other than excluded Schedule 1 chemicals) are likely to be produced, acquired, retained or used at, or transferred from, the facility during the year. Schedule 1 chemicals are excluded chemicals in relation to a facility and to a year if -
   i. the total amount of those chemicals likely to be acquired, retained or used at, or transferred from, the facility during the year does not exceed 100 grams;
   ii. such chemicals will not be produced at the facility during that year; and
   iii. such chemicals are intended only to be put to research, medical or pharmaceutical purposes;
b. an amount of a Schedule 2 chemical exceeding, in the aggregate, the Schedule 2 permit threshold for that chemical is likely to be produced, processed or consumed at a plant comprising, or comprising part of, the facility during the year. The threshold is -
   i. 1 kg for any chemical designated with an "*" in Schedule 2, Part A;
   ii. 100 kg of any other chemicals listed in Schedule 2, Part A; or
   iii. 1 tonne of any chemical listed in Schedule 2, Part B; or
c. an amount of a Schedule 3 chemical exceeding, in the aggregate, 30 tonnes of that chemical is likely to be produced at a plant comprising, or comprising part of, the facility during the year.

The maximum penalties for contravening Clause 8 in relation to Schedule 1 chemicals are a fine of $500,000 and imprisonment for 5 years. The penalties in relation to Schedule 2 chemicals are a fine of $200,000 and imprisonment for 2 years, and Schedule 3 chemicals a fine of $100,000 and imprisonment for 1 year.

In addition, Clause 12 of the Bill requires such permit holder to give to the Director periodic reports on the facilities and chemicals concerned, and to keep relevant records for not less than three years. Contravention of this provision is subject to a fine of $100,000 and to imprisonment for 1 year.

Notification Requirement

Clause 11 of the Bill requires the operator of a facility to notify the Director if -

a. the amount of UDOC produced in the facility during the preceding calendar year was more than 200 tonnes; or
b. the UDOC produced in the facility contained the elements phosphorus, sulfur or fluorine and the amount produced exceeded 30 tonnes,

except where the facility concerned was only producing hydrocarbons or explosives. An operator who is required to notify the Director is also required to keep the relevant records for not less than three years. Failure to comply with the notification and the record-keeping requirements will be subject to a fine of $100,000 and to imprisonment for 1 year.

Note 1: "Chemical weapons", as defined under the Convention, includes any toxic chemicals and their precursors except where intended for purposes not prohibited under the Convention; munitions and devices specifically designed to cause death or other harm through the toxic properties of toxic chemicals and any equipment specifically designed for use directly in connection with the employment of these munitions and devices.

Note 2: "Discrete Organic Chemical" is defined as any chemical belonging to the class of chemical compounds consisting of all compounds of carbon except for its oxides, sulfides and metal carbonates, identifiable by chemical name, by structural formula, if known, and by Chemical Abstracts Service (CAS) registry number, if assigned.