

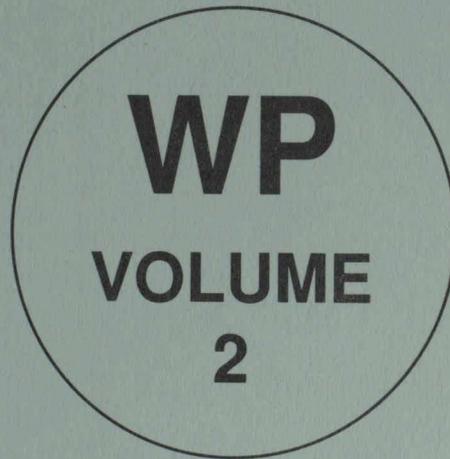
D116A

CONFERENCE ON DISARMAMENT

# CHEMICAL WEAPONS

WORKING PAPERS

1992 SESSION



COMPILED AND EDITED BY:  
ARMS CONTROL AND DISARMAMENT DIVISION OF  
EXTERNAL AFFAIRS AND INTERNATIONAL TRADE CANADA  
OTTAWA, CANADA

NOVEMBER 1993



CONFERENCE ON DISARMAMENT

# CHEMICAL WEAPONS

## WORKING PAPERS

1992 SESSION

Dept. of Foreign Affairs  
Min. des Affaires étrangères

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CHEMICAL WEAPONS WORKING PAPERS  
 SUBMITTED TO CD 1992  
 CHRONOLOGICAL INDEX

1992

VOLUME I

Serial	Reference	Country	Description	Date
551	CD/1114 [EXTRACT]	Bolivia Colombia Ecuador Peru Venezuela	<b>PREFACE</b>  <b>WP</b>  <b>VOLUME 2</b>	7 January 1992

This set of two volumes covers official documents (working papers) relating to Chemical Weapons submitted in plenary to the Conference on Disarmament during its 1992 session. It is compiled to facilitate discussions and research on this issue.

Volume I includes CD/1114 to CD/1128; Volume II includes CD/1129 to CD/1153; Volume III includes CD/1155 to CD/1171.

Note that the index is a chronological listing while the documents themselves are arranged in numerical order by CD number.

552	CD/1115 [EXTRACT]	UN Secretary-General	Letter dated 15 January 1992 from the Secretary-General of the United Nations addressed to the President of the Conference on Disarmament transmitting the resolutions and decisions on disarmament adopted by the General Assembly at its forty-sixth session	16.1.92
553	CD/1116	ANCCW	Report of the Ad Hoc Committee on Chemical Weapons to the Conference on Disarmament on its work during the period 30 September 1991 to 20 January 1992	20.1.92



**CHEMICAL WEAPONS WORKING PAPERS  
SUBMITTED TO CD 1992  
CHRONOLOGICAL INDEX**

1992

VOLUME 1

<b>Serial</b>	<b>Reference</b>	<b>Country</b>	<b>Description</b>	<b>Date</b>
551	CD/1114 [EXTRACT]	Bolivia Colombia Ecuador Peru Vene- zuela	Letter dated 7 January 1992 from the Representatives of Bolivia, Colombia, Ecuador, Peru and Venezuela addressed to the Secretary-General of the Conference on Disarmament transmitting the text of the Cartagena Declaration on Renunciation of Weapons of Mass Destruction, signed at Cartagena de Indias, Colombia, on 4 December 1991 by the five Heads of State of the member countries of the Andean Group	9.1.92
552	CD/1115 [EXTRACT]	UN Sec- retary- General	Letter dated 15 January 1992 from the Secretary-General of the United Nations addressed to the President of the Conference on Disarmament transmitting the resolutions and decisions on disarmament adopted by the General Assembly at its forty-sixth session	16.1.92
553	CD/1116	AHCCW	Report of the Ad Hoc Committee on Chemical Weapons to the Conference on Disarmament on its work during the period 30 September 1991 to 20 January 1992	20.1.92

Serial	Reference	Country	Description	Date
554	CD/1120	CD	Decision on the re-establishment of the Ad Hoc Committee on Chemical Weapons for the 1992 session	22.1.92
555	CD/1123 [EXTRACT]	Russian Federation	Letter dated 30 January 1992 from the Representative of the Russian Federation addressed to the President of the Conference on Disarmament transmitting the text of the statement made on 29 January 1992 by B.N. Yeltsin, the President of the Russian Federation, on Russia's policy in the field of arms limitation and reduction	31.1.92
556	CD/1126	Argentina Brazil Chile	Letter dated 7 February 1992 from the Heads of the Delegations of Argentina, Brazil and Chile addressed to the Secretary-General of the Conference on Disarmament transmitting the text of the Joint Declaration on the Complete Prohibition of Chemical and Biological Weapons, "The Mendoza Agreement"	17.2.92
557	CD/1127 and Corr.1 CD/CW/ WP.384 and Corr.1	China	Some information on discovered chemical weapons abandoned in China by a foreign State	18.2.92
558	CD/1128 CD/CW/ WP.385	Australia	Trial inspection of a Schedule 3/other relevant facility	20.2.92

VOLUME 2

Serial	Reference	Country	Description	Date
559	CD/1129 CD/CW/ WP.386	Australia	Australian national secretariat: survey of chemical industry	20.2.92
560	CD/1130 CD/CW/ WP.387	China	Principled position and proposals on the issue of abandoned chemical weapons	20.2.92
561	CD/1132	Canada	Letter dated 19 February 1992 from the Deputy Permanent Representative of Canada addressed to the Secretary-General of the Conference on Disarmament transmitting compendia on chemical weapons comprising plenary statements and working papers from the 1991 session of the Conference on Disarmament	21.2.92
562	CD/1134 [EXTRACT]	Chile	Letter dated 21 February 1992 from the Permanent representative of Chile addressed to the Secretary-General of the Conference on Disarmament transmitting the text of the statement issued by the Acting Minister for Foreign Affairs of Chile concerning international disarmament	24.2.92
563	CD/1135 CD/CW/ WP.388	Hungary	Provision of data relevant to the Chemical Weapons Convention	24.2.92
564	CD/1136 CD/CW/ WP.389	Czech and Slovak Federal Republic	Protection against chemical weapons (data bank of available basic means)	27.2.92

Serial	Reference	Country	Description	Date
565	CD/1140	Germany	Letter dated 25 February 1992 from the Representative of Germany addressed to the President of the Conference on Disarmament transmitting the official text of the letter dated 8 February 1992 from the Foreign Minister of the Federal Republic of Germany addressed to the member States of the Conference on Disarmament concerning the Ad Hoc Committee on Chemical Weapons	28.2.92
566	CD/1141 CD/CW/ WP.390	France	Provision of data relevant to the Chemical Weapons Convention	3.3.92
567	CD/1143	Australia	Proposed Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and their Destruction	12.3.92
568	CD/1146 CD/CW/ WP.392	Poland	Solid-phase extraction as a possible way of chemical warfare agents sampling for their analysis in laboratories under Chemical Weapons Convention	17.3.92
569	CD/1152 CD/CW/ WP.410	Spain	Report on trial challenge inspection	5.6.92

Serial	Reference	Country	Description	Date
570	CD/1153 CD/CW/ WP.412	Norway	Letter dated 11 June 1992 from the Charge d'affaires a.i. of Norway addressed to the President of the Conference on Disarmament, transmitting a research report, entitled 'Verification of a Chemical Weapons Convention: recommended operating procedures for sampling and sample handling, Part XI'	11.6.92

VOLUME 3

571	CD/1155	Finland	Letter dated 19 June 1992 from the Permanent Representative of Finland addressed to the Secretary-General of the Conference on Disarmament transmitting the latest volume of the blue book series on verification of chemical disarmament, entitled 'International Interlaboratory Comparison (Round-Robin) Test for the Verification of Chemical Disarmament; F.3. Testing of Procedures on Simulated Military Facility Samples'	22.6.92
572	CD/1157	Australia	Letter dated 24 June 1992 from the Permanent Representative of Australia to the United Nations for Disarmament Matters addressed to the Secretary-General of the Conference on Disarmament transmitting the statement issued by participating states at the conclusion of the Third Chemical Weapons Regional Seminar, held in Sydney, Australia, from 21 to 23 June 1992	25.6.92

Serial	Reference	Country	Description	Date
573	CD/1158 [EXTRACT]	USA	Letter date 20 July 1992 from the Representative of the United States of America addressed to the President of the Conference on Disarmament transmitting a statement by President Bush on the non-proliferation initiative, announced by him on 13 July 1992, as well as two related fact sheets issued by the White House	22.7.92
574	CD/1161 CD/CW/ WP.426	USA	Letter dated 3 August 1992 from the Representative of the United States of America addressed to the President of the Conference on Disarmament transmitting the Agreement between the Department of Defense of the United States of America and the President's Committee on Conventional Problems of Chemical and Biological Weapons of the Russian Federation concerning the safe, secure and ecologically sound destruction of chemical weapons	5.8.92
576	CD/1164	Australia	Statement made on behalf of 'Australia Group' by the Representative of Australia, Ambassador Paul O'Sullivan, at the 629th Plenary Meeting of the Conference on Disarmament	7.8.92

Serial	Reference	Country	Description	Date
575	CD/1162 [EXTRACT]	USA	Letter dated 3 August 1992 from the Representative of the United States of America addressed to the President of the Conference on Disarmament transmitting documents relating to arms control and disarmament issues agreed on during the summit meeting held by Presidents Bush and Yeltsin in Washington, D.C. in June 1992	12.8.92
578	CD/1168 CD/CW/ WP.428	UK	Letter dated 12 August 1992 from the Representative of the United Kingdom of Great Britain and Northern Ireland addressed to the Secretary-General of the Conference on Disarmament transmitting a paper which addressed the requirements for safety during the on-site inspections provided for under the Chemical Weapons Convention	13.8.92
579	CD/1169 CD/CW/ WP.437	Norway	Letter dated 24 August 1992 from the Representative of Norway addressed to the Secretary-General of the Conference on Disarmament, transmitting a report entitled "Transport of Samples Containing Chemical Warfare Agents by Air"	24.8.92
580	CD/1170	AHCCW	Report of the Ad Hoc Committee on Chemical Weapons to the Conference on Disarmament	26.8.92

Serial	Reference	Country	Description	Date
581	CD/1171 [EXTRACT]	China	Letter dated 30 August 1992 from the Representative of the People's Republic of China addressed to the Secretary-General of the Conference on Disarmament transmitting the text of a speech made on 17 August 1992 by Mr. Qian Qichen, State Councillor and Foreign Minister of China, at the United Nations Conference on Disarmament and Security Issues in the Asia-Pacific Region	31.8.92
577	CD/1166	Russian Federation	Letter dated 11 August 1992 from the representative of the Russian Federation addressed to the President of the Conference on Disarmament transmitting documents relating to arms control and disarmament agreed on during the summit meeting between the President of the Russian Federation, B.N. Yeltsin, and the President of the United States of America, G. Bush, in Washington in June 1992	1.9.92





# CONFERENCE ON DISARMAMENT

CD/1129  
CD/CW/WP.386  
20 February 1992

Original: ENGLISH

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AUSTRALIA

## AUSTRALIAN NATIONAL SECRETARIAT: SURVEY OF CHEMICAL INDUSTRY

### 1. Introduction

At the Government-Industry Conference against Chemical Weapons, held in Canberra in September 1989, the Australian Foreign Minister announced that the Department of Foreign Affairs and Trade was proceeding to establish a National Secretariat to act as a nucleus for the future National Authority of the CWC. The Minister stated that the Secretariat, in consultation with appropriate Federal and State Government departments, would be responsible for reviewing existing laws and regulations covering the activities of the Australian chemical industry, and looking for ways to introduce and adapt the prospective requirements of the CWC to the current regulatory matrix.

The first task of the Secretariat was to develop a strategy to prepare Australia for national implementation of a CWC. The strategy comprises a program of consultation and research leading to the development of a package of implementation measures which will be considered by the Australian Government at the appropriate time. A document entitled "Strategy for Preparing for the Implementation of the Chemical Weapons Convention in Australia" was presented to the Conference on Disarmament in February 1991 (CD/1055).

That paper served to illustrate the fact that there is a wide range of tasks which must be initiated ahead of time by any government if it is to be able to commit its country in good faith to the CWC at the time of entry into force.

An important requirement under the future CWC, highlighted in the above mentioned Strategy Paper, is the assembling of data on which chemicals relevant to the CWC are produced, used, and traded. When considering its approach to implementation, Australia's National Secretariat was faced with the problem of not knowing the levels of production or use of the relevant chemicals in Australia. This is a fundamental question which is critical for any country in determining not only the size and shape of its National Authority, but also the overall national implementation effort which will be required.

In common with most other countries, chemicals are heavily regulated in Australia. While this regulation means that various databases on chemical production do exist, it became clear that in themselves, these would not meet all the requirements of the CWC. Because of differences in the way these databases were structured, difficulties were also found in assembling this information in a format suitable for the CWC. Furthermore it was likely, given that these databases are held by different governments within Australia, that there would have been issues of access to resolve. Consequently Australia's National Secretariat concluded it would be necessary to conduct a survey of chemicals which was tailor-made to meet the requirements of the CWC.

2. Survey Design

The survey was designed to the National Secretariat's specifications by the Australian Bureau of Statistics, the government agency responsible for the conduct of the Australian census of population and housing and a large number of industry surveys.

The key objective of the survey was to collect the information about the production, processing and consumption of chemicals that would be required from Australia by the International Organisation when the CWC comes into effect. It was also designed to collect similar information about chemical weapons precursor chemicals subject to Australian export controls.

A first step in the design of the survey was to analyse which organisations would be covered. Analysis of the peaceful purposes for which scheduled chemicals could be used suggested that as well as chemical manufacturers and industrial chemical users, government agencies and laboratories at both Commonwealth and State government levels, universities and hospitals needed to be included.

The main features of the survey methodology were:

it was a mail survey

participation was voluntary

it was directed to companies, not individual plants.

The survey deliberately did not include companies solely engaged in the distribution of, or trade in chemicals. It was considered that this would introduce an element of double-counting between traders and users

and in any case alternative - and possibly more reliable - import and export data is potentially available from government sources.

Because it was a mail survey an up-to-date mailing list was required. Such a list was developed on the basis of chemical industry directories supplemented by business telephone directories. Government directories of hospitals and tertiary institutions were used for these organisations. State and territory governments were asked to nominate government organisations at these levels for inclusion on the mailing list. Similarly Commonwealth departments were asked to nominate relevant agencies at this level of government.

This process yielded some 2000 companies and organisations including chemical manufacturers, industrial chemical users, government agencies and laboratories, hospitals and universities to whom the questionnaire was eventually sent.

### 3. Development of the Survey Questionnaire

In order to ask companies and organisations about the production of chemicals a manageable list of individual chemicals was required.

The chemicals to be covered by the Chemical Weapons Convention are listed in three schedules. Within these schedules some chemicals are listed individually, and others are listed as "families", the families approach having been adopted by our negotiations here in order that all relevant chemicals be covered. Because some of these families may contain a large number of chemicals, however, it was not possible to specify a complete list of chemicals which will be covered by legislation implementing the CWC in Australia.

For the purposes of the survey, the Australian Inventory of Chemical Substances (AICS) was used to identify individual chemicals within the families which are produced in or imported to Australia. The inventory was developed under national occupational health and safety legislation as the basis for distinguishing between existing chemicals and new chemicals for the purposes of assessing a newly introduced chemical's health and safety impact. AICS was used in this survey as an alternative to generating a list of chemicals containing thousands of individual chemicals, most of which would not be relevant to Australia.

A copy of the Survey questionnaire is attached to this paper. It will be noted that for questions relating to families of chemicals, individual chemicals of the family are listed first, followed by a question on other members of the same family. To further assist respondents, a page of the questionnaire provides chemical information on these families.

In addition to scheduled chemicals, the survey covers a list of additional chemicals (Section C, items 18 to 40), which may be used in the production of scheduled chemicals. These additional chemicals are covered by Australian export controls.

The questionnaire was developed by the Australian Bureau of Statistics with the technical assistance of the Materials Research Laboratory, chemical industry organisations and a number of chemical companies.

#### 4. Conduct of the Survey

The survey was conducted in December 1991. Respondents were sent the questionnaire, a covering letter from the

National Secretariat seeking their co-operation and providing a contact name and telephone number for any queries, and a self-addressed, postage-paid envelope. One reminder letter was sent to respondents who did not meet the due date for return of the questionnaire. At an appropriate interval those who fail to respond to the reminder letter will receive a reminder telephone call.

The mail-out was preceded by pre-survey publicity in two chemical industry association newsletters. Two weeks before the questionnaire was sent out, a letter from the head of the Chemical Confederation of Australia requesting co-operation was sent to all addressees on the mailing list.

Data entry and analysis will commence as soon as the last returns have been received. When this is completed Australia will be in a better position to determine its implementation requirements including resource questions in relation to its National Authority. Valuable experience will also have been provided to assist in the design of the compulsory data reporting system which will be introduced under the Australian CWC implementing legislation.

Australia will present a Working Paper incorporating the results of the survey when this is available.

It is hoped that this preliminary communication, in particular the survey methodology and questionnaire, will assist other countries in undertaking similar exercises in preparation for the implementation of the CWC.

# DEPARTMENT OF FOREIGN AFFAIRS AND TRADE

## Survey of Chemical Industry

November 1991

### Confidentiality

Your completed form remains confidential to the Department of Foreign Affairs and Trade.

### Due Date

Please complete this form and return it to the address below by  
**3 December 1991**

### Help Available

Chemicals marked with a \* have a brief technical note on page 26.

If you have any other problems in completing this form or if you require additional copies, please contact Henry Fox on (06) 261 2431 or Sherree Minehan on (06) 261 2338.

### Instructions

Please answer all questions carefully, even if you have not handled or produced any of the chemicals listed.

We are interested in your entire Australian operations, so please compile your information accordingly.

Careful estimates should be provided only when actual figures cannot be obtained.

This survey collects information about the 1990 calendar year.

### Return Address

The Executive Officer  
Chemical Industry Survey - CBS  
D-3-N / DND  
Department of Foreign Affairs and Trade  
Canberra A.C.T. 2600

A. Were the chemicals described below produced, synthesized, consumed or handled during 1990 in ANY amount:

Include: - amounts imported and exported  
- amounts processed without conversion

1 a. O-isopropyl methylphosphonofluoridate  
(Sarin, CAS Number 107-44-8)?  
No  1  
Yes  2

b. O-pinacolyl methylphosphonofluoridate  
(Soman, CAS Number 96-64-0)?  
No  1  
Yes  2

c. Other O-Alkyl ( $\leq C_{10}$ , including cycloalkyl)  
alkyl (Me, Et, n-Pr, or i-Pr)-  
phosphonofluoridates \*?  
No  1  
Yes (Specify name(s) below)  2

2 a. O-ethyl N,N-dimethylphosphoramidocyanidate  
(Tabun, CAS Number 77-81-6)?  
No  1  
Yes  2

b. Other O-Alkyl ( $\leq C_{10}$ , including cycloalkyl)  
N,N-dialkyl (Me, Et, n-Pr or i-Pr)-  
phosphoramidocyanidates \*?  
No  1  
Yes (Specify name(s) below)  2

3 a. O-ethyl S-2-diisopropylaminoethyl methyl  
phosphonothiolate  
(VX, CAS Number 50782-69-9)?  
No  1  
Yes  2

b. Other O-Alkyl (H or  $\leq C_{10}$ , including cycloalkyl)  
S-2-dialkyl (Me, Et, n-Pr or i-Pr)-  
aminoethyl alkyl (Me, Et, n-Pr, or i-Pr)-  
phosphonothiolates \*  
and corresponding alkylated and protonated salts?  
No  1  
Yes (Specify name(s) below)  2

4 a. Methylphosphonyldifluoride  
(DF, CAS Number 676-99-3)?  
No  1  
Yes  2

b. Other Alkyl (Me, Et, n-Pr or i-Pr)  
phosphonyldifluorides \*?  
No  1  
Yes (Specify name(s) below)  2

5 a. O-ethyl O-2-diisopropylaminoethyl  
methylphosphonite  
(QL, CAS Number 57856-11-8)?  
No  1  
Yes  2

b. Other O-Alkyl (H or  $\leq C_{10}$ , including cycloalkyl)  
O-2-dialkyl (Me, Et, n-Pr or i-Pr)-  
aminoethyl alkyl (Me, Et, n-Pr or i-Pr)-  
phosphonites \*  
and corresponding alkylated and protonated salts?  
No  1  
Yes (Specify name(s) below)  2

6 a. O-isopropyl methylphosphonochloridate  
(Chloro Sarin, CAS Number 1445-76-7)?  
No  1  
Yes  2

b. O-pinacolyl methylphosphonochloridate  
(Chloro Soman, CAS Number 7040-57-5)?  
No  1  
Yes  2

c. Other O-Alkyl ( $\leq C_{10}$ , including cycloalkyl)  
alkyl (Me, Et, n-Pr or i-Pr)-  
phosphonochloridates \*?  
No  1  
Yes (Specify name(s) below)  2

Additional chemical names from above - if you need more space please use page 10.

[CAS Number]


A. Were the chemicals described below produced, synthesized, consumed or handled during 1990 in ANY amount:

Include: - amounts imported and exported  
- amounts processed without conversion

- 7 a. bis (2-chloroethyl) sulphide  
(Mustard gas, CAS Number 505-60-2)?  
No .....  1  
Yes .....  2
- b. 1,2 bis (2-chloroethylthio)-ethane  
(Sesquimustard, CAS Number 3563-36-8)?  
No .....  1  
Yes .....  2
- c. bis (2-chloroethylthioethyl) ether  
(O-mustard, CAS Number 63918-89-8)?  
No .....  1  
Yes .....  2
- d. bis (2-chloroethylthio) methane  
(CAS Number 63869-13-6)?  
No .....  1  
Yes .....  2
- e. 1,3-bis (2-chloroethylthio)-n-propane  
(CAS Number 63905-10-2)?  
No .....  1  
Yes .....  2
- f. 1,4-bis (2-chloroethylthio)-n-butane  
(CAS Number not available)?  
No .....  1  
Yes .....  2
- g. 2-chloroethylchloromethylsulphide  
(CAS Number 2625-76-5)?  
No .....  1  
Yes .....  2
- h. 1,5-bis (2-chloroethylthio)-n-pentane  
(CAS Number not available)?  
No .....  1  
Yes .....  2
- i. bis-(2-chloroethylthiomethyl) ether  
(CAS Number not available)?  
No .....  1  
Yes .....  2

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- 8 a. 2-chlorovinyl dichloroarsine  
(Lewisite 1, CAS Number 541-25-3)?  
No .....  1  
Yes .....  2
- b. bis (2-chlorovinyl) chloroarsine  
(Lewisite 2, CAS Number 40334-69-8)?  
No .....  1  
Yes .....  2
- c. tris (2-chlorovinyl) arsine  
(Lewisite 3, CAS Number 40334-70-1)?  
No .....  1  
Yes .....  2
- 9 a. bis (2-chloroethyl) ethylamine  
(HN1, CAS Number 538-07-8)?  
No .....  1  
Yes .....  2
- b. bis (2-chloroethyl) methylamine  
(HN2, CAS Number 51-75-2)?  
No .....  1  
Yes .....  2
- c. tris (2-chloroethyl) amine  
(HN3, CAS Number 555-77-1)?  
No .....  1  
Yes .....  2
- 10 3-quinuclidinyl benzilate  
(BZ, CAS Number 6581-06-2)?  
No .....  1  
Yes .....  2
- 11 Saxitoxin  
(CAS Number 35523-89-8)?  
No .....  1  
Yes .....  2
- 12 Ricin  
(CAS Number 9009-86-3)?  
No .....  1  
Yes .....  2
- 13 3,3-Dimethylbutan-2-ol  
(Pinacolyl alcohol, CAS Number 464-07-3)?  
No .....  1  
Yes .....  2



B. Were the chemicals described below produced, synthesized, consumed or handled during 1990 in amounts which total at least 10 kilograms:

Include: - amounts imported and exported  
- amounts processed without conversion

8 a. 2-Dimethylaminoethanol  
(CAS Number 108-01-0)?

No .....  1  
Yes .....  2

b. 2-Diethylaminoethanol  
(CAS Number 100-37-8)?

No .....  1  
Yes .....  2

c. 2-Di-isopropylaminoethanol  
(CAS Number 96-80-0)?

No .....  1  
Yes .....  2

d. Choline  
(CAS Number 62-49-7)?

No .....  1  
Yes .....  2

e. Choline carbonate  
(CAS Number 78-73-9)?

No .....  1  
Yes .....  2

f. Choline chloride  
(CAS Number 67-48-1)?

No .....  1  
Yes .....  2

g. Choline hydroxide  
(CAS Number 123-41-1)?

No .....  1  
Yes .....  2

h. Choline methyl sulphate  
(CAS Number 65151-62-4)?

No .....  1  
Yes .....  2

i. Choline dihydrogen citrate  
(CAS Number 77-91-8)?

No .....  1  
Yes .....  2

j. Tricholine citrate  
(CAS Number 546-63-4)?

No .....  1  
Yes .....  2

k. Choline bitartrate  
(CAS Number 87-67-2)?

No .....  1  
Yes .....  2

l. Other N, N-Dialkyl (Me, Et, n-Pr, or i-Pr)  
aminoethane-2-ols  
and corresponding alkylated and protonated salts?

No .....  1  
Yes (Specify name(s) below) .....  2

9 a. N,N-diisopropyl-2-aminoethane thiol  
(CAS Number 5842-07-9)?

No .....  1  
Yes .....  2

b. Dimethylaminoethane-2-thiol hydrochloride  
(CAS Number 13242-44-9)?

No .....  1  
Yes .....  2

c. Other N, N-Dialkyl (Me, Et, n-Pr, or i-Pr)  
aminoethane-2-thiols  
and corresponding alkylated and protonated salts?

No .....  1  
Yes (Specify name(s) below) .....  2

Additional chemical names from above - if you need more space please use page 10.

[CAS Number]


B. Were the chemicals described below produced, synthesized, consumed or handled during 1990 in amounts which total at least 10 kilograms:

Include: - amounts imported and exported  
- amounts processed without conversion

- 10 a. O-ethyl S-phenyl ethylphosphonothiothionate  
(Fonofos, CAS Number 944-22-9)?
- No .....  1  
Yes .....  2
- b. Diethyl ethyl phosphonate  
(CAS Number 78-38-6)?
- No .....  1  
Yes .....  2
- c. Methyl phosphonic acid  
(CAS Number 993-13-5)?
- No .....  1  
Yes .....  2
- d. Dimethyl methylphosphonate  
(CAS Number 756-79-6)?
- No .....  1  
Yes .....  2
- e. Diphenyl methylphosphonate  
(CAS Number 7526-26-3)?
- No .....  1  
Yes .....  2
- f. Phosphonic acid, methyl- methyl  
3-(trimethoxysilyl)-propyl ester  
(CAS Number 67812-17-3)?
- No .....  1  
Yes .....  2
- g. Phosphonic acid, methyl-, monoammonium salt  
(CAS Number 34255-87-3)?
- No .....  1  
Yes .....  2
- h. Phosphonic acid, methyl-, monoethyl ester  
(CAS Number 73750-69-3)?
- No .....  1  
Yes .....  2
- i. Methyl phosphonyl dichloride  
(CAS Number 676-97-1)?
- No .....  1  
Yes .....  2

- j. Phosphonothioic dichloride, ethyl-  
(CAS Number 993-43-1)?
- No .....  1  
Yes .....  2
- k. Methyl phosphinyl dichloride  
(CAS Number 676-83-5)?
- No .....  1  
Yes .....  2
- l. Phosphonic acid, methyl-, bis(3-trimethoxysilyl)  
propyl ester  
(CAS Number 67812-18-4)?
- No .....  1  
Yes .....  2
- m. Phosphonic acid, methyl-,  
compounded with (aminoiminomethyl) urea (1:1)  
(CAS Number 84402-58-4)?
- No .....  1  
Yes .....  2
- n. Phosphonic acid, methyl-, (5-ethyl-2-methyl-  
1,3,2-dioxaphosphorinan-5-yl) methyl methyl  
ester, P, oxide)  
(Antiblaze 19, CAS Number 41203-81-0)?
- No .....  1  
Yes .....  2
- o. Phosphonic acid, methyl-, bis[(5-ethyl-2-methyl-  
1,3,2-dioxaphosphorinan-5-yl) methyl ester,  
P, P' dioxide])  
(Antiblaze 19, CAS Number 42595-45-9)?
- No .....  1  
Yes .....  2
- p. 1,2-Oxaphospholan-5-one, 2-methyl-, 2-oxide  
(Trevira 271, CAS Number 15171-48-9)?
- No .....  1  
Yes .....  2
- q. Methyl phosphinyl difluoride  
(CAS Number 753-59-3)?
- No .....  1  
Yes .....  2



C. Were the chemicals described below produced, synthesized, consumed or handled during 1990 in amounts which total at least 100 kilograms:

Include: - amounts imported and exported  
- amounts processed without conversion

1 Phosgene  
(Carbonic dichloride, CAS Number 75-44-5)?  
No .....  1  
Yes .....  2

2 Cyanogen chloride  
(CAS Number 506-77-4)?  
No .....  1  
Yes .....  2

3 Hydrogen cyanide  
(Hydrocyanic acid, CAS Number 74-90-8)?  
No .....  1  
Yes .....  2

4 Trichloronitromethane  
(Chloropicrin, CAS Number 76-06-2)?  
No .....  1  
Yes .....  2

5 Phosphorus oxychloride  
(Phosphoryl chloride, CAS Number 10025-87-3)?  
No .....  1  
Yes .....  2

6 Phosphorus trichloride  
(CAS Number 7719-09-7)?  
No .....  1  
Yes .....  2

7 Phosphorus pentachloride  
(CAS Number 10026-13-8)?  
No .....  1  
Yes .....  2

8 Trimethyl phosphite  
(CAS Number 121-45-9)?  
No .....  1  
Yes .....  2

9 Triethyl phosphite  
(CAS Number 122-52-1)?  
No .....  1  
Yes .....  2

10 Dimethyl phosphite  
(CAS Number 868-85-9)?  
No .....  1  
Yes .....  2

11 Diethyl phosphite  
(CAS Number 762-04-9)?  
No .....  1  
Yes .....  2

12 Sulphur monochloride  
(CAS Number 10025-67-9)?  
No .....  1  
Yes .....  2

13 Sulphur dichloride  
(CAS Number 10545-99-0)?  
No .....  1  
Yes .....  2

14 Thionyl chloride  
(CAS Number 7719-09-7)?  
No .....  1  
Yes .....  2

15 Triethanolamine  
(CAS Number 102-71-6)?  
No .....  1  
Yes .....  2

16 Ethyldiethanolamine  
(CAS Number 139-87-7)?  
No .....  1  
Yes .....  2

17 Methyl-diethanolamine  
(CAS Number 105-59-9)?  
No .....  1  
Yes .....  2

C. Were the chemicals described below produced, synthesized, consumed or handled during 1990 in amounts which total at least 100 kilograms:

Include: - amounts imported and exported  
- amounts processed without conversion

- 18 Hydrogen fluoride  
(Hydrofluoric acid, CAS Number 7664-39-3)?  
No .....  1  
Yes .....  2
- 19 Ammonium bifluoride  
(Ammonium hydrogen fluoride, CAS Number 1341-49-7)?  
No .....  1  
Yes .....  2
- 20 Sodium bifluoride  
(Sodium hydrogen fluoride, CAS Number 1333-83-1)?  
No .....  1  
Yes .....  2
- 21 Sodium fluoride  
(CAS Number 7681-49-4)?  
No .....  1  
Yes .....  2
- 22 Potassium fluoride  
(CAS Number 7789-23-3)?  
No .....  1  
Yes .....  2
- 23 Potassium bifluoride  
(Potassium hydrogen fluoride, CAS Number 7789-29-9)?  
No .....  1  
Yes .....  2
- 24 Sodium sulphide  
(CAS Number 1313-82-2)?  
No .....  1  
Yes .....  2
- 25 Phosphorus pentasulphide  
(CAS Number 1314-80-3)?  
No .....  1  
Yes .....  2
- 26 Sodium cyanide  
(CAS Number 143-33-9)?  
No .....  1  
Yes .....  2

- 27 Potassium cyanide  
(CAS Number 151-50-8)?  
No .....  1  
Yes .....  2
- 28 2-Chloroethanol  
(CAS Number 107-07-3)?  
No .....  1  
Yes .....  2
- 29 3,3-Dimethyl-2-butanone  
(Pinacolone, CAS Number 75-97-8)?  
No .....  1  
Yes .....  2
- 30 Dimethylamine  
(CAS Number 124-40-3)?  
No .....  1  
Yes .....  2
- 31 Dimethylamine hydrochloride  
(CAS Number 506-59-2)?  
No .....  1  
Yes .....  2
- 32 Diisopropylamine  
(CAS Number 108-18-9)?  
No .....  1  
Yes .....  2
- 33 3-Quinuclidone  
(CAS Number 3731-38-2)?  
No .....  1  
Yes .....  2
- 34 Phosphorus sulfochloride  
(Thiophosphoryl chloride, CAS Number 3982-91-0)?  
No .....  1  
Yes .....  2
- 35 Triethanolamine hydrochloride  
(CAS Number 637-39-8)?  
No .....  1  
Yes .....  2
- 36 Oxalyl chloride  
(CAS Number 79-37-8)?  
No .....  1  
Yes .....  2

C. Were the chemicals described below produced, synthesized, consumed or handled during 1990 in amounts which total at least 100 kilograms:

Include: - amounts imported and exported  
- amounts processed without conversion

37 Tri-n-butylamine  
(CAS Number 102-82-9)?  
No .....  1  
Yes .....  2

38 Sodium iodide  
(CAS Number 7681-82-5)?  
No .....  1  
Yes .....  2

39 Morpholine  
(CAS Number 110-91-8)?  
No .....  1  
Yes .....  2

40 Decalin  
(CAS Number 91-17-8)?  
No .....  1  
Yes .....  2

D. Were the chemicals described below produced, synthesized, consumed or handled during 1990 in amounts which total at least 1 kilogram:

Include: - amounts imported and exported  
- amounts processed without conversion

1 a. O, O-Diethyl S- (2- (diethylamino) ethyl) phosphorothiolate  
(Amiton, CAS Number 78-53-5)?  
No .....  1  
Yes .....  2

b. Alkylated and/or protonated salts of  
O, O-Diethyl S- (2- (diethylamino) ethyl) phosphorothiolate?  
No .....  1  
Yes (Please specify below) .....  2

Chemical name

\_\_\_\_\_

[CAS Number]

\_\_\_\_\_

2 1,1,3,3,3-pentafluoro-2-(trifluoromethyl)-1-propene  
(PFIB, CAS Number 382-21-8)?  
No .....  1  
Yes .....  2

E. Did you answer "Yes" to any chemical in Section A?

No (Go to Section F) .....  1  
Yes .....  2

How many different chemicals from Section A were handled?

Number .....

Complete Section I for each such chemical

F. Did you answer "Yes" to any chemical in Section B?

No (Go to Section G) .....  1  
Yes .....  2

How many different chemicals from Section B were handled?

Number .....

Complete Section J for each such chemical

G. Did you answer "Yes" to any chemical in Section C?

No (Go to section H) .....  1  
Yes .....  2

How many different chemicals from Section C were handled?

Number .....

Complete Section K for each such chemical

H. Did you answer "Yes" to any chemical in Section D?

No (See note at bottom of page) .....  1  
Yes .....  2

How many different chemicals from Section D were handled?

Number .....

Complete Section L for each such chemical

If you answered "No" to ALL of Questions E, F, G and H, please turn to the back page.

If you answered "Yes" to ANY of Questions E, F, G, or H, please turn to page 11.

Question number

Additional chemical names

[CAS Number]

CHEMICAL 3 (from Section A)

Question number	Quantity or Trade Name	CAS Number

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced	Quantity imported	Quantity exported

CHEMICAL 4 (from Section A)

CHEMICAL 4 (from Section A)

Question number	Quantity or Trade Name	CAS Number

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced	Quantity imported	Quantity exported

- I. If you answered "No" to Question E, go to page 13.  
If you answered "Yes" to Question E, complete the section below for each chemical handled in Section A.

NOTE: Please report all quantities to the nearest 0.1 gram. If a quantity is 'NIL', please write '0'.  
Report figures for your 1990 operations.  
If you require extra sheets for this section, contact the Department or photocopy this page.

CHEMICAL 1 (from Section A)

Question number	Common or Trade Name	CAS Number
<input type="text"/>	<input type="text"/>	<input type="text"/>

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced <input type="text"/> grams	Quantity processed without conversion <input type="text"/> grams	Quantity consumed <input type="text"/> grams
Quantity imported <input type="text"/> grams	Quantity exported <input type="text"/> grams	Quantity stored on 31/12/90 <input type="text"/> grams

CHEMICAL 2 (from Section A)

Question number	Common or Trade Name	CAS Number
<input type="text"/>	<input type="text"/>	<input type="text"/>

Chemical Name

Name and Address of facility where chemical handled and/or stored

Quantity produced <input type="text"/> grams	Quantity processed without conversion <input type="text"/> grams	Quantity consumed <input type="text"/> grams
Quantity imported <input type="text"/> grams	Quantity exported <input type="text"/> grams	Quantity stored on 31/12/90 <input type="text"/> grams

- I. If you answered "No" to Question E, go to page 13.  
If you answered "Yes" to Question E, continue completing the section below for Section A chemicals.

NOTE: Please report all quantities to the nearest 0.1 gram. If a quantity is 'NIL', please write '0'.  
Report figures for your 1990 operations.

If you require extra sheets for this section, contact the Department or photocopy this page.

CHEMICAL 3 (from Section A)

Question number	Common or Trade Name	CAS Number

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced <div style="border: 1px solid black; width: 150px; height: 25px;"></div> grams	Quantity processed without conversion <div style="border: 1px solid black; width: 150px; height: 25px;"></div> grams	Quantity consumed <div style="border: 1px solid black; width: 150px; height: 25px;"></div> grams
Quantity imported <div style="border: 1px solid black; width: 150px; height: 25px;"></div> grams	Quantity exported <div style="border: 1px solid black; width: 150px; height: 25px;"></div> grams	Quantity stored on 31/12/90 - <div style="border: 1px solid black; width: 150px; height: 25px;"></div> grams

CHEMICAL 4 (from Section A)

Question number	Common or Trade Name	CAS Number

Chemical Name

Name and Address of facility where chemical handled and/or stored

Quantity produced <div style="border: 1px solid black; width: 150px; height: 25px;"></div> grams	Quantity processed without conversion <div style="border: 1px solid black; width: 150px; height: 25px;"></div> grams	Quantity consumed <div style="border: 1px solid black; width: 150px; height: 25px;"></div> grams
Quantity imported <div style="border: 1px solid black; width: 150px; height: 25px;"></div> grams	Quantity exported <div style="border: 1px solid black; width: 150px; height: 25px;"></div> grams	Quantity stored on 31/12/90 <div style="border: 1px solid black; width: 150px; height: 25px;"></div> grams

J. If you answered "No" to Question F, go to page 17

If you answered "Yes" to Question F, complete the section below for each chemical handled in Section B.

NOTE: Please report all quantities to the nearest 10 kilograms. If a quantity is 'NIL', please write '0'.  
Report figures for your 1990 operations.

If you require extra sheets for this section, contact the Department or photocopy this page.

**CHEMICAL 1 (from Section B)**

Question number	Common or Trade Name	CAS Number
<input type="text"/>	<input type="text"/>	<input type="text"/>

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms

**CHEMICAL 2 (from Section B)**

Question number	Common or Trade Name	CAS Number
<input type="text"/>	<input type="text"/>	<input type="text"/>

Chemical Name

Name and Address of facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms

- J. If you answered "No" to Question F, go to page 17.  
If you answered "Yes" to Question F, continue completing the section below for Section B chemicals.

NOTE: Please report all quantities to the nearest 10 kilograms. If a quantity is 'NIL', please write '0'.  
Report figures for your 1990 operations.  
If you require extra sheets for this section, contact the Department or photocopy this page.

CHEMICAL 3 (from Section B)

Question number	Common or Trade Name	CAS Number
<input type="text"/>	<input type="text"/>	<input type="text"/>

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced <input type="text"/> kilograms	Quantity processed without conversion <input type="text"/> kilograms	Quantity consumed <input type="text"/> kilograms
Quantity imported <input type="text"/> kilograms	Quantity exported <input type="text"/> kilograms	Quantity stored on 31/12/90 <input type="text"/> kilograms

CHEMICAL 4 (from Section B)

Question number	Common or Trade Name	CAS Number
<input type="text"/>	<input type="text"/>	<input type="text"/>

Chemical Name

Name and Address of facility where chemical handled and/or stored

Quantity produced <input type="text"/> kilograms	Quantity processed without conversion <input type="text"/> kilograms	Quantity consumed <input type="text"/> kilograms
Quantity imported <input type="text"/> kilograms	Quantity exported <input type="text"/> kilograms	Quantity stored on 31/12/90 <input type="text"/> kilograms

J. If you answered "No" to Question F, go to page 17.  
If you answered "Yes" to Question F, continue completing the section below for Section B chemicals.

NOTE: Please report all quantities to the nearest 10 kilograms. If a quantity is 'NIL', please write '0'.  
Report figures for your 1990 operations.  
If you require extra sheets for this section, contact the Department or photocopy this page.

CHEMICAL 5 (from Section B)

Question number	Common or Trade Name	CAS Number
<input type="text"/>	<input type="text"/>	<input type="text"/>

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms

CHEMICAL 6 (from Section B)

Question number	Common or Trade Name	CAS Number
<input type="text"/>	<input type="text"/>	<input type="text"/>

Chemical Name

Name and Address of facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms

J. If you answered "No" to Question F, go to page 17.  
If you answered "Yes" to Question F, continue completing the section below for Section B chemicals.

NOTE: Please report all quantities to the nearest 10 kilograms. If a quantity is 'NIL', please write '0'.  
Report figures for your 1990 operations.  
If you require extra sheets for this section, contact the Department or photocopy this page.

**CHEMICAL 7 (from Section B)**

Question number	Common or Trade Name	CAS Number
<input type="text"/>	<input type="text"/>	<input type="text"/>

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms

**CHEMICAL 8 (from Section B)**

Question number	Common or Trade Name	CAS Number
<input type="text"/>	<input type="text"/>	<input type="text"/>

Chemical Name

Name and Address of facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms

K. If you answered "No" to Question G, go to page 25.  
If you answered "Yes" to Question G, complete the section below for each chemical handled in Section C.

NOTE: Please report all quantities to the nearest 100 kilograms. If a quantity is 'NIL', please write '0'.  
Report figures for your 1990 operations.

If you require extra sheets for this section, contact the Department or photocopy this page.

CHEMICAL 1 (from Section C)

Question number	Common or Trade Name	CAS Number
<input type="text"/>	<input type="text"/>	<input type="text"/>

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms

CHEMICAL 2 (from Section C)

Question number	Common or Trade Name	CAS Number
<input type="text"/>	<input type="text"/>	<input type="text"/>

Chemical Name

Name and Address of facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms

K. If you answered "No" to Question G, go to page 25.  
If you answered "Yes" to Question G, continue completing the section below for Section C chemicals.

*NOTE: Please report all quantities to the nearest 100 kilograms. If a quantity is "NIL", please write "0".  
Report figures for your 1990 operations.*

*If you require extra sheets for this section, contact the Department or photocopy this page.*

CHEMICAL 3 (from Section C)

Question number	Common or Trade Name	CAS Number
<input type="text"/>	<input type="text"/>	<input type="text"/>

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms

CHEMICAL 4 (from Section C)

Question number	Common or Trade Name	CAS Number
<input type="text"/>	<input type="text"/>	<input type="text"/>

Chemical Name

Name and Address of facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms

K. If you answered "No" to Question G, go to page 25.  
If you answered "Yes" to Question G, continue completing the section below for Section C chemicals.

NOTE: Please report all quantities to the nearest 100 kilograms. If a quantity is 'NIL', please write '0'.  
Report figures for your 1990 operations.  
If you require extra sheets for this section, contact the Department or photocopy this page.

CHEMICAL 5 (from Section C)

Question number	Common or Trade Name	CAS Number

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms

CHEMICAL 6 (from Section C)

Question number	Common or Trade Name	CAS Number

Chemical Name

Name and Address of facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms

K. If you answered "No" to Question G, go to page 25.  
If you answered "Yes" to Question G, continue completing the section below for Section C chemicals.

NOTE: Please report all quantities to the nearest 100 kilograms. If a quantity is 'NIL', please write '0'.  
Report figures for your 1990 operations.  
If you require extra sheets for this section, contact the Department or photocopy this page.

CHEMICAL 7 (from Section C)

Question number	Common or Trade Name	CAS Number
<input type="text"/>	<input type="text"/>	<input type="text"/>

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms

CHEMICAL 8 (from Section C)

Question number	Common or Trade Name	CAS Number
<input type="text"/>	<input type="text"/>	<input type="text"/>

Chemical Name

Name and Address of facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms

K. If you answered "No" to Question G, go to page 25.  
If you answered "Yes" to Question G, continue completing the section below for Section C chemicals.

NOTE: Please report all quantities to the nearest 100 kilograms. If a quantity is 'NIL', please write '0'.  
Report figures for your 1990 operations.  
If you require extra sheets for this section, contact the Department or photocopy this page.

CHEMICAL 9 (from Section C)

Question number	Common or Trade Name	CAS Number
<input type="text"/>	<input type="text"/>	<input type="text"/>

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms

CHEMICAL 10 (from Section C)

Question number	Common or Trade Name	CAS Number
<input type="text"/>	<input type="text"/>	<input type="text"/>

Chemical Name

Name and Address of facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms

K. If you answered "No" to Question G, go to page 25.  
If you answered "Yes" to Question G, continue completing the section below for Section C chemicals.

NOTE: Please report all quantities to the nearest 100 kilograms. If a quantity is 'NIL', please write '0'.  
Report figures for your 1990 operations.

If you require extra sheets for this section, contact the Department or photocopy this page.

CHEMICAL 11 (from Section C)

Question number	Common or Trade Name	CAS Number
<input type="text"/>	<input type="text"/>	<input type="text"/>

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced <input type="text"/>	kilograms	Quantity processed without conversion <input type="text"/>	kilograms	Quantity consumed <input type="text"/>	kilograms
Quantity imported <input type="text"/>	kilograms	Quantity exported <input type="text"/>	kilograms	Quantity stored on 31/12/90 <input type="text"/>	kilograms

CHEMICAL 12 (from Section C)

Question number	Common or Trade Name	CAS Number
<input type="text"/>	<input type="text"/>	<input type="text"/>

Chemical Name

Name and Address of facility where chemical handled and/or stored

Quantity produced <input type="text"/>	kilograms	Quantity processed without conversion <input type="text"/>	kilograms	Quantity consumed <input type="text"/>	kilograms
Quantity imported <input type="text"/>	kilograms	Quantity exported <input type="text"/>	kilograms	Quantity stored on 31/12/90 <input type="text"/>	kilograms

K. If you answered "No" to Question G, go to page 25.  
If you answered "Yes" to Question G, continue completing the section below for Section C chemicals.

NOTE: Please report all quantities to the nearest 100 kilograms. If a quantity is 'NIL', please write '0'.  
Report figures for your 1990 operations.  
If you require extra sheets for this section, contact the Department or photocopy this page.

CHEMICAL 13 (from Section C)

Question number	Common or Trade Name	CAS Number

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
kilograms	kilograms	kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
kilograms	kilograms	kilograms

CHEMICAL 14 (from Section C)

Question number	Common or Trade Name	CAS Number

Chemical Name

Name and Address of facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
kilograms	kilograms	kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
kilograms	kilograms	kilograms

- K. If you answered "No" to Question G, go to page 25.  
If you answered "Yes" to Question G, continue completing the section below for Section C chemicals.

NOTE: Please report all quantities to the nearest 100 kilograms. If a quantity is 'NIL', please write '0'.  
Report figures for your 1990 operations.  
If you require extra sheets for this section, contact the Department or photocopy this page.

CHEMICAL 15 (from Section C)

Question number	Common or Trade Name	CAS Number

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms

CHEMICAL 16 (from Section C)

Question number	Common or Trade Name	CAS Number

Chemical Name

Name and Address of facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms

L. If you answered "No" to Question H, go to back page.  
If you answered "Yes" to Question H, complete the section below for each chemical handled in Section D.

NOTE: Please report all quantities to the nearest kilogram. If a quantity is 'NIL', please write '0'.  
Report figures for your 1990 operations.  
If you require extra sheets for this section, contact the Department or photocopy this page.

CHEMICAL 1 (from Section D)

Question number	Common or Trade Name	CAS Number
<input type="text"/>	<input type="text"/>	<input type="text"/>

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms

CHEMICAL 2 (from Section D)

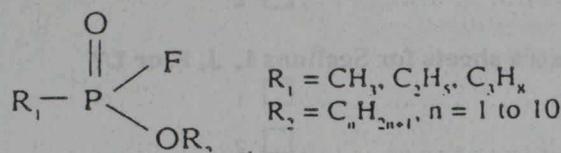
Question number	Common or Trade Name	CAS Number
<input type="text"/>	<input type="text"/>	<input type="text"/>

Chemical Name

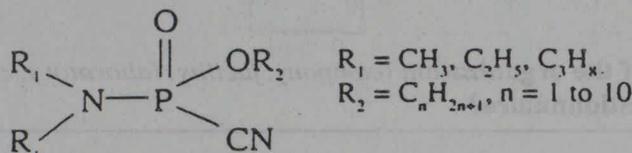
Name and Address of facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
<input type="text"/> kilograms	<input type="text"/> kilograms	<input type="text"/> kilograms

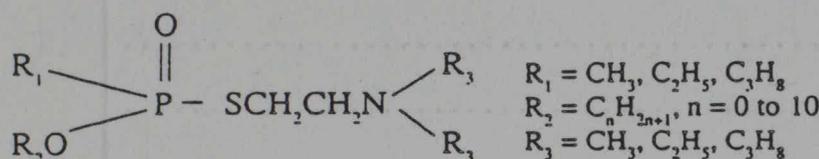
Question A 1 c: Other O-alkyl alkyl phosphonofluoridates



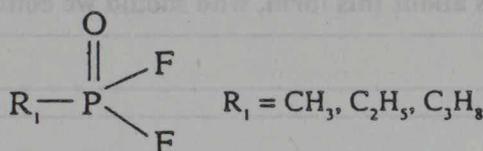
Question A 2 b: Other O-alkyl N,N-dialkyl phosphoramidocyanidates



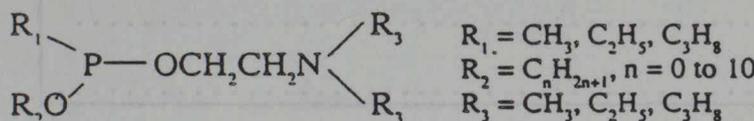
Question A 3 b: Other O-alkyl S-2-dialkyl aminoethyl alkyl phosphonothiolates



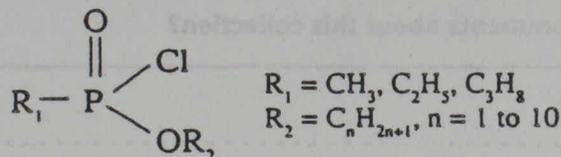
Question A 4 b: Other alkyl phosphonyldifluorides



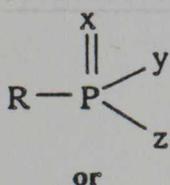
Question A 5 b: Other O-alkyl O-2-dialkyl aminoethyl alkyl phosphonites



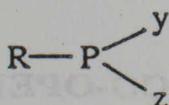
Question A 6 c: Other O-alkyl alkyl phosphonochloridates



Question B 10 x: Other chemicals containing a phosphorus atom to which is bonded an alkyl group but no other carbon atoms



x, y and z may be any functional group or heteroatom, provided that no other carbon atoms are directly bonded to this phosphorus.



All of the chemicals in Question B 10 are examples of the structure described.

M Did you answer yes to any of the chemicals or chemical groups listed inside the form?

- No (Go to Question P) . . . . .  1  
Yes . . . . .  2

N Did you need any extra sheets for Sections I, J, K or L?

- No (Go to Question P) . . . . .  1  
Yes . . . . .  2

O How many extra sheets did you need?

Number

P What is the name of the organization (company, facility, laboratory, etc.) covered by this questionnaire?

Name   
Mailing Address   
.....  
.....  
.....

Q If we have any queries about this form, who should we contact?

Name and title   
Address   
.....  
.....  
.....  
Telephone Number

R Do you have any comments about this collection?

.....  
.....  
.....

S Please return this form by 3 December to:

The Executive Officer  
Chemical Industry Survey - CBS  
D-3-N/DND  
Department of Foreign Affairs and Trade  
Parkes A.C.T. 2600

**THANK YOU FOR YOUR CO-OPERATION**





# CONFERENCE ON DISARMAMENT

CD/1130  
CD/CW/WP.387  
20 February 1992

ENGLISH  
Original: CHINESE

## CHINA

### Principled Position and Proposals on the Issue of Abandoned Chemical Weapons

#### I

1. The objective of the future convention is the complete prohibition and thorough destruction of all types of chemical weapons and the realization of a chemical-weapon-free world. As the issue of the chemical weapons abandoned in a victim State by another State is of direct relevance to this objective, a just solution will have to be found within the framework of the convention and form an essential part of it. An important consensus to this effect has already been reached in the Conference and its Ad Hoc Committee on Chemical Weapons, and is clearly reflected in the rolling texts of 1990 and 1991.
2. The necessity and relevance of arriving at a solution is self-evident. The act of using and abandoning chemical weapons by a State on the territory of another State is certainly not a mere "historical problem" that concerns only the States directly involved; it is of relevance to the entire international community. Furthermore, the possibility that such acts might be committed again cannot be excluded before the chemical-weapon-free world becomes a reality. The issue of abandoned chemical weapons is, therefore, an important one that has a bearing on the rights and obligations of each and every State party to the convention.
3. The issue of abandoned chemical weapons, being inherently related to definitions of chemical weapons as well as provisions on their use, declaration, destruction, verification, sanctions and cooperation, should be dealt with in a balanced, reasonable and integrated way, and the resulting provisions should become an integral part of the convention. Only then can the convention become truly comprehensive, effective and universal.
4. As an international legal document of unlimited duration, the convention must contain equitable provisions on abandoned chemical weapons, clearly setting forth the rights and obligations of States parties, including the principle that the State which used and abandoned chemical weapons shall bear the responsibility for undoing the consequences of such uses and for

destroying the chemical weapons it abandoned. This is a fair and reasonable principle at all times; only by establishing such a principle can past wrongdoings be duly dealt with and future ones prevented. If, on the other hand, responsibility were imposed on the victim State, it would be not only a great injustice to the victim State, but also tantamount to allowing and encouraging a chemical-weapon-State to use chemical weapons against, and abandon such weapons in, another State whenever it pleases regardless of the consequences. This would obviously run counter to the letter and spirit of the convention.

5. As the circumstances under which chemical weapons were abandoned or will probably be abandoned may not be identical, they should be dealt with accordingly, in a pragmatic fashion. In setting forth the principle that the abandoning State shall bear the responsibility for destruction, the convention should not preclude the possibility that appropriate solutions may be found through consultations among the States concerned.

6. The precise role of the organization to be set up under the future convention in facilitating the solution of the problems of abandoned chemical weapons and in completing the destruction processes should be specified in the convention, and fully adhered to in practice.

## II

7. The Chinese delegation has been working actively to promote an early and appropriate solution to the issue of abandoned chemical weapons on the basis of the foregoing position of principle. For this purpose, we now reiterate and further propose the following necessary additions and changes to the relevant paragraphs in the rolling text:

8. Paragraph 3 of Article I should read:

"3. Each State Party undertakes to destroy chemical weapons which are in its possession or under its [jurisdiction or] control, except as provided in paragraph 5 below."

Furthermore, a new paragraph 5 should be added at the end of Article I:

"5. Each State Party undertakes to destroy all chemical weapons it abandoned on the territory of another State, and the States concerned may on this basis seek proper solutions through consultations among themselves."

9. A new paragraph on the definition of abandoned chemical weapons should be inserted after paragraph 1 of Article II:

"The term 'Abandoned Chemical Weapons' means any chemical weapons abandoned in the past or in the future by a State on the territory of another State without its consent during a war or a conflict or under other circumstances."

10. Paragraph 1 (a) (i) of Article III should read:

"(i) Whether it owns or possesses any chemical weapons, or whether there are any chemical weapons located in any place under its jurisdiction or control, or whether it has abandoned any chemical weapons in any place in other States;"

Furthermore, paragraph 1 (a) (ii) of Article III should read:

"(ii) Whether it has on its territory any chemical weapons located in any place under the jurisdiction or control of other States or that are under the ownership or possession of other States or have been abandoned by other States;"

11. Two new paragraphs C and D should be inserted in section I of the Annex to Article III (with the original paragraph C renumbered as paragraph E):

"C. Existence of chemical weapons abandoned elsewhere

Yes ...

No ..."

"D. Existence on the territory of any chemical weapons abandoned by anyone else

Yes ...

No ..."

12. Paragraph 1 of Article IV should read:

"1. The provisions of this Article and its Annex shall apply to any and all chemical weapons owned or possessed by a State Party, or that are located in any place under its jurisdiction or control or have been abandoned by it in any place in other States."

In paragraph 2 of Article IV, subparagraphs (a), (b) and (d) should read, respectively:

"(a) Specify the precise location, aggregate quantity and detailed inventory of the chemical weapons it owns or possesses, or that are located in any place under its jurisdiction or control or have been abandoned by it in any place in other States;

"(b) Report any chemical weapons on its territory that are located in any place under the jurisdiction or control of other States or have been abandoned by other States;

"(d) Provide its general plan for destruction of chemical weapons it owns or possesses, or that are located in any place under its jurisdiction or control or have been abandoned by it in any place in other States."

Paragraph 3 of Article IV should read:

"Each State Party shall, immediately after the declaration under paragraph 2 of this Article has been submitted, provide access to the chemical weapons it owns or possesses, or that are located in any place under its jurisdiction or control, or that it has discovered abandoned by other States, for the purpose of systematic international on-site verification of the declaration through on-site inspection. Thereafter, each State Party shall ensure, through access to the chemical weapons it owns or possesses, or that are located in any place under its jurisdiction or control, or that it has discovered abandoned by other States, for the purpose of systematic international on-site verification and through on-site inspection and continuous monitoring with on-site instruments, that the chemical weapons are not removed except to a chemical weapons destruction facility."

In paragraph 6 of Article IV, subparagraphs (a) and (c) should read, respectively:

"(a) Destroy any chemical weapons it owns or possesses or that are located in any place under its jurisdiction or control, or have been abandoned by it in any place in other States, pursuant to the order of destruction specified in the Annex to Article IV, beginning not later than one year after the Convention enters into force for it, and finishing not later than 10 years after the Convention enters into force; however, a State Party is not precluded from destroying them at a faster pace;

"(c) Certify, not later than 30 days after the destruction process has been completed, that any chemical weapons it owns or possesses, or that are located in any place under its jurisdiction or control, or that it has discovered abandoned by other States, have been destroyed."

Furthermore, paragraph 7 of Article IV should read:

"7. Each State Party, during its transportation, sampling, storage, and destruction of any chemical weapons it owns or possesses, or that are located in any place under its jurisdiction or control, or have been abandoned by it in any place in other States, shall assign the highest priority to ensuring the safety of people and to protecting the environment. Each State party shall transport, sample, store and destroy such chemical weapons in accordance with national standards for safety and emissions."

13. A new paragraph C should be inserted under section I of the Annex to Article IV (with the original paragraphs C, D and E renumbered as paragraphs D, E and F, respectively):

"C. Information on abandoned chemical weapons:

1. A State Party that has discovered any abandoned chemical weapons shall declare:

(1) the time of each discovery.

(2) the location of each discovery (name and geographical coordinates).

(3) the types of abandoned chemical weapons discovered by it.

(4) the quantities of abandoned chemical weapons discovered by it.

(5) the treatment given.

2. A State Party that has abandoned any chemical weapons shall declare:

(1) the time of each abandonment.

(2) the location of each abandonment (name and geographical coordinates).

(3) the types of chemical weapons abandoned by it.

(4) the quantities of chemical weapons abandoned by it.

Furthermore, a new provision on "abandoned chemical weapons" should be added after "multi-component chemical weapons" in section III.B of the Annex to Article IV:

"Abandoned chemical weapons

The destruction of abandoned chemical weapons discovered before the date the Convention enters into force shall be completed not later than five years after the entry into force of the Convention; the destruction of abandoned chemical weapons discovered after the date the Convention enters into force shall be completed not later than two years after their discovery."

14. A new paragraph 11 should be added to Article X:

"11. If any State Party discovers on its territory any chemical weapons abandoned by a State not Party to the Convention, or if the abandoning State cannot be identified, the Organization shall, at the request of the State Party that discovers such weapons, provide assistance in the destruction of those abandoned chemical weapons."







# CONFERENCE ON DISARMAMENT

CD/1132  
21 February 1992

Original: ENGLISH

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LETTER DATED 19 FEBRUARY 1992 FROM THE DEPUTY PERMANENT REPRESENTATIVE OF CANADA ADDRESSED TO THE SECRETARY-GENERAL OF THE CONFERENCE ON DISARMAMENT TRANSMITTING COMPENDIA ON CHEMICAL WEAPONS COMPRISING PLENARY STATEMENTS AND WORKING PAPERS FROM THE 1991 SESSION OF THE CONFERENCE ON DISARMAMENT 1/

We have just received the latest in the Canadian series of compendia of the CWC AHC plenary statements (PVS) (in one volume) and the Plenary Working Papers (WPS) (in two volumes) concerning the ongoing work on Chemical Weapons during the 1991 Session of the Conference.

I would be grateful if the necessary arrangements could be made for the distribution of these volumes, under a CD number, to all member and participating non-member State delegations.

(Signed) A.W.J. Robertson  
Minister and Deputy Permanent  
Representative to the  
Conference on Disarmament

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1/ A limited distribution of these compendia in English only has been made available to the members and non-members invited to participate in the work of the Conference on Disarmament. Additional copies are available from the Permanent Mission of Canada.

CONFERENCE ON DISABILITY

LETTER DATED 15 FEBRUARY 1961 FROM THE DEPUTY PERMANENT REPRESENTATIVE OF CANADA ADDRESSED TO THE SECRETARY-GENERAL OF THE CONFERENCE ON DISABILITY TRANSMITTING COMPROMIS ON CEREBRAL WEAPONS CONTAINING A SUMMARY STATEMENT AND WORKING PAPERS FROM THE 1961 SESSION OF THE CONFERENCE ON DISABILITY

We have the honor to acknowledge the receipt of the letter in the Canadian capital of Ottawa dated 15 February 1961 from the Deputy Permanent Representative of Canada addressed to the Secretary-General of the Conference on Disability transmitting a copy of the Summary Statement and Working Papers from the 1961 Session of the Conference on Disability.

I would be grateful if the necessary arrangements could be made for the distribution of these volumes, under a CD number, to all member and participating non-member state delegations.

(Signed) A.W.J. Robertson  
Minister and Deputy Permanent Representative to the Conference on Disability

The following information of this conference is being made available to the media and non-member states invited to participate in the work of the Conference on Disability. Additional copies are available from the Permanent Office of the Conference on Disability.





# CONFERENCE ON DISARMAMENT

CD/1134  
24 February 1992

ENGLISH  
Original: SPANISH  
(EXTRACT)

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LETTER DATED 21 FEBRUARY 1992 FROM THE PERMANENT REPRESENTATIVE  
OF CHILE ADDRESSED TO THE SECRETARY-GENERAL OF THE CONFERENCE  
ON DISARMAMENT TRANSMITTING THE TEXT OF THE STATEMENT ISSUED  
BY THE ACTING MINISTER FOR FOREIGN AFFAIRS OF CHILE CONCERNING  
INTERNATIONAL DISARMAMENT

I have the honour to transmit the text of the Statement on International Disarmament issued by Mr. Eduardo Vargas C., Acting Minister for Foreign Affairs of Chile, on 12 February last in the city of Santiago.

I should be most grateful if you, Sir, in accordance with established practice, would arrange for this text to be issued as an official document of the Conference on Disarmament and distributed it to all delegations, both of the member States and of the non-member States participating in the work of the Conference.

(Signed) Ernesto Tironi  
Ambassador  
Permanent Representative

STATEMENT ON INTERNATIONAL DISARMAMENT ISSUED BY ACTING MINISTER  
FOR FOREIGN AFFAIRS

I should like to announce some important advances in matters of international disarmament, a question to which the Government of Chile attaches the greatest importance.

... Another important dimension is that relating to the multilateral convention on chemical weapons which is being negotiated in the Geneva Conference on Disarmament and which unquestionably represents the most

CD/1134

page 3

important international effort in the matter of disarmament and a significant contribution to the protection of the global environment. In that connection, it will be recalled that Foreign Minister Silva Cimma, along with his colleagues from Argentina and Brazil, signed the Mendoza Agreement, subsequently joined by the other Latin American States before and during the Presidential Summit of the Rio Group at Cartagena. At present, we are finalizing with Argentina and Brazil the contribution which the three countries can make to the procedures of verification and implementation of the future convention in keeping with the position taken in the Mendoza Agreement.

Santiago, 12 February 1992





# CONFERENCE ON DISARMAMENT

CD/1135  
CD/CW/WP.388  
24 February 1992

Original: ENGLISH

## HUNGARY

### Provision of data relevant to the Chemical Weapons Convention

With a view to contributing to the negotiations on the Chemical Weapons Convention, the Hungarian Foreign Minister put forward an initiative at the forty-fourth session of the United Nations General Assembly declaring that Hungary was ready to comply with all the provisions of the Convention under negotiation and to act in full conformity with it at this stage already. In February 1990 and in February 1991, in accordance with this initiative, Hungary presented a declaration on the production, consumption, as well as export and import of chemicals relevant to the Convention. (CD/969, CD/1061)

Following the spirit of these measures, Hungary wishes to repeat its declaration and present detailed information regarding the year of 1991.

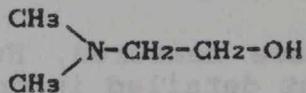
The declaration was prepared in conformity with the draft provisions of the convention. The data contained in the declaration are based on the co-operative and voluntary contribution of chemical plants and enterprises.

Quantities exceeding one ton and thirty tons for Schedule 2 and Schedule 3 chemicals respectively are contained in the declaration. The general methodology adopted for the purposes of the present declaration are not intended to prejudice in any way the final agreed provisions of the relevant section of the draft convention.

AGGREGATE NATIONAL DATA

ON THE PRODUCTION, CONSUMPTION, EXPORT AND IMPORT OF  
SCHEDULE 2 CHEMICALS  
in 1991

Chemical name: N,N-dimethylamino-ethane-2-ol  
name used by the facility: dimetilamino-etanol  
structural formula:



CASRN: (108-01-0)

the total amount

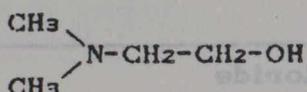
produced (t): 0	exported (t): 0
consumed (t): 2	imported (t): 2 from the United Kingdom

DECLARATION  
1991

SCHEDULE 2 CHEMICAL

I. CHEMICAL

Chemical name: N,N-dimethylamino-ethane-2-ol  
name used by the facility: dimetilamino-etanol  
structural formula:



CASRN: (108-01-0)

the total amount

produced (t):0

exported (t):0

consumed (t):2

imported (t):2

from the United Kingdom

The purposes for which the chemical was produced, consumed  
or processed: *pharmaceutical product*

II. FACILITY

name of the facility: Kémia-5 üzem

name of the owner: EGIS RT

operating the facility: EGIS RT

the exact location of the facility: 1106 Budapest

10.kerület Keresztúri út 30-38

24. épület

the facility is a *multipurpose* facility

the main orientation of the facility:

*production of intermediers*

the facility *can not be used* for the production of  
*Schedule 1 and other Schedule 2 chemicals*

capacity for the declared compound: 10 t

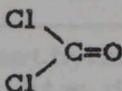
The following activities are performed with regard to the  
declared chemical:

*processing with conversion into another chemical*

DECLARATION  
**NATIONAL DATA**  
ON THE PRODUCTION, CONSUMPTION, EXPORT AND IMPORT OF  
**SCHEDULE 3 CHEMICALS AND THE FACILITIES WHICH PRODUCED**  
CONSUMED, PROCESSED OR TRANSFERRED MORE THAN 30 TONNES  
in 1991

**1. CHEMICAL**

Chemical name: carbonyl dichloride  
common or trade name: phosgene  
structural formula:



CASRN: (75-44-5)

the total amount

produced (t): 5000-10000

exported (t): 0

consumed (t): 5000-10000

imported (t): 0

**FACILITIES**

1.

name of the facility: Foszgén üzem  
name of the owner: BORSODCHEM RT  
operating the facility: BORSODCHEM RT

the exact location of the facility: KAZINCBARCIKA Bolyai tér 1

production (t): 1000-5000

capacity (t): 10000-20000

consumption (t): 1000-5000

capacity (t): 1000-5000

2.

name of the facility: MDI üzem  
name of the owner: BORSODCHEM RT  
operating the facility: BORSODCHEM RT

the exact location of the facility: KAZINCBARCIKA Bolyai tér 1

production (t): 5000-10000

capacity (t): 10000-20000

consumption (t): 5000-10000

capacity (t): 10000-20000

3.

name of the facility: V-3, V-4 üzem  
name of the owner: Északmagyarországi Vegyiművek  
operating the facility: SAGROCHEM Kft

the exact location of the facility: 3792 SAJOBÁBONY

production (t): 500-1000	capacity (t): 10000-15000
consumption (t): 1000-5000	capacity (t): 5000-10000

## 2. CHEMICAL

Chemical name: phosphorus trichloride  
common or trade name: phosphorus trichloride  
structural formula:



CASRN: (7719-12-2)

the total amount produced (t): 0	exported (t): 0
consumed (t): 500-1000	imported (t): 500-1000

## FACILITIES

1.

name of the facility: Szintézis üzem  
name of the owner: Rhone-Poulenc - Agro Borsod KFT  
operating the facility: Rhone-Poulenc - Agro Borsod KFT

the exact location of the facility: KAZINCBARCIKA Bolyai tér 1

production (t): 0	capacity (t): 0
consumption (t): 100-500	capacity (t): 500-1000

2.

name of the facility: V-2 üzem  
name of the owner: Északmagyarországi Vegyiművek  
operating the facility: SAGROCHEM Kft

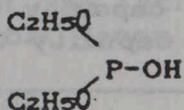
the exact location of the facility: 3792 SAJOBÁBONY

production (t): 0	capacity (t): 0
consumption (t): 50-200	capacity (t): 1000-2000



#### 4. CHEMICAL

Chemical name: Diethyl-phosphite  
common or trade name: diethyl-phosphite  
structural formula:



CASRN:(762-04-9)

the total amount

produced (t): 100-500

consumed (t): 100-500

exported (t): 0

imported (t): 0

#### FACILITY

name of the facility: Szintézis Üzem

name of the owner: Rhone-Poulenc - Agro Borsod KFT

operating the facility: Rhone-Poulenc - Agro Borsod KFT

the exact location of the facility: KAZINCBARCIKA Bolyai tér 1.

production (t): 100-500

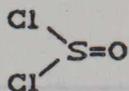
consumption (t): 100-500

capacity (t): 500-1000

capacity (t): 500-1000

#### 5. CHEMICAL

Chemical name: Thionyl-dichloride  
common or trade name: thionyl-dichloride  
structural formula:



CASRN:(7719-09-7)

the total amount

produced (t): 0

consumed (t): 100-500

exported (t): 0

imported (t): 100-500

## FACILITIES

1.

name of the facility: Kémia-2  
name of the owner: EGIS RT  
operating the facility: EGIS RT

the exact location of the facility: 1106 BUDAPEST  
10.kerület Kereszturi ut 30-38 III. csarnok  
production (t): 0 capacity (t): 0  
consumption (t): 100-200 capacity (t): 100-200

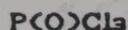
2.

name of the facility: Kémia IV.  
name of the owner: Richter Gedeon Vegyészeti Gyár RT  
operating the facility: Richter Gedeon Vegyészeti Gyár RT

the exact location of the facility: BUDAPEST  
10.kerület Gyömrői ut 19-21  
production (t): 0 capacity (t): 0  
consumption (t): 50-200 capacity (t): 100-200

## 6. CHEMICAL

Chemical name: Phosphonyl chloride  
common or trade name: phosphorus oxichloride  
structural formula:



CASRN:(10025-87-3)

the total amount

produced (t): 0 exported (t): 0  
consumed (t): 100-500 imported (t): 100-500

## FACILITIES

1.

name of the facility: Kémia I.  
name of the owner: Richter Gedeon Vegyészeti Gyár RT  
operating the facility: Richter Gedeon Vegyészeti Gyár RT

the exact location of the facility: BUDAPEST  
10.kerület Gyömrői ut 19-21  
production (t): 0 capacity (t): 0  
consumption (t): 100-500 capacity (t): 100-500









# CONFERENCE ON DISARMAMENT

CD/1136  
CD/CW/WP.389  
27 February 1992

Original: ENGLISH

## THE CZECH AND SLOVAK FEDERAL REPUBLIC

### Protection against Chemical Weapons (Data bank of available basic means)

1. The Czech and Slovak Federal Republic has repeatedly stated that it does not possess chemical weapons, and it has declared its intention to become an original signatory of the Chemical Weapons Convention. All steps undertaken by the Czech and Slovak Federal Republic in the various fields within the existing rolling text (CD/1116) have been aimed at an early conclusion of the Chemical Weapons Convention (CWC).
2. In the light of openness and transparency, the Czech and Slovak Federal Republic has informed the Conference on Disarmament (CD) about its past and current activities in the sphere of the chemical industry, including military facilities, as well as other relevant industrial branches. Documents CD/1021, CD/1022, CD/1048 have illustrated the positive and concrete contribution of the Czech and Slovak Federal Republic to the on-going negotiations in the Ad Hoc Committee on Chemical Weapons.
3. The Czech and Slovak Federal Republic welcomes all activities and proposals leading to the intensification of the work on the text of the CWC. In accordance with the mandate for the Ad Hoc Committee on Chemical Weapons, the negotiations on a multilateral Convention continue to intensify with a view to achieving a final agreement on the CWC during 1992. The Czech and Slovak Federal Republic, as a member of the Conference on Disarmament, is working for the successful end of the negotiations in the Ad Hoc Committee on Chemical Weapons, and it shares the responsibility for reaching that goal.
4. In this connection, the Czech and Slovak Federal Republic sees, inter alia, the necessity for making the work of subsidiary bodies, which will be established under the future CWC, much easier. From this point of view, it should be underlined that one of the important questions dealing with the future Convention is the protection against use of CW. According to the present rolling text (CD/1116), article X, paragraph 4: "The Technical Secretariat shall establish within 180 days after the entry into force of the

Convention and maintain, for the use of any requesting State party, a data bank containing freely available information concerning various means of protection against chemical weapons ...".

5. In this connection, the early establishment of such data bank will be a significant step towards the fulfilment of the spirit and letter of the CWC. The Czech and Slovak Federal Republic as an advance expression of its interest in the CWC would like to provide, on a voluntary basis, the data with means and equipment for protection against CW. These means are specified as follows.

6.

Mean	Characterization	Note
7-MEOTA	Antidote against psychotomimetic compounds like BZ	Possible use for civilian purposes (injections and tablets)
Injection part of the Autoinjector	Antidote against nerve agents containing reactivator and atropine	In plastic syringe, it can be used also without Autoinjector (injection)
FOSAN	Antidote against nerve agents. Multipack of reactivator with atropine (solution)	Injection
CHONOL I	Antidote against nerve agents. Multipack of atropine (isotonized solution)	Common drug, injection
CHONOL II	Antidote against nerve agents. Multipack of benactyzine (isotonized, lyophilized)	Common drug, injection
RENOL	Antidote against nerve agents. Lyophilized new reactivator	Pharmacological efficacy is very high, injection
PANPAL	Prophylactic antidote against nerve agents containing reversible inhibitor of cholinesterase, combined with two parasympatholytics	Obduced tablets and capsules
DESPRACH	Emergency decontamination kit	Based on a sorption mechanical principle (powder)
Antichemical carrier PCHB-60-P	For decontamination and disinfection of the skin (two parts solution)	For decontamination of 50 sq. dm

Mean	Characterization	Note
PCHB-60-P kit	For decontamination, and containing solutions for additional decontamination	Enlargement of decontamination area
Protective mask M-10	Face-type mask with two filter elements inserted into pouches molded in the cheeks of the facepiece. It protects respiratory system, eyes and the face surface against CWA, radioactive compounds (RC) and biological warfare agents (BWA) in the form of vapours, gases and aerosols.	It has been verified in field conditions
Protective mask M-10 M	Innovative mask of M-10 type, facepieces are resistant to scraping, it offers capability to drink water and to transduct speech through the soundpermeable membrane.	It has been verified in field conditions
Protective cape JP-75A	Protection of persons, their clothing and personal arms against CWA, RC, BWA. Partly resists to light emission of nuclear weapons (NW) and incendiary weapons (IW), consisting of cape, gloves and rubbers.	It has been verified in field conditions
Protective clothing OPCH 90	Individual protective equipment of isolating type for special troops, with increased hermeticity and improved physiological tolerance to heat. It protects body surface and personal equipment against RC, CWA, BWA and industrial chemicals of polar character. Single protection against light emission of NW and IW including short-term fireproofing. The variant with active airflow mechanism allows staying and moving in this protective device for a 24-hour period (up to 30° C and 55 per cent humidity) or working (middle effort) at least for a 3-hour period. The passive variant offers the same parameters as OPCH-70.	It has been verified in field conditions

Mean	Characterization	Note
Protective cape PO-90	A protective device of isolative type for multipurpose use. It protects against CWA, BWA and rain. Single protection against light emission of NW and IW. Usable for simple porch, tent or water resistant bed	It has been verified in field conditions
Change clothing FOP-85	A mean of filter-type, it protects body surface against CWA	It has been verified in field conditions
Protective clothing OPCH-70	It offers antichemical protection of body surface for special troops. It is a heavy-duty equipment which protects against CWA, BWA and RC, predestinated for long-lasting period of use in the contaminated areas	It has been verified in field conditions

7. The enumerated list of means creates the basis for antichemical protection in the Czech and Slovak Federal Republic. Some of them are available for sale. Some should be order, in case of necessity, in advance. Many of them are commercially used in the specialized facilities for protection against highly toxic chemicals, for the treatment of accidental poisonings or diseases. Some of them have been verified and tested in field conditions.

8. The proposed list might represent the first contribution to the data bank of the means for antichemical defence of the future CWC Organization and its Technical Secretariat. At the same time, the Czech and Slovak Federal Republic understands that only in cooperation with other States parties and data bank will be reasonable and useful. That is why the Czech and Slovak Federal Republic invites other delegations to follow its step in this field.

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# CONFERENCE ON DISARMAMENT

CD/1140  
28 February 1992

Original: ENGLISH

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LETTER DATED 25 FEBRUARY 1992 FROM THE REPRESENTATIVE OF GERMANY  
ADDRESSED TO THE PRESIDENT OF THE CONFERENCE ON DISARMAMENT  
TRANSMITTING THE OFFICIAL TEXT OF THE LETTER DATED 8 FEBRUARY 1992  
FROM THE FOREIGN MINISTER OF THE FEDERAL REPUBLIC OF GERMANY  
ADDRESSED TO THE MEMBER STATES OF THE CONFERENCE ON DISARMAMENT  
CONCERNING THE AD HOC COMMITTEE ON CHEMICAL WEAPONS

I have the honour to send you herewith the official text of the letter dated 8 February 1992 from the Foreign Minister of the Federal Republic of Germany addressed to the member States of the Conference on Disarmament concerning the Ad Hoc Committee on Chemical Weapons.

I would be grateful if you would circulate this text as an official document of the Conference on Disarmament and arrange for its translation into the other languages of the Conference.

(Signed) Dr. Adolf Ritter von Wagner  
(Ambassador)

Excellency,

The participants in the Geneva negotiations on Chemical Weapons set themselves in their mandate the goal of successfully concluding the Convention in 1992.

This year offers us the opportunity to achieve the aim to which we publicly committed ourselves on 11 January 1989 at the Paris Conference: "To prevent any recourse to chemical weapons by completely eliminating them". We can fulfil the high expectations we placed in this Convention only through joint action. Our representatives at the Geneva Conference on Disarmament have already achieved consensus on major sections of the rolling text of the Convention. The remaining issues now call for joint efforts. I am convinced that we can reach consensus on the Chemical Weapons Convention in this year's negotiations, and I would ask you to give this goal, which affects mankind as a whole, your personal attention.

The Federal Republic of Germany whose representative at the Geneva Conference on Disarmament has this year assumed the chairmanship of the negotiations for the first time, is aware of the special responsibility this entails. I should like to convey my sincere thanks for the confidence your country placed in us through this election. The Federal Government will do all within its power to seek the successful conclusion of the negotiations, if possible by the middle of this year.

Please accept, Excellency, the assurances of my highest consideration.

(Signed) Hans-Dietrich Genscher  
Federal Minister for Foreign Affairs  
of the Federal Republic of Germany

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# CONFERENCE ON DISARMAMENT

CD/1141  
CD/CW/WP.390  
3 March 1992

ENGLISH  
Original: FRENCH

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## FRANCE

### Provision of data relevant to the Chemical Weapons Convention

#### 1. Introduction

As the date for completion of the negotiations on chemical weapons approaches, the provision of data relevant to the Convention is regarded as increasingly vital for setting up the Organization for the Prohibition of Chemical Weapons.

France presents hereunder information concerning the manufacture and use of the chemicals listed in schedules 1, 2 and 3.

#### 2. Method of collection of information concerning the chemicals industry

The Union des Industries chimiques was requested to conduct a survey of the some 1,200 companies members of the Union, which represents the entire French chemicals industry. The information obtained reflects the situation in the industry in mid-1991.

The information was provided on a voluntary basis and therefore it cannot be guaranteed to be absolutely complete. Nevertheless, the data obtained are deemed to be sufficiently exact and comprehensive to meet the requirements.

Schedules of chemicals 1, 2 and 3 in document CD/1046 of 18 January 1991 were used as the basis for collection of these data.

#### 3. Information concerning uses for protective purposes

The present aggregate production situation is shown in appendix 1.

Chemicals listed in schedule 1 are produced for defence research and protective purposes in a small-scale production facility whose maximum total capacity is 300 kg/year.

These chemicals are consumed either at the research centre in which the facility is situated, in a decontamination measures and research department (a few kg/year), or at a military centre for protection training (a few kg/year).

4. Information concerning the chemicals industry

The firms which responded to the survey may be classified as follows:

- Schedule 1: 1 firm uses one type of chemical (nitrogen mustards)
- Schedule 2A: 9 firms produce or use certain chemicals
- Schedule 3: 35 firms produce or use certain chemicals.

In all, there are 15 production sites and 58 processing/consumption sites.

Appendix 2 shows the aggregate situation regarding the number of plants producing or using the chemicals listed in the different schedules.

Appendix 3, for production, and Appendix 4, for processing/consumption, show, for each chemical, the production tonnage range.

APPENDIX 1

- 1 - Presence of chemical weapons in the national territory No
- Chemical weapons held in the territory of another State No
- 2 - Chemical weapons production facilities None
  - Total number of sites where substances listed in schedules 1, 2 or 3 are produced, processed or consumed 74
- 3 - Types and names of chemical warfare agents produced (\*) Mustard gas, Tabun, Sarin, Soman, VX
  - Types of chemical munitions stored; chemical weapons in bulk Not applicable
  - Names of chemicals listed (\*\*) in schedules 1, 2 and 3 produced by the chemicals industry Not applicable
- 4 - Destruction plans and methods, chemical weapon destruction facilities Not applicable

(\*) In the small-scale production facility

(\*\*) See Appendix 3

1. Ethylene
2. Cyanogen chloride
3. Phosgene
4. Chloroacetyl chloride
5. Chloroacetyl bromide
6. Chloroacetyl iodide
7. Chloroacetyl nitrate
8. Chloroacetyl phosphate
9. Chloroacetyl sulphate
10. Chloroacetyl cyanide
11. Chloroacetyl isocyanide
12. Sulphur monochloride
13. Sulphur dichloride
14. Thionyl chloride

APPENDIX 2  
 AGGREGATE DATA FOR THE CHEMICALS INDUSTRY

Schedule 1		Schedule 2A				Schedule 3								
Production facilities	Processing/ consumption facilities	Production facilities		Production/ consumption facilities		Production facilities		Production/ consumption facilities						
	<1T	>1T	0-10T	10-20T	>30T	<10T	10-30T	>30T	0-30T	30-100T	>100T			
0	1	0	0	0	3	1	1	7	2	1	13	16	11	24

APPENDIX 3

PRODUCTION IN THE CHEMICALS INDUSTRY

	0-10T	10-30T	>30T
<b>SCHEDULE 2A</b>			
1. Chemicals containing a phosphorus atom to which is bonded one methyl, ethyl or propyl (normal or iso) group			X
7. N, N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethyl-2-chloride			X
8. N, N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-ol			X
9. N, N-Dialkyl (Me, Et, n-Pr or i-Pr) ethanethiol			X
10. Bis (2-hydroxyethyl) sulphide			X

0-30T      30-100T      >100T

**SCHEDULE 3**

1. Phosgene			X
2. Cyanogen chloride		X	X
3. Hydrogen cyanide			X
4. Trichloronitromethane		X	X
5. Phosphorus oxychloride	X		
6. Phosphorus trichloride			X
8. Phosphorous acid esters			X
9.                   "			
10.                  "			
12. Sulphur monochloride			X
13. Sulphur dichloride	X		X
14. Thionyl chloride	X	X	X

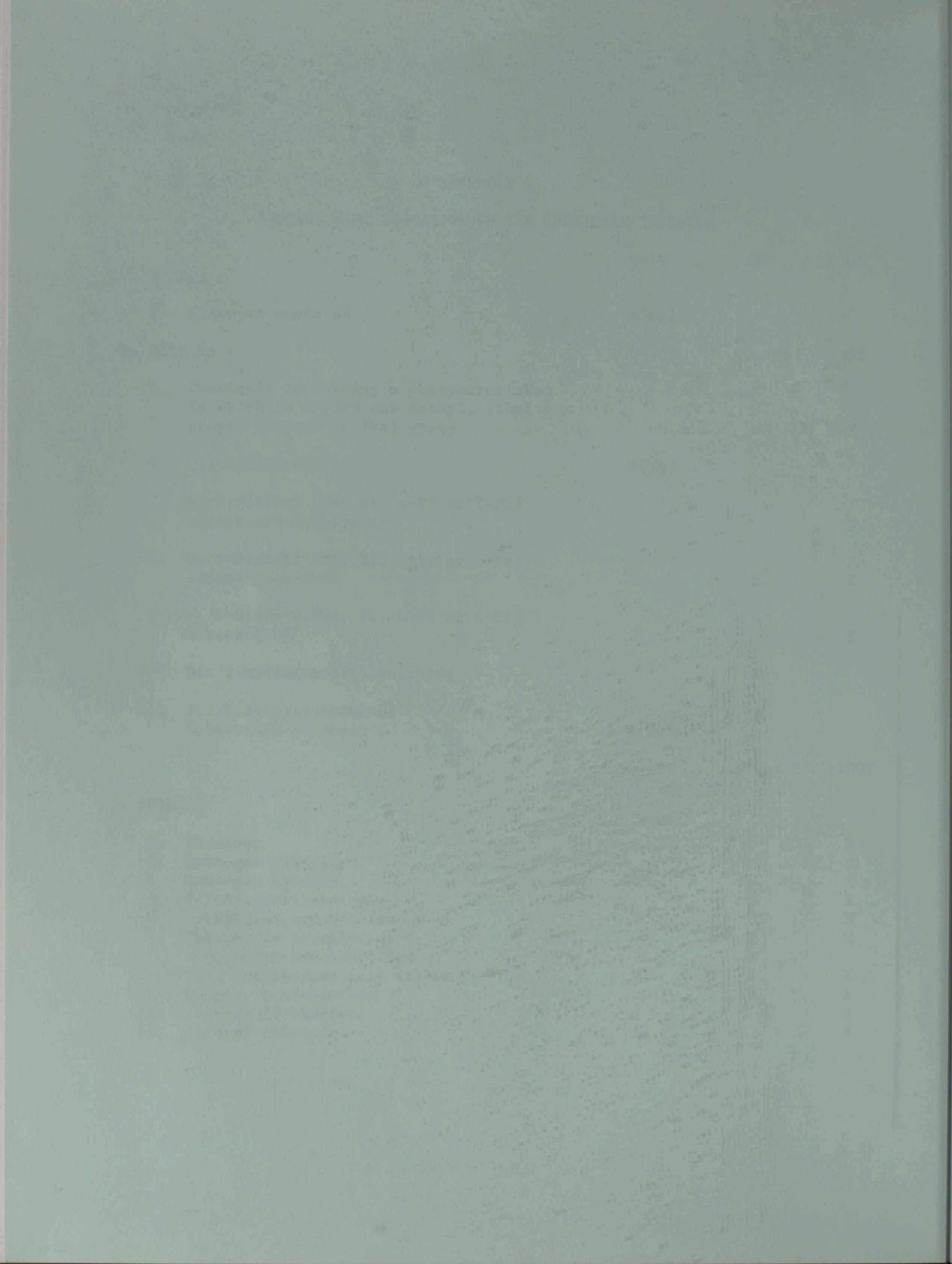
APPENDIX 4

PROCESSING/CONSUMPTION IN THE CHEMICALS INDUSTRY

	0-1T	>1T	30T
<u>SCHEDULE 1</u>			
6. Nitrogen mustards	X(kg)		
<u>SCHEDULE 2A</u>			
	0-10T	10-30T	>30T
1. Chemicals containing a phosphorus atom to which is bonded one methyl, ethyl or propyl (normal or iso) group			X
6. Quinuclidin-3-ol	X(kg)		
7. N, N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethyl-2-chloride			X
8. N, N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-ol	X	X	X
9. N, N-Dialkyl (Me, Et, n-Pr or i-Pr) ethanethiol			X
10. Bis(2-hydroxyethyl) sulphide		X	
11. 3,3-Dimethylbutan-2-ol (pinacolyl alcohol)	X(kg)		
	0-30T	30-100T	>100T
<u>SCHEDULE 3</u>			
1. Phosgene			X
2. Cyanogen chloride		X	X
3. Hydrogen cyanide	X		X
4. Trichloronitromethane		X	X
5. Phosphorus oxychloride	X	X	X
6. Phosphorus trichloride	X	X	X
7. Phosphorus pentachloride	X	X	
8/9/10. Phosphorous acid esters	X		X
11. Sulphur monochloride		X	X
12. Sulphur dichloride			X
13. Thionyl chloride	X	X	X

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# CONFERENCE ON DISARMAMENT

CD/1143  
12 March 1992

Original: ENGLISH

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PREAMBLE

The States Parties to this Convention,

Determined to act with a view to achieving effective progress towards general and complete disarmament under strict and effective international control, including the prohibition and elimination of all types of weapons of mass destruction,

Desiring to contribute to the realization of the purposes and principles of the Charter of the United Nations,

Recalling that the General Assembly of the United Nations Organization has repeatedly condemned all actions contrary to the principles and objectives of the Protocol for Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed at Geneva on 17 June 1925 (the Geneva Protocol of 1925),

Recognizing that the Convention reaffirms principles and objectives of and obligations assumed under the Geneva Protocol of 1925, and the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction signed at London, Moscow and Washington on 10 April 1972,

Bearing in mind the objective contained in Article IX of the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction,

Determined for the sake of all humanity, to completely exclude the possibility of the use of chemical weapons, through the implementation of the provisions of this Convention, thereby complementing the obligations assumed under the Geneva Protocol of 1925,

Considering that the achievements in the field of chemistry should be used exclusively for the benefit of humanity,

Convinced that the complete and effective prohibition of the development, production, stockpiling and use of chemical weapons, and their destruction, represents a necessary step towards the achievement of these common objectives,

Have agreed as follows:

ARTICLE I

DEFINITIONS AND CRITERIA

For the purposes of this Convention:

1. The term "Chemical Weapons" shall apply to the following, together or separately:

(a) Toxic chemicals and their precursors, except where intended for purposes not prohibited under the Convention, as long as the types and quantities involved are consistent with such purposes;

(b) Munitions and devices, specifically designed to cause death or other harm through the toxic properties of those toxic chemicals, as referred to above, which would be released as a result of the employment of such munitions and devices; or

(c) Any equipment specifically designed for use directly in connection with the employment of such munitions or devices specified in subparagraph (b) of this paragraph.

2. The term "Chemical Weapons" shall not apply to the following:

(a) Other toxic munitions and devices as specified in paragraph 3 of this Article;

(b) Chemicals that are not lethal chemicals and are used by a State Party for domestic law enforcement or riot control purposes, such as agents CS (O-chlorobenzylidene malononitrile), CN (2-chloroacetophenone) and CR (dibenz (b,f) (1,4) oxazepine); or

(c) Herbicides, as long as they are used as such.

3. "Other toxic munitions and devices" means munitions and devices specifically designed to cause death or other harm through the properties of toxic chemicals that would be released as a result of the employment of such munitions or devices that have been:

(a) Produced before 1925;

(b) Accidentally recovered from ocean dump sites; or

(c) Found by a State Party on its territory or in any other place under its jurisdiction or control, abandoned by another State or by another person or persons between 1925 and the date of the entry into force of the Convention.

4. "Toxic Chemical" means:

Any chemical which through its chemical action on life processes can cause death, temporary incapacitation or permanent harm to humans or animals. This includes all such chemicals, regardless of their origin or method of production. Toxic chemicals of special relevance are specified in Schedules contained in the Annex on Chemicals.

## 5. "Precursor" means:

A chemical reagent which takes part in the production of a toxic chemical. Precursors of special relevance are specified in Schedules contained in the Annex on Chemicals.

## 6. "Chemical Weapons Production Facility":

(a) Means any equipment, as well as any building housing such equipment, that was designed, constructed or used at any time since 1 January 1946:

(i) As part of the stage in the production of chemicals ("final technological stage") where the material flows would contain, when the equipment is in operation, either:

(1) Any chemical listed on Schedule 1 in the Annex on Chemicals (hereinafter referred to as "any Schedule 1 chemical");

(2) Any other chemical that has no use, above one tonne per year in the territory or in any other place under the jurisdiction or control of the State Party, for purposes not prohibited by this Convention, but can be used for chemical weapons purposes; or

(ii) For filling chemical weapons, including, inter alia, the filling of Schedule 1 chemicals into munitions, devices or bulk storage containers; the filling of scheduled chemicals into containers that form part of assembled binary munitions and devices or into chemical submunitions that form part of assembled unitary munitions and devices and the loading of the containers and chemical submunitions into the respective munitions and devices;

(b) Does not include:

(i) Any facility having a production capacity for synthesis of chemicals specified in subparagraph (a) (i) of this paragraph that is less than one tonne;

(ii) Any facility in which a chemical specified in subparagraph (a) (i) of this paragraph is produced as an unavoidable by-product of activities for purposes not prohibited by this Convention, provided that the chemical does not exceed 3 per cent of the total product and that the facility is subject to declaration and inspection under the Verification Annex;

(iii) the single small-scale facility for production of Schedule 1 chemicals for purposes not prohibited by this Convention.

7. "Purposes not prohibited by this Convention" means:

(a) Industrial, agricultural, research, medical, pharmaceutical or any other peaceful purposes, domestic law enforcement or riot control purposes; or military purposes not connected with the use of chemical weapons; or

(b) Purposes directly related to protection against chemical weapons, hereinafter referred to as "protective purposes".

8. "Production Capacity" means the annual quantitative potential for manufacturing a specific substance based on the technological process actually used or, if the process is not yet operational, planned to be used at the relevant facility, and shall be deemed to be equal to the nameplate capacity or, if the nameplate capacity is not available, to the design capacity. The nameplate capacity is the product output under conditions optimized for maximum quantity for the production facility, as demonstrated by one or more test-run(s). The design capacity is the corresponding theoretically calculated product output.

9. "Organization" means the Organization for the Prohibition of Chemical Weapons established pursuant to Article VIII of this Convention.

10. "Production" of a chemical means the formation of a chemical through chemical reaction, including rearrangement.

11. "Processing" of a chemical means a physical process, such as formulation, extraction and purification, in which the chemical is not converted into another chemical.

12. "Consumption" of a chemical means its conversion via a chemical reaction into another chemical.

ARTICLE II

GENERAL OBLIGATIONS

1. Each State Party to this Convention undertakes never under any circumstances:

(a) To develop, produce, otherwise acquire, stockpile or retain chemical weapons, or transfer, directly or indirectly, chemical weapons to anyone;

(b) To use chemical weapons;

(c) To assist, encourage or induce, in any way, anyone to engage in activities prohibited to Parties under this Convention.

2. Each State Party undertakes to destroy any chemical weapons that it owns or possesses anywhere and any other chemical weapons that are located in any place under its jurisdiction or control, in accordance with the provisions of this Convention.

3. Each State Party undertakes to destroy any chemical weapons production facilities that it owns or possesses anywhere and any other chemical weapons production facilities that are located in any place under its jurisdiction or control, in accordance with the provisions of this Convention.

ARTICLE III

DECLARATIONS

1. Each State Party shall submit to the Organization, not later than 30 days after the Convention enters into force for it, the following declarations:

(a) With respect to chemical weapons:

- (i) Whether it owns or possesses any chemical weapons and whether there are any other chemical weapons located in any place under its jurisdiction or control;
- (ii) Whether it has on its territory any chemical weapons that are under the ownership or possession of other States and any other chemical weapons that are located in any place under the jurisdiction or control of other States;
- (iii) Whether it has transferred or received, directly or indirectly, any chemical weapons since 1 January 1946;
- (iv) The precise location, aggregate quantity and detailed inventory of the chemical weapons that it owns or possesses and any other chemical weapons that are located in any place under its jurisdiction or control;
- (v) Its general plan for destruction of chemical weapons that it owns or possesses and any other chemical weapons that are located in any place under its jurisdiction or control.

(b) With respect to other toxic munitions and devices:

- (i) Whether it owns or possesses any other toxic munitions and devices, and whether there are any other toxic munitions and devices that are located on its territory or in any other place under its jurisdiction or control; and
- (ii) The number and types of such other toxic munitions and devices, if known at the time of declaration.

(c) With respect to chemical weapons production facilities:

- (i) Specify any chemical weapons production facilities it has owned or possessed and any other chemical weapons production facilities that have been located in any place under its jurisdiction or control, at any time since 1 January 1946;
- (ii) Specify any chemical weapons production facilities that have been located on its territory in any place under the jurisdiction or control of other States, at any time since 1 January 1946;

(iii) Specify any transfer or any receipt, directly or indirectly, of any equipment for the production of chemical weapons since 1 January 1946;

(iv) Specify actions to be taken for closure of any chemical weapons production facility it owns or possesses anywhere, and any other chemical weapon production facility that is located in any place under its jurisdiction or control;

(v) Provide its general plan for destruction for any chemical weapons production facility it owns or possesses anywhere, and for any other chemical weapons production facility that is located in any place under its jurisdiction or control;

(vi) Provide its general plan for any temporary conversion of any chemical weapons production facility into a chemical weapons destruction facility.

(d) With respect to other facilities:

(i) The precise location, nature and general scope of activities of any facility or establishment designed, constructed or used at any time since 1 January 1946 primarily for development of chemical weapons, including inter alia, laboratories and test and evaluation sites, which it has owned or possessed at any time since 1 January 1946. Each State Party shall also state the same information for any such facility or establishment that has been located in any place under its jurisdiction or control at any time since 1 January 1946; and

(ii) Whether there are within its territory or any other place under its jurisdiction or control facilities required to be declared under Article VI and details of these in accordance with the provisions of that Article and the Verification Annex.

2. Declarations submitted by each State Party under this Article shall be made in accordance with the format set out in the Verification Annex.

ARTICLE IV

CHEMICAL WEAPONS

1. The provisions of this Article shall apply to any and all chemical weapons owned or possessed by a State Party anywhere and to any other chemical weapons that are located in any place under its jurisdiction or control, hereinafter referred to in this Article as "declared chemical weapons".
2. Detailed procedures for the implementation of this Article hereinafter referred to in this Article as "agreed procedures" are set out in the Verification Annex.
3. All locations at which declared chemical weapons are stored or destroyed shall be subject to systematic international on-site verification through on-site inspection and monitoring with on-site instruments, in accordance with the provisions of this Article and the agreed procedures. Plans and information submitted by each State Party under this Article shall also be made in accordance with agreed procedures.
4. Each State Party shall, immediately after the declaration under Article III subparagraph 1 (a) of this Convention, provide access to declared chemical weapons for the purpose of systematic international on-site verification of the declaration through on-site inspection. Thereafter, each State Party shall not remove declared chemical weapons, except to a chemical weapons destruction facility. It shall provide access to such chemical weapons, for the purpose of systematic international on-site verification.
5. Each State Party shall provide access to any chemical weapons destruction facilities and their storage areas that it owns or possesses and to any other chemical weapons destruction facilities and their storage areas that are located in any place under its jurisdiction or control, for the purpose of systematic on-site verification.
6. Each State Party shall submit detailed plans for the destruction of declared chemical weapons no later than 180 days before each annual destruction period begins in accordance with agreed procedures.
7. Each State Party shall:
  - (a) Destroy all declared chemical weapons, as set out in agreed procedures and in accordance with the agreed rate and sequence of destruction based on the principle of levelling out. Such destruction shall begin not later than one year after the Convention enters into force for a State Party and shall finish not later than 10 years after entry into force of the Convention. A State Party is not precluded from destroying such chemical weapons at a faster rate;
  - (b) Provide information annually regarding the implementation of its plans for destruction of declared chemical weapons; and
  - (c) Certify, not later than 30 days after the destruction process has been completed, that all declared chemical weapons have been destroyed.

8. If a State ratifies or accedes to the Convention after the 10 year period for destruction set out in paragraph 7 of this Article, it shall destroy declared chemical weapons as soon as possible. The rate and sequence of destruction for such a State Party shall be determined by the Executive Council.

9. Any chemical weapons discovered by or disclosed to a State Party after the initial declaration of chemical weapons shall be reported, secured and destroyed in accordance with the agreed procedures.

10. Each State Party, during transportation, sampling, storage and destruction of declared chemical weapons, shall assign the highest priority to ensuring the safety of people and to protecting the environment. Each State Party shall transport, sample, store and destroy such chemical weapons in accordance with national standards for safety and emissions.

11. Any State Party which has on its territory chemical weapons that are owned or possessed by a State not a Party to this Convention or any other chemical weapons that are located in any place under the jurisdiction or control of a State not a Party to this Convention, shall either ensure that such chemical weapons are removed from its territory not later than 30 days after the Convention enters into force for it or shall implement the provisions of this Article with regard to the destruction of such chemical weapons.

12. The provisions of this Article and agreed procedures, including paragraph 1, shall also apply to the declaration, inspection and destruction of other toxic munitions and devices as specified in paragraphs 3 (b) or 3 (c) of Article I of this Convention, except that, upon the request of a State Party, the Executive Council shall have the power to modify or suspend the application of the provisions if it determines that so doing would not pose a risk to the objectives of the Convention.

13. Each State Party shall permit the Organization to conduct an on-site inspection to determine whether any other toxic munitions and devices specified in paragraph 3 (a) of Article I of this Convention that it has declared or reported were produced before 1925. Such an inspection shall be permitted no later than 30 days after entry into force of the Convention for the State Party or, if such munitions and devices are discovered after entry into force for it, not more than one year after their discovery. For those other toxic munitions and devices that the Organization determines were produced before 1925, the State Party shall undertake to destroy such munitions and devices as toxic waste and shall provide information annually regarding the measures taken to destroy them. The provisions of this Article, and agreed procedures, including paragraph 1, shall apply to the declaration, inspection and destruction of other toxic munitions and devices as specified in paragraphs 3 (b) and (c) of Article I of this Convention that are not determined to have been produced before 1925.

14. Where:

(a) It is established through consultations between a State Party and the Organization or between a State Party and other States that the State Party has abandoned other toxic munitions and devices specified in paragraph 3 (c) of Article I of this Convention in the territory or in any other place under the jurisdiction or control of another State Party ("the other State Party"); and

(b) That State Party is requested by the other State Party to destroy such other toxic munitions and devices;

that State Party shall provide assistance to that other State Party, bilaterally or through the Secretariat, for the destruction of such other toxic munitions and devices.

15. Each State Party shall meet the costs associated with the destruction of its chemical weapons. Where bilateral or multilateral arrangements for destruction of declared chemical weapons and verification of such destruction already exist, the Organization's verification activities shall be complementary to such agreements.

16. Each State Party undertakes to cooperate with other States Parties that request information or assistance on a bilateral basis or through the Secretariat regarding methods and technologies for the safe and efficient destruction of chemical weapons.

17. The provisions of Articles III and IV shall not apply to chemical weapons that have been disposed of by land burial or ocean dumping before 1 January 1975.

ARTICLE V

CHEMICAL WEAPONS PRODUCTION FACILITIES

1. The provisions of this Article shall apply to any and all chemical weapons production facilities owned or possessed by a State Party and any other chemical weapons production facilities that are located in any place under its jurisdiction or control, hereinafter referred to in this Article as "declared chemical weapons production facilities".
2. Detailed procedures for the implementation of this Article hereinafter referred to in this Article as "agreed procedures" are set out in the Verification Annex.
3. All declared chemical weapons production facilities shall be subject to systematic international on-site verification through on-site monitoring in accordance with the provisions of this Article and agreed procedures. Plans and information submitted by each State Party under this Article shall also be made in accordance with agreed procedures.
4. Each State Party shall cease immediately all activity at declared chemical weapons production facilities, except activity required for closure.
5. No State Party shall construct any new chemical weapons production facilities or modify any existing facilities for the purpose of chemical weapons production or for any other purpose prohibited by this Convention.
6. Each State Party shall immediately after the declaration under paragraph 1(c) of Article III provide access to declared chemical weapons production facilities, for the purpose of systematic international on-site verification.
7. Each State Party shall:
  - (a) Close, not later than 90 days after the Convention enters into force for it, all declared chemical weapons production facilities, in a manner that will render each facility inoperable, and submit notice of such closure to the Organization; and
  - (b) Provide access to declared chemical weapons production facilities, subsequent to closure, for the purpose of systematic international on-site verification in order to ensure that the facility remains closed and is subsequently destroyed.
8. Each State Party shall submit detailed plans for destruction of declared chemical weapons production facilities no later than 180 days before the destruction of each facility begins.
9. Each State Party shall:
  - (a) Destroy all declared chemical weapons production facilities and related facilities and equipment, as set out in agreed procedures in accordance with an agreed rate and sequence of destruction based on the

principle of levelling out, beginning not later than one year after the Convention enters into force for it, and finishing not later than ten years after entry into force of the Convention. A State Party is not precluded from destroying such facilities at a faster rate;

(b) Provide information annually regarding the implementation of its plans for the destruction of all declared chemical weapons production facilities;

(c) Certify, not later than 30 days after the destruction process has been completed, that all declared chemical weapons production facilities have been destroyed.

10. If a State Party ratifies or accedes to the Convention after the ten-year period for destruction set out in paragraph 9 of this Article, it shall destroy declared chemical weapons production facilities as soon as possible. The rate and sequence of destruction for such a State Party shall be determined by the Executive Council.

11. Each State Party, during the destruction of its declared chemical weapons production facilities, shall assign the highest priority to ensuring the safety of people and to protecting the environment. Each State Party shall destroy its facilities in accordance with national standards for safety and emissions.

12. Declared chemical weapons production facilities may be temporarily converted for destruction of chemical weapons in accordance with agreed procedures. Such a converted facility must be destroyed as soon as it is no longer in use for destruction of chemical weapons but, in any case, not later than ten years after entry into force of the Convention.

13. Each State Party shall meet the costs associated with the destruction of its chemical weapons production facilities. Where bilateral or multilateral arrangements for destruction of declared chemical weapons production facilities and verification of such destruction already exist, the Organization's verification activities shall be complementary to such agreements.

ARTICLE VI

ACTIVITIES NOT PROHIBITED UNDER THE CONVENTION

1. Each State Party:

(a) Has the right, subject to the provisions of this Convention, to develop, produce, otherwise acquire, retain, transfer and use toxic chemicals and their precursors for purposes not prohibited under the Convention;

(b) Shall adopt the necessary measures to ensure that toxic chemicals and their precursors are not developed, produced, otherwise acquired, retained, transferred, or used within its territory or in any other place under its jurisdiction or control for purposes prohibited under the Convention.

2. Each State Party shall subject toxic chemicals and their precursors listed in Schedules 1, 2A, 2B and 3 of the Annex on Chemicals, as well as facilities which produce, process or consume these toxic chemicals or precursors and other facilities specified in the Verification Annex, that are located within its territory or in any other place under its jurisdiction or control, to international monitoring as provided in that Annex, in order to verify that activities are in accordance with obligations under the Convention.

3. Not later than 30 days after the entry into force of the Convention for it, each State Party shall declare data on relevant chemicals and facilities in accordance with the Verification Annex.

4. Each State Party shall make annual declarations regarding the relevant chemicals and facilities in accordance with the Verification Annex.

5. Each State Party shall subject chemicals listed in Schedule 1 and facilities declared under the Verification Annex to the measures contained in that Annex.

6. Each State Party shall subject chemicals listed in Schedules 2A, 2B and 3 and facilities declared under the Verification Annex to monitoring by data reporting and international on-site verification in accordance with that Annex.

7. In conducting verification activities, the Secretariat shall avoid undue intrusion into the State Party's chemical activities for purposes not prohibited under the Convention, consistent with the general obligation in Article XI, paragraph 1 of this Convention.

8. For the purpose of on-site verification, each State Party shall grant to the inspectors access to facilities as required in the Verification Annex and the Confidentiality Annex.

9. For the purposes of increasing the transparency of national programmes related to protective purposes, each State Party shall provide annually to the Secretariat information on its programme, in accordance with procedures to be developed by the Preparatory Commission and endorsed by the Conference of the States Parties.

ARTICLE VII

NATIONAL IMPLEMENTATION MEASURES

General undertakings

1. Each State Party shall, in accordance with its constitutional processes, adopt the necessary measures to implement its obligations under this Convention, and, in particular:

(a) To prohibit natural and legal persons anywhere on its territory or in other places under its jurisdiction as recognized by international law from undertaking any activity that a State Party to this Convention is prohibited from undertaking by this Convention;

(b) Not to permit any activity as referred to under (a) in any place under its control; and

(c) To enact penal legislation, which shall extend to such activities as referred to under (a) undertaken anywhere by natural persons, possessing its nationality, in conformity with international law.

2. Each State Party shall cooperate with other States Parties and afford the appropriate form of legal assistance to facilitate the implementation of the obligations under this Article.

3. Each State Party, during the implementation of its obligations under this Convention, shall assign the highest priority to ensuring the safety of people and to protecting the environment, and shall cooperate as appropriate with other States Parties in this regard.

Relations between the State Party and the Organization

4. In order to fulfil its obligations under this Convention, each State Party shall designate or establish a National Authority to serve as the national focal point for effective liaison with the Organization and other States Parties. Each State Party shall notify the Organization of its National Authority at the time that the Convention enters into force for that State Party.

5. States Parties shall inform the Organization of the legislative and administrative measures taken to implement the Convention, including their system for monitoring transfers of chemicals listed in the Annex on Chemicals and equipment and technology for producing such chemicals.

6. States Parties shall treat as confidential and afford special handling to information which they receive in confidence in connection with the implementation of the Convention from the Organization. They shall treat such information exclusively in connection with their rights and obligations under the Convention and in accordance with the provisions set out in the Confidentiality Annex.

7. Each State Party undertakes to cooperate with the Organization in the exercise of all its functions and in particular to provide assistance to the Secretariat.

## ARTICLE VIII

### THE ORGANIZATION

#### General Provisions

1. There is hereby established the Organization for the Prohibition of Chemical Weapons to achieve the objectives of this Convention, to ensure the implementation of its provisions, including those for international verification of compliance with it, and to provide a forum for consultation and cooperation among States Parties.
2. All States Parties to this Convention shall be members of the Organization. A State Party shall not be deprived of its membership in the Organization.
3. There are hereby established as the organs of the Organization the Conference of the States Parties, the Executive Council and the Secretariat.
4. The verification activities described in this Convention shall be conducted in the least intrusive manner possible consistent with the timely and efficient accomplishment of their objectives. The Organization shall request only the information and data necessary to fulfil its responsibilities under this Convention.
5. The Organization shall take every precaution to protect the confidentiality of information on civil and military activities and facilities in the implementation of the Convention and, in particular, shall abide by the provisions set out in the Confidentiality Annex. Information related to States Parties' continuing compliance with the Convention that has been authorized by the Director-General, taking into account the general principles for the handling of confidential information as set out in the Annex on Confidentiality, shall be transmitted to all States Parties by the Organization on a routine basis.
6. In undertaking its verification activities the Organization shall consider measures to avoid unnecessary duplication of bilateral or multilateral arrangements for providing confidence in compliance and to make use of advances in science and technology, provided that such measures do not in any way detract from the obligations assumed by States Parties under this Convention.
7. The costs of the Organization's activities shall be paid by States Parties in accordance with the assessment scale adopted by the United Nations for its general budget, adjusted to take into account differences in membership between the United Nations and this Convention, and subject to the provisions of Articles IV and V of this Convention. Financial contributions of States Parties to the Preparatory Commission shall be deducted in an appropriate way from their contributions to the regular budget.

The Conference of the States Parties

Composition, procedure and decision-making

8. The Conference of the States Parties shall be composed of all the States Parties to this Convention. Each State Party shall have one representative in the Conference of the States Parties, who may be accompanied by alternates and advisers.

9. The first session of the Conference of the States Parties shall be convened by the Secretary-General of the United Nations not later than 30 days after the entry into force of the Convention.

10. The Conference of the States Parties shall meet in regular sessions, which shall be held annually unless it decides otherwise. Special sessions shall be convened whenever:

- (a) Decided by the Conference of the States Parties;
- (b) Requested by the Executive Council; or
- (c) Requested by any State Party and supported by one-third of the States Parties.

The special session shall be convened not later than 30 days after receipt of the request by the Director-General of the Secretariat, unless otherwise specified in the request.

11. Sessions shall take place at the headquarters of the Organization unless the Conference of the States Parties otherwise decides.

12. The Conference of the States Parties shall adopt its Rules of Procedure on the basis of proposed Rules developed by the Preparatory Commission.

13. A majority of the members of the Conference of the States Parties shall constitute a quorum.

14. Each member of the Conference of the States Parties shall have one vote.

15. The Conference of the States Parties shall take decisions on questions of procedure, including decisions to convene special sessions of the Conference, by a simple majority of the members present and voting. Decisions on matters of substance should be taken as far as possible by consensus. If consensus is not attainable when an issue comes up for decision, the Chairman shall defer any vote for 24 hours and during this period of deferment shall make every effort to facilitate achievement of consensus, and shall report to the Conference prior to the end of the period. If consensus is not possible at the end of 24 hours, the Conference shall take the decision by a two-thirds majority of members present and voting unless otherwise specified in the Convention. When the issue arises as to whether the question is one of substance or not, that question shall be treated as one of substance unless otherwise decided by the Conference by the majority required for decisions on questions of substance.

Powers and functions

16. The Conference of the States Parties shall be the principal organ of the Organization. It shall oversee the implementation of the Convention, and promote its objectives. It shall review compliance with the Convention. It shall consider any questions, matters or issues within the scope of the Convention including those relating to the powers and functions of the Executive Council and the Secretariat. It may make recommendations and take decisions on any questions, matters or issues within the scope of the Convention raised by a State Party or brought to its attention by the Executive Council.

17. The Conference of the States Parties shall also oversee the activities of the Executive Council and the Secretariat and may issue guidelines in accordance with the Convention to either of them for the exercise of their functions.

18. In addition, the Conference of the States Parties shall:

(a) Consider and adopt at its regular sessions the report of the Organization, consider other reports and consider and adopt the programme and budget of the Organization, submitted by the Executive Council;

(b) Promote international cooperation for peaceful purposes in the field of chemical activities;

(c) Review scientific and technological developments which could affect the operation of the Convention and, in this context, direct the Director-General of the Secretariat to establish a Scientific Advisory Board to enable the Director-General, in the performance of the functions of that office, to render to the Conference of the States Parties, the Executive Council or States Parties independent and specialized advice in areas of science and technology relevant to the Convention;

(d) Review proposed revisions to the scale of financial contributions to be paid by States Parties;

(e) Elect the members of the Executive Council;

(f) Appoint the Director-General of the Secretariat;

(g) Approve the Rules of Procedure of the Executive Council submitted by the latter;

(h) Establish such subsidiary organs as it finds necessary for the exercise of its functions in accordance with this Convention.

The Executive Council

Composition, procedure and decision-making

19. The membership of the Executive Council shall be composed of thirty States Parties according to the formula set out in the Annex on the Composition of the Executive Council. Each State Party shall have the right to serve on the Executive Council.

20. The Executive Council shall:

(a) Meet for regular sessions. Between regular sessions, it shall meet as often as may be required for the fulfilment of its functions;

(b) Select its Chairman;

(c) Elaborate and submit its Rules of Procedure to the Conference of the States Parties for approval; and

(d) Make arrangements for the sessions of the Conference of the States Parties, including the preparation of a draft agenda.

(e) Consider and submit to the Conference of the States Parties the draft programme and budget of the Organization;

(f) Consider and submit to the Conference of the States Parties the draft report of the Organization on the implementation of the Convention, the report on the performance of its own activities and such special reports as it deems necessary or which the Conference of the States Parties may request;

(g) Conclude agreements with States and international organizations on behalf of the Organization, subject to approval by the Conference of the States Parties, and approve agreements relating to the implementation of verification activities, negotiated by the Director-General of the Secretariat with States Parties;

(h) Conclude agreements with States Parties in connection with Article X and supervise the voluntary fund for the purpose of this Article.

21. The Executive Council may request the convening of a special session of the Conference of the States Parties.

22. Each member of the Executive Council shall have one vote.

23. The Executive Council shall take decisions on questions of procedure by a simple majority of all its members. Unless otherwise specified in the Convention, decisions on matters of substance shall be taken as far as possible by consensus. If consensus is not reached when an issue comes up for decision, the Executive Council shall take the decision by a two-thirds majority of all its members. When the issue arises as to whether the question is one of substance or not, that question shall be treated as one of substance unless otherwise decided by the Executive Council by the majority required for decisions on questions of substance.

### Powers and functions

24. The Executive Council shall be the executive organ of the Conference of the States Parties, to which it shall be responsible. The Executive Council shall carry out the powers and functions entrusted to it by this Convention, as well as such functions delegated to it by the Conference of the States Parties. In so doing, it shall act in conformity with the recommendations, decisions and guidelines of the Conference of the States Parties and ensure their continuous and proper implementation.

25. The Executive Council shall:

(a) Promote the effective implementation of, and compliance with, the Convention;

(b) Supervise the activities of the Secretariat;

(c) Cooperate with the National Authority of each State Party and facilitate consultations and cooperation among States Parties at their request;

(d) Consider any issue or matter within its competence, affecting this Convention and its implementation, including concerns regarding compliance, and cases of non-compliance, and, as appropriate, notify States Parties and bring the issue or matter to the attention of the Conference of the States Parties;

(e) In its consideration of doubts or concerns regarding compliance and cases of non-compliance, including inter alia, abuse of the rights provided for by the Convention, the Executive Council shall consult with the States Parties involved and, as appropriate, request the State Party to take measures to redress the situation within a specified time. To the extent that the Executive Council considers further action to be necessary, it shall take, inter alia, one or more of the following measures:

(i) Inform all States Parties of the issue;

(ii) Bring the issue to the attention of the Conference of the States Parties;

(iii) Make recommendations to the Conference of the States Parties regarding measures to redress the situation and ensure compliance.

The Executive Council shall in cases of particular gravity and urgency, bring the issue, including relevant information and conclusions directly to the attention of the United Nations General Assembly and the United Nations Security Council. It shall at the same time inform all States Parties of this step.

The Secretariat

26. The Secretariat shall assist the Conference of the States Parties and the Executive Council in the performance of their functions. The Secretariat shall carry out the functions entrusted to it by this Convention and its Annexes, as well as such functions delegated to it by the Conference of the States Parties or the Executive Council.
27. The Secretariat shall consist of a Director-General, who shall be its head and chief administrative officer, inspectors and such scientific, technical and other personnel as may be required. The Director-General of the Secretariat shall be appointed by the Conference of the States Parties upon the recommendation of the Executive Council.
28. The Secretariat shall:
- (a) Address and receive communications on behalf of the Organization to and from States Parties on matters pertaining to the implementation of the Convention;
  - (b) Negotiate the agreements on subsidiary arrangements with States Parties relating to systematic international on-site verification for approval by the Executive Council;
  - (c) Carry out international verification measures provided for in the Convention;
  - (d) Prepare and submit to the Executive Council the draft report of the Organization on the implementation of the Convention and such other reports as the Executive Council and/or the Conference of the States Parties may request;
  - (e) Inform the Executive Council of any problems which have arisen with regard to the execution of its functions, including doubts, ambiguities or uncertainties about compliance with the Convention which have come to its notice in the performance of its verification activities and which it has been unable to resolve or clarify through its consultations with the State Party concerned;
  - (f) Provide technical assistance and technical evaluation to States Parties in the implementation of the provisions of the Convention, including evaluations of listed and unlisted chemicals;
  - (g) Prepare and submit to the Executive Council the draft programme and budget of the Organization;
  - (h) Provide administrative and technical support to the Conference of the States Parties, the Executive Council and other subsidiary organs;
  - (i) In relation with Article X, paragraph 6, administer the voluntary fund, compile declarations made by States Parties and register, when requested, bilateral agreements concluded between States Parties or a State Party and the Organization for the purposes of Article X.

29. The Inspectorate shall be a unit of the Secretariat and shall act under the supervision of the Director-General of the Secretariat.

30. The Director-General's term of office shall be for four years renewable for one further term, but not thereafter. The Director-General shall be responsible to the Conference of the States Parties and the Executive Council for the appointment of the staff and the organization and functioning of the Secretariat. The paramount consideration in the employment of the staff and in the determination of the conditions of services shall be the necessity of securing the highest standards of efficiency, competence and integrity. Only citizens of States Parties shall serve as the Director-General, as inspectors or as other members of the professional and clerical staff. Due regard shall be paid to the importance of recruiting the staff on as wide a geographical basis as possible. Recruitment shall be guided by the principle that the staff shall be kept to a minimum necessary for the proper execution of its responsibilities.

31. Consequent to paragraph 18(c) above, the Director-General is responsible for the organization and functioning of the Scientific Advisory Board. The Director-General shall, in consultation with States Parties, appoint members of the Scientific Advisory Board who shall serve in their individual capacity. The members of the Board shall be appointed on the basis of their expertise in the particular scientific fields relevant to the implementation of the Convention. The Director-General may also, as appropriate, in consultation with members of the Board, establish temporary working groups of scientific experts to provide recommendations on specific issues. In regard to the above, States Parties may submit lists of experts to the Director-General.

32. In the performance of their duties, the Director-General of the Secretariat, the inspectors and other members of the staff shall not seek or receive instructions from any Government or from any other source external to the Organization. They shall refrain from any action which might reflect on their positions as international officers responsible only to the Conference of the States Parties and the Executive Council.

33. Each State Party shall undertake to respect the exclusively international character of the responsibilities of the Director-General of the Secretariat, the inspectors and the other members of the staff and not seek to influence them in the discharge of their responsibilities.

ARTICLE IX

CONSULTATIONS, COOPERATION AND FACT-FINDING

1. States Parties shall consult and cooperate, directly among themselves, or through the Organization or other appropriate international procedures, including procedures within the framework of the United Nations and in accordance with its Charter, on any matter which may be raised relating to the objectives or the implementation of the provisions of this Convention.

2. States Parties shall make every possible effort to clarify and resolve, through exchange of information and consultations among them, any matter which may cause doubt about compliance with this Convention, or which gives rise to concerns about a related matter which may be considered ambiguous. A Party which receives a request from another Party for clarification of any matter which the requesting Party believes causes such doubts or concerns shall provide the requesting Party, not later than seven days after the request, with information sufficient to answer the doubts or concerns raised along with an explanation on how the information provided resolves the matter. Nothing in this Convention affects the right of any two or more States Parties to arrange by mutual consent for inspections or any other procedures among themselves to clarify and resolve any matter which may cause doubts about compliance or gives rise to concerns about a related matter which may be considered ambiguous. Such arrangements shall not affect the rights and obligations of any State Party under other provisions of this Convention.

Procedure for requesting clarification

3. A State Party shall have the right to request the Executive Council to assist in clarifying any situation which may be considered ambiguous or which gives rise to doubts about the compliance of another State Party with the Convention. The Executive Council shall provide appropriate information and data in its possession relevant to such concerns.

4. A State Party shall have the right to request the Executive Council to obtain clarification from another State Party on any situation which may be considered ambiguous or which gives rise to doubts about its compliance with the Convention. In such a case, the following shall apply:

(a) The Executive Council shall forward the request for clarification to the State Party concerned not later than 24 hours after its receipt;

(b) The requested State Party shall provide the clarification to the Executive Council not later than seven days after the receipt of the requests;

(c) The Executive Council shall forward the clarification to the requesting State Party not later than 24 hours after its receipt;

(d) If the requesting State Party deems the clarification to be inadequate, it shall have the right to request the Executive Council to obtain from the requested State Party further clarification;

(e) For the purpose of obtaining further clarification requested under subparagraph (d) of this paragraph, the Executive Council may establish a group of experts to examine all available information and data relevant to the situation causing the doubt. The group of experts shall submit a factual report to the Executive Council on its findings;

(f) If the requesting State Party considers the clarification obtained under subparagraphs (d) and (e) of this paragraph to be unsatisfactory, it shall have the right to request a special meeting of the Executive Council in which States Parties involved that are not members of the Executive Council shall be entitled to take part. In such a special meeting, the Executive Council shall consider the matter and may recommend any measure it deems appropriate to cope with the situation.

5. A State Party shall also have the right to request the Executive Council to clarify any situation which has been considered ambiguous or has given rise to doubts about its compliance with the Convention. The Executive Council shall respond by providing such assistance as appropriate.

6. The Executive Council shall inform the States Parties about any request for clarification provided in this Article.

7. If the doubts or concerns of a State Party about compliance have not been resolved not later than 60 days after the submission of the request for clarification to the Executive Council, or it believes its doubts warrant urgent consideration, notwithstanding its right to request an on-site challenge inspection, it shall have the right to request a special session of the Conference of the States Parties in accordance with Article VIII. In such a special session, the Conference of the States Parties shall consider the matter and may recommend any measure it deems appropriate to resolve the situation.

#### Procedure for requesting a fact-finding mission

8. Each State Party shall have the right to request an on-site challenge inspection of any facility or location in any other State Party for the purpose of clarifying and resolving any questions concerning compliance with the provisions of this Convention, and to have this inspection conducted anywhere without delay by an inspection team designated by the Director-General of the Secretariat and in accordance with the Verification Annex. Each State Party shall make requests that are within the scope of the Convention and that are for the sole purpose of determining facts relating to compliance.

9. For the purpose of verifying compliance with the provisions of this Convention, each State Party shall permit the Secretariat to conduct on-site challenge inspections pursuant to paragraph 8 of this Article.

10. Pursuant to a challenge of its facility or location, and in accordance with the procedures provided for in the Verification Annex, a State Party has:

(a) The right and the obligation to make every reasonable effort to demonstrate its compliance with the Convention and, to this end, to ensure that the inspection team is able to fulfil its mandate;

(b) The obligation to provide access within the requested site for the sole purpose of establishing facts relevant to the request; and

(c) The right to take measures to protect sensitive installations, and to prevent disclosure of confidential information, not related to the Convention.

11. The requesting State Party shall have the right to send a representative to observe the conduct of the inspection. The inspected State Party shall then grant access to the observer in accordance with the Verification Annex.

12. The requesting State Party shall present a request for an on-site challenge inspection to the Director-General of the Secretariat. The Director-General shall notify the inspected State Party not less than 12 hours prior to the planned arrival of the inspection team at the point of entry. Contemporaneously, the members of the Executive Council and all the other States Parties shall be informed about the request. At the request of the inspected State Party, the Executive Council shall meet to discuss the request for an on-site challenge inspection. This meeting shall not, under any circumstances, delay the inspection.

#### Inspections

13. Each State Party is under the obligation to provide in its request all relevant information on the concern regarding compliance, as specified in Part VIII, Section II.A.1 and 2 of the Verification Annex. This information shall form the basis of the issue of the mandate for the conduct of an inspection.

14. Where a request pursuant to the preceding paragraph has been received, the Director-General of the Secretariat shall promptly issue a mandate for the conduct of the inspection. The mandate shall be the requesting State Party's request put into operational terms and shall conform with the request.

15. The inspection shall be conducted in accordance with Part VIII, or in the case of alleged use, Part IX of the Verification Annex. The inspection team shall be guided by the principle of conducting the inspection in the least intrusive manner possible, consistent with the effective and timely accomplishment of its mission.

16. The inspected State Party shall assist the inspection team throughout the inspection and facilitate its task. Should the inspected State Party propose, pursuant to Part VIII, Section III B of the Verification Annex, arrangements to demonstrate compliance, alternative to full and comprehensive access, it shall make every reasonable effort, through consultations with the inspection team, to reach agreement on the modalities for establishing the facts with the aim of demonstrating its compliance.

17. The Director-General of the Secretariat shall promptly transmit the final report of the inspection team to the requesting State Party, to the inspected State Party, to the Executive Council and to all other States Parties. The final report shall contain such factual findings which relate only to the inspection mandate as well as the assessment of the inspection team of the degree and nature of access and cooperation granted to the inspectors and the extent to which this enabled them to fulfil their mandate. The Director-General shall further transmit promptly to the Executive Council the assessment of the requesting State Party, and the inspected State Party, and the views of other States Parties that may be conveyed to the Director-General for that purpose, and then transmit them to all States Parties.

18. The Executive Council shall meet within 48 hours following the presentation of the final report of the inspection team to review the situation and consider any appropriate further action necessary to redress the situation and to ensure compliance with the Convention, including specific proposals to the Conference of the States Parties. The Executive Council may also issue an opinion on whether the inspection was initiated in conformity with the obligation to keep the request within the scope of the Convention and conducted in accordance with the provisions of paragraph 15 above. At such a meeting, the requesting State Party and the inspected State Party shall have the right to participate. The Executive Council shall inform the States Parties of the outcome of its meeting.

ARTICLE X

ASSISTANCE AND PROTECTION AGAINST CHEMICAL WEAPONS

1. For the purposes of this Article, assistance means the coordination and delivery to States Parties of protection against chemical weapons, including, inter alia, the following: detection equipment and alarm systems, protective equipment, decontamination equipment and decontaminants, medical antidotes and treatments and advice on any of these protective measures.

2. Nothing in this Convention shall be interpreted as impeding the right of any State Party to conduct research into, develop, produce, acquire, transfer or use means of protection against chemical weapons, for purposes not prohibited by the Convention.

3. Each State Party undertakes to facilitate, and shall have the right to participate in, the fullest possible exchange of equipment, material and scientific and technological information concerning means of protection against chemical weapons.

4. The Secretariat shall establish, not later than 180 days after entry into force of the Convention and maintain, for the use of any requesting State Party, a data bank containing freely available information concerning various means of protection against chemical weapons as well as such information as may be provided by States Parties.

The Secretariat shall also, within the resources available to it, and at the request of a State Party, provide expert advice and assist the State Party in identifying how its programmes for the development and improvement of a protective capacity against chemical weapons could be implemented.

5. Nothing in this Convention shall be interpreted as impeding the right of States Parties to request and provide assistance bilaterally and to conclude individual agreements with other States Parties concerning the emergency procurement of assistance.

6. Each State Party undertakes to provide assistance through the Organization and to this end to elect:

(a) To contribute to the voluntary fund for assistance to be established by the Conference of the States Parties at its first session; and/or

(b) To conclude, if possible not later than 180 days after the Convention enters into force for it, agreements with the Organization concerning the procurement, upon demand, of assistance; and/or

(c) To declare, not later than 180 days after the Convention enters into force for it, the kind of assistance it might provide in response to an appeal by the Organization. If, however, a State Party subsequently is unable to provide the assistance envisaged in its declaration, it is still under the obligation to provide assistance in accordance with this paragraph.

7. Each State Party has the right to request and, subject to the procedures set out in paragraphs 8, 9 and 10 of this Article, to receive assistance and protection against the use or threat of use of chemical weapons if it considers that:

(a) Chemical weapons have been used against it;

(b) It is threatened by actions or activities by any State which are prohibited for States Parties by Article II of this Convention.

8. The request, substantiated by relevant information, shall be made to the Director-General of the Secretariat, who shall transmit it to the Executive Council and to all States Parties.

The Director-General shall initiate, not later than 24 hours after receipt of the request, an investigation in order to provide foundation for action, complete it within 72 hours and forward a report to the Executive Council. If additional time is required for completion of the investigation, an interim report shall be submitted within the same time-frame. The additional time required for investigation shall not exceed 72 hours and may be extended by similar periods. Reports at the end of each additional period shall be submitted to the Executive Council. The investigation shall, as appropriate and in conformity with the request and the information accompanying it, establish relevant facts related to the request as well as the type and scope of assistance and protection needed.

9. The Executive Council shall meet not later than 24 hours after receiving the first investigation report to consider the situation and shall take a decision by simple majority in the following 24 hours on whether to instruct the Secretariat to provide assistance. The Secretariat shall immediately transmit to all States Parties and relevant international organizations the final investigation report and the decision taken by the Executive Council. When so decided by the Executive Council, the Director-General of the Secretariat shall provide assistance immediately. For this purpose, the Director-General may cooperate with the requesting State Party, other States Parties and relevant international organizations. The States Parties shall make the fullest possible efforts to provide assistance.

10. If the information available from the ongoing investigation or other reliable sources would give sufficient proof that there are victims of use of chemical weapons and immediate action is indispensable, the Director-General of the Secretariat shall notify all States Parties and shall take emergency measures of assistance, using the resources the Conference of the States Parties has placed at the disposal of the Director-General for such contingencies. The Director-General shall keep the Executive Council informed of actions undertaken pursuant to this paragraph.

ARTICLE XI

ECONOMIC AND TECHNOLOGICAL DEVELOPMENT

1. The provisions of this Convention shall be implemented in a manner which avoids, as far as possible, hampering the economic or technological development of States Parties to the Convention and international cooperation in the field of chemical activities for purposes not prohibited under the Convention including the international exchange of scientific and technical information and chemicals and equipment for the production, processing or use of chemicals for purposes not prohibited under the Convention. Accordingly, States Parties shall:

(a) Have the right, pursuant to subparagraph 1 (a) of Article VI, individually or collectively, to conduct research with, to develop, produce, acquire, retain, transfer, and use chemicals, including toxic chemicals and their precursors and, in exercising that right, shall take all necessary measures to ensure that they abide by the obligations set out in Article II.1 (c);

(b) Undertake to facilitate, and have the right to participate in, the fullest possible exchange of chemicals, equipment and scientific and technical information relating to the development and application of chemistry;

(c) Not apply among themselves any restrictions designed to impede development and promotion of scientific and technological knowledge in the field of chemistry; and

(d) Undertake to ensure that national restrictions in the field of chemistry are rendered consistent with the objectives and purposes of this Convention.

2. The provisions of this Article shall be without prejudice to the generally recognized principles and applicable rules of international law.

ARTICLE XII

MEASURES TO REDRESS A SITUATION AND TO ENSURE COMPLIANCE,  
INCLUDING SANCTIONS

1. The Conference of the States Parties shall take the necessary measures, as set out in paragraphs 2, 3 and 4 of this Article, to ensure compliance with the Convention and to redress and remedy any situation which contravenes the provisions of the Convention. In considering action pursuant to this paragraph, the Conference of the States Parties shall take into account all information and recommendations on the issues submitted by the Executive Council.

2. If a State Party, having been requested by the Executive Council pursuant to paragraph 26 (e) of Article VIII to take measures to redress a situation concerning problems with regard to its compliance, fails to fulfil the request within the specified time, the Conference of the States Parties may - inter alia and upon the recommendation of the Executive Council - restrict or suspend the State Party's rights and privileges under the Convention until it undertakes the necessary action to conform with its obligations under the Convention.

3. In cases where serious damage to the objectives and purposes of the Convention may result from actions prohibited by the Convention, in particular by Article II, the Conference of the States Parties may recommend collective measures including sanctions to States Parties in conformity with international law.

4. The Conference of the States Parties shall in cases of particular gravity, bring the issue, including relevant information and conclusions to the attention of the United Nations General Assembly and the United Nations Security Council.

ARTICLE XIII

PRIVILEGES AND IMMUNITIES

1. The Organization shall enjoy in the territory and in any other place under the jurisdiction or control of a State Party such legal capacity and such privileges and immunities as are necessary for the exercise of its functions.
2. Delegates of States Parties, together with their alternates and advisers, representatives appointed to the Executive Council together with their alternates and advisers, and the Director-General and, subject to the provisions of paragraph 4 of this Article, the staff of the Organization shall enjoy such privileges and immunities as are necessary in the independent exercise of their functions in connection with the Organization.
3. Subject to the provisions of paragraph 4 of this Article, the legal capacity, privileges, and immunities referred to in this Article shall be defined in a separate agreement between the Organization and the States Parties. This agreement shall be developed by the Preparatory Commission.
4. The provisions set out in Part I (III) of the Verification Annex shall apply to the Director-General and the staff of the Secretariat of the Organization.

ARTICLE XIV

RELATION TO OTHER INTERNATIONAL AGREEMENTS

Nothing in this Convention shall be interpreted as in any way limiting or detracting from the obligations assumed by any State under the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed at Geneva on 17 June 1925, and the under the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction, signed at London, Moscow and Washington on 10 April 1972.

ARTICLE XV

AMENDMENTS AND MODIFICATIONS

1. Any State Party may propose amendments or modifications to this Convention in accordance with the provisions of this Article.
2. The text of a proposed amendment shall be submitted to the Director-General of the Secretariat for circulation to all States Parties. It shall be considered only by an Amendment Conference. Such an Amendment Conference shall be held no less than 60 days after the circulation of the proposed amendment if one third of the States Parties notify the Director-General not later than 30 days after circulation that they support further consideration of the proposal. The Amendment Conference shall be held immediately following a regular session of the Conference of the States Parties unless the requesting States Parties ask for an earlier meeting.
3. An amendment shall enter into force if it is adopted at the Amendment Conference by a positive vote of a majority of all States Parties to the Convention with no State Party casting a negative vote and is ratified or accepted by all of the States Parties casting a positive vote at the Amendment Conference. Such an amendment shall enter into force for all States Parties 30 days after deposit of all of the instruments of ratification or acceptance of the States Parties casting a positive vote at the Amendment Conference.
4. Notwithstanding the provisions of paragraphs 2 and 3 of this Article, changes that are related only to minor matters of an administrative or technical nature, and are intended to improve the viability and effectiveness of the Convention, may be made to those provisions in the Annexes to this Convention that are expressly identified as subject to such modification. Such modification shall be made in accordance with the procedures set out in paragraph 5 of this Article and shall not be deemed as Amendments subject to ratification or acceptance by States Parties.
5. Proposed modifications shall be made in accordance with the following procedures:
  - (a) The text of proposed modifications shall be transmitted together with the necessary information to the Director-General of the Secretariat. Additional information for the evaluation of the proposal may be provided by any State Party and the Director-General. The Director-General shall promptly transmit any such proposals and information to all States Parties and the Executive Council;
  - (b) The Executive Council shall examine the proposal in the light of all information available to it. Not later than 90 days after its receipt, the Executive Council shall transmit its recommendation to all States Parties for consideration. States Parties shall acknowledge receipt within 10 days;

(c) If the Executive Council recommends to all States Parties that the proposal be adopted, it shall be considered approved if no State Party objects to it within 90 days after receipt of the recommendation. If the Executive Council recommends that the proposal be rejected, it shall be considered rejected if no State Party objects to the rejection not later than 90 days after receipt of the recommendation;

(d) If a recommendation of the Executive Council does not meet with the acceptance required under subparagraph (c) of this paragraph, a decision on the proposal shall be taken as a matter of substance by the Conference of the States Parties at its next session;

(e) The Executive Council may itself propose modifications, making use of information provided by the Director-General. In such cases, subparagraphs (c) and (d) of this paragraph shall be applied accordingly;

(f) The Director-General shall notify all States Parties of any decision under this paragraph;

(g) A modification approved pursuant to this procedure shall be binding on all States Parties and shall enter into force 60 days after the date of its notification by the Director-General unless otherwise recommended by the Executive Council or decided by the Conference of the States Parties.

ARTICLE XVI

SETTLEMENT OF DISPUTES

1. Disputes which may arise concerning the application or the interpretation of this Convention shall be settled in accordance with the relevant provisions of this Convention and in conformity with the provisions of the Charter of the United Nations.
2. When a dispute arises between two or more Parties relating to the interpretation or application of this Convention, the Parties concerned shall consult together with a view to the expeditious settlement of the dispute by negotiation or by other peaceful means of the Parties' choice, including recourse to appropriate organs of the Convention and/or, by mutual consent, referral to the International Court of Justice in conformity with the Statute of the Court. The States Parties involved shall keep the Executive Council informed of actions being taken.
3. The Executive Council may contribute to the settlement of a dispute by whatever means it deems appropriate, including offering its good offices.
4. The Conference of the States Parties shall consider questions related to disputes raised by States Parties or brought to its attention by the Executive Council. The Conference of the States Parties shall, as it finds necessary, establish and/or entrust organs with tasks related to the settlement of these disputes in accordance with paragraph 19 (h) of Article VIII.
5. The Conference of the State Parties and/or the Executive Council may ask the Security Council or the General Assembly of the United Nations to request the International Court of Justice to give an advisory opinion on any legal question arising within the scope of the activities of the Organization.
6. This Article is without prejudice to Article IX or to the provisions on measures to redress a situation and to ensure compliance, including sanctions.

ARTICLE XVII

DURATION AND WITHDRAWAL

1. This Convention shall be of unlimited duration.
2. Each State Party shall, in exercising its national sovereignty, have the right to withdraw from the Convention if it decides that extraordinary events, related to the subject matter of the Convention, have jeopardized the supreme interests of its country. It shall give notice of such withdrawal to all other States Parties, the Depositary and the Security Council of the United Nations 90 days in advance. Such notice shall include a statement of the extraordinary events it regards as having jeopardized its supreme interests.
3. The withdrawal of a State Party from this Convention shall not in any way affect the duty of States to continue fulfilling the obligations assumed under general rules of international law, particularly those derived from the Geneva Protocol of 1925.

ARTICLE XVIII

ANNEXES

The Annexes form an integral part of this Convention, and unless expressly provided otherwise, a reference to this Convention includes its Annexes.

ARTICLE XIX

SIGNATURE

This Convention shall be open for signature for all States before its entry into force.

ARTICLE XX

RATIFICATION

This Convention shall be subject to ratification, acceptance or approval by signatory States according to their constitutional processes.

ARTICLE XXI

ACCESSION

Any State that does not sign this Convention before its entry into force shall have the right to accede to it at any time.

ARTICLE XXII

DEPOSITARY

The Secretary-General of the United Nations is hereby designated as the Depositary of this Convention.

ARTICLE XXIII

ENTRY INTO FORCE

1. This Convention shall enter into force two years after the date the Convention becomes open for signature or 30 days after the date of deposit of the sixtieth instrument of ratification, acceptance or approval, whichever date is the later.
2. For States whose instruments of ratification or accession are deposited subsequent to the entry into force of the Convention, it shall enter into force 30 days after the date of deposit of their instrument of ratification or accession.

ARTICLE XXIV

LANGUAGES AND AUTHENTIC TEXTS

This Convention, of which the Arabic, Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Secretary-General of the United Nations.

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ANNEX 1: VERIFICATION ANNEX

ARTICLE VIII

AMENDMENTS

The Annexes form an integral part of this Convention, and unless expressly provided otherwise, a reference to this Convention includes its Annexes.

ARTICLE IX

SIGNATURE

This Convention shall be open for signature for all States before its entry into force.

ARTICLE X

RATIFICATION

This Convention shall be subject to ratification, acceptance or approval by signatory States according to their constitutional procedures.

ARTICLE XI

ACCESSION

Any State that does not sign this Convention before its entry into force shall have the right to accede to it at any time.

ANNEX I: VERIFICATION ANNEX

ARTICLE XII

DEPOSITARY

The Secretary-General of the United Nations is hereby designated as the depositary of this Convention.

ARTICLE XIII

ENTRY INTO FORCE

1. This Convention shall enter into force on the date the depositary receives the ratification, acceptance, approval or accession of the States mentioned in paragraph 2 of this article, whichever date is the later.

2. For States whose ratification, acceptance, approval or accession is deposited with the depositary after the date of entry into force of this Convention, it shall enter into force on the date of deposit of their ratification, acceptance, approval or accession.

ARTICLE XIV

LANGUAGES AND AUTHENTIC TEXTS

The Convention shall be drawn up in Arabic, English, French, Russian and Spanish, and the five texts shall be equally authentic. In case of dispute as to the meaning of any provision of the Convention, the Secretary-General of the United Nations shall refer the matter to the International Court of Justice for its decision.

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PART I: GENERAL

I. DEFINITIONS

"Inspector" means an individual designated by the Director-General of the Secretariat according to the procedures as set out in Part I, Section II of this Verification Annex, to carry out an inspection in accordance with the Convention and this Annex.

"Inspection assistant" means an individual designated by the Director-General of the Secretariat as set out in Part I, Section II of this Annex to assist inspectors in an inspection (e.g. medical, security, administration, interpreters).

"Inspection Team" means the group of inspectors and inspection assistants assigned by the Director-General of the Secretariat to conduct a particular inspection.

"Inspected State Party" means the State Party to the Convention on whose territory or in any place under its jurisdiction or control an inspection pursuant to the Convention, and its annexes takes place, or the State Party to the Convention whose facility on the territory of a host State is subject to such an inspection.

"Inspection Site" means any area or facility at which the inspection is carried out and which is specifically defined in the respective facility agreement or inspection mandate or request expanded by the alternative or final perimeter.

"Perimeter" in case of a challenge inspection means the external boundary of the inspection site, either defined by geographic coordinates or by description on a map.

"Requested Perimeter" means the inspection site perimeter as specified in the inspection request; it shall conform to the requirements of paragraph 3 of Part VIII, Section II.A.

"Alternative Perimeter" means the inspection site perimeter as specified, alternatively to the requested perimeter, by the inspected State Party; it shall conform to the requirements of paragraph 2 of Part VIII, Section II.C.1.

"Final Perimeter" means the final inspection site perimeter as agreed if necessary in negotiations between the inspection team and the challenged State Party; if such negotiations should not lead to an agreement, the alternative perimeter would also constitute the final perimeter.

"Period of Inspection" means the period of time from arrival of the inspection team at the inspection site until its departure from the inspection site, exclusive of time spent on briefings before and after the verification activities.

"Point of Entry" means the location(s) designated for the in-country arrival of inspection teams for inspections pursuant to the Convention and for their departure after completion of their mission.

"In-Country Period" means the period from the arrival of the inspection team at a point of entry until its departure from the State at a point of entry.

"Host State" means that State on whose territory lie States Parties' facilities subject to inspection under the Convention.

"In-Country Escort" means individuals specified by the inspected State Party and, if appropriate, by the Host State, if they so wish to accompany and assist the inspection team during the in-country period.

"Routine Inspections" means the international, on-site inspection of facilities pursuant to Articles IV, V and VI.

"Initial Inspection" means the first on-site inspection of facilities to verify data declared pursuant to Articles IV, V and VI and this Annex.

"Challenge Inspection" means the inspection of a State Party requested by another State Party pursuant to Article IX, Part II.

"Requesting State Party" means a State Party which has requested a challenge inspection pursuant to Article IX.

"Observer" means a representative of a requesting State Party designated by that State Party to observe a challenge inspection.

"Approved Equipment" means the devices and/or instruments necessary for the performance of the inspection team's duties that have been certified by the Secretariat in accordance with agreed procedures. Such equipment may also refer to the administrative supplies or recording materials that would be used by the inspection team.

"Facility Agreement" means an agreement between a State Party and the Organization relating to a specific facility subject to routine inspection.

"Inspection Mandate" means the instructions issued by the Director-General of the Secretariat to the inspection team for the conduct of a particular inspection.

"Inspection Manual" means additional procedures for the conduct of inspections to be developed by the Director-General, taking into account guidelines drawn up by the Preparatory Commission.

"Specialized Equipment" means:

(a) The main production train, including any reactor or equipment for product synthesis, separation or purification, any equipment used directly for heat transfer in the final technological stage (for example, in reactors or in product separation), as well as any other equipment which has been in contact

with any Schedule 1 chemical, or any other chemical that has no use for purposes not prohibited under the Convention above 1 tonne per year but can be used for chemical weapons purposes, or would be if the facility were operated;

(b) Any chemical weapon filling machines;

(c) Any other equipment specially designed, built or installed for the operation of the facility as a chemical weapons production facility, as distinct from a facility constructed according to prevailing commercial industry standards for facilities not producing super-toxic lethal or corrosive chemicals. (Examples include equipment made of high-nickel alloys or other special corrosion-resistant material; special equipment for waste control, waste treatment, air filtering, or solvent recovery; special containment enclosures and safety shields; non-standard laboratory equipment used to analyse toxic chemicals for chemical weapons purposes; custom-designed process control panels; dedicated spares for Specialized Equipment.)

"Standard Equipment" means:

(a) Production equipment which is generally used in the chemical industry and is not included in the types of Specialized Equipment;

(b) Other equipment commonly used in the chemical industry, such as fire-fighting equipment, guard and security/safety surveillance equipment, medical facilities, laboratory facilities, communications equipment.

The buildings mentioned in the definition of Chemical Weapons Production Facility in Article I cover Specialized Buildings and Standard Buildings.

"Specialized Building" means:

(a) Any building, including underground structures, containing Specialized Equipment in a production or filling configuration;

(b) Any building, including underground structures, which has distinctive features which distinguish it from buildings normally used for chemical production or filling activities not banned by the Convention.

"Standard Building" means any building, including underground structures, constructed to prevailing industry standards for facilities not producing super-toxic lethal or corrosive chemicals.

"Model Agreement" means a document specifying the general form and content for agreements concluded between a State Party and the Organization for fulfilling the verification provisions specified in this Annex to be developed by the Director-General of the Secretariat, taking into account guidelines drawn up by the Preparatory Commission.

"Production" of a chemical means the formation of a chemical through chemical reaction, including rearrangement.

"Processing" of a chemical means a physical process, such as formulation, extraction and purification, in which the chemical is not converted into another chemical.

"Consumption" of a chemical means its conversion via a chemical reaction into another chemical.

"Discrete organic chemical" means any organic chemical compound, identifiable by chemical name, structural formula and, if assigned, Chemical Abstracts Service registry number.

"Organic chemical" means any chemical belonging to the class of chemical compounds consisting of all compounds of carbon except for its oxides, sulphides and metal carbonates.

"Facility" in the context of Article VI means any of the industrial sites as defined below ("plant site", "plant" and "unit").

"Plant site" ("Works", "Factory") means the local integration of one or more plants, with any intermediate administrative levels, which are under one operational control and includes common infrastructure, inter alia:

- (a) Administration and other offices;
- (b) Repair and maintenance shops;
- (c) Medical centre;
- (d) Utilities;
- (e) Central analytical laboratory;
- (f) Research and development laboratories;
- (g) Central effluent and waste treatment area; and
- (h) Warehouse storage.

"Plant" ("Production facility", "Workshop") means a relatively self-contained area, structure or building containing one or more units with auxiliary and associated infrastructure, which could include, inter alia:

- (a) Small administrative section;
- (b) Storage/handling areas for feedstock and products;
- (c) Effluent/waste handling/treatment area;
- (d) Control/analytical laboratory;
- (e) First aid service/related medical section; and

(f) Records associated with the movement into, around and from the site, of declared chemicals and its feedstock or product chemicals formed from it, as appropriate.

"Unit" ("Production unit", "Process unit") means the combination of those items of equipment, including vessels and vessel set up, necessary for the production, processing or consumption of a chemical.

## II. DESIGNATION OF INSPECTORS AND INSPECTION ASSISTANTS

1. Not later than 30 days after entry into force of the Convention the Secretariat shall communicate, in writing, to all States Parties the names, nationality and rank if applicable, of the Inspectors and inspection assistants proposed for designation, as well as a description of their qualifications and professional experience.
2. Each State Party shall immediately acknowledge receipt of the list of Inspectors and inspection assistants, proposed for designation communicated to it. Any Inspector and inspection assistant included in this list shall be regarded as designated unless a State Party, within 30 days after acknowledgement of receipt of the list declares its non-acceptance.  
  
In the case of non-acceptance, the proposed Inspector or inspection assistant shall not undertake or participate in verification activities within the territory or in any other place under the jurisdiction or control of the State Party which has declared its non-acceptance. The Director-General shall, as necessary, submit further proposals in addition to the original list.
3. Verification activities under the Convention shall only be performed by designated Inspectors and inspection assistants.
4. Subject to the provisions of paragraph 5 below, a State Party has the right at any time to object to an Inspector or inspection assistant who may have been already designated in accordance with the procedures in paragraph 1 above. It shall notify the Secretariat of its objections and include the reason for the objection. Such objections shall come into effect 30 days after receipt by the Secretariat. The Secretariat shall immediately inform the State Party concerned of the withdrawal of the designation of the Inspector or inspection assistant.
5. A State Party that has been notified of an inspection shall not seek to have removed from the inspection team for that inspection any of the designated inspectors or inspection assistants named in the inspection team list.
6. The number of Inspectors or inspection assistants accepted by and designated to a State Party must be sufficient to allow for availability and rotation of appropriate numbers of Inspectors and inspection assistants.

7. If, in the opinion of the Director-General the non-acceptance of proposed Inspectors or inspection assistants impedes the designation of a sufficient number of Inspectors or inspection assistants or otherwise hampers the effective fulfilment of the task of the Inspectorate, the Director-General shall refer the issue to the Executive Council.

8. Whenever amendments to the above-mentioned lists of Inspectors and inspection assistants are necessary or requested, replacement Inspectors and inspection assistants shall be designated in the same manner as set out with respect to the initial list.

9. The members of the inspection team carrying out an inspection of a facility of a State Party located in the territory of another State Party shall be designated in accordance with the procedures set out in this Annex as applied both to the inspected State Party and the host State.

### III. PRIVILEGES AND IMMUNITIES

1. Each State Party shall, within 30 days after acknowledgement of receipt of the list of Inspectors and inspection assistants or of changes thereto, provide multiple entry/exit and/or transit visas and other such documents to enable each Inspector or inspection assistant to enter and to remain on the territory of that State Party for the purpose of carrying out inspection activities. These documents shall be valid for at least 24 months from the date of their provision to the Secretariat.

2. To exercise their functions effectively, Inspectors and inspection assistants shall be accorded privileges and immunities as set out in paragraph (a) through (i). Privileges and immunities shall be granted to members of the inspection team for the sake of the Convention and not for the personal benefit of the individuals themselves. Privileges and immunities shall be accorded for the period of transit through non-inspected States Parties, for the entire in-country period, and thereafter with respect to acts previously performed in the exercise of official functions as Inspector or inspection assistant.

(a) The members of the inspection team shall be accorded the inviolability enjoyed by diplomatic agents pursuant to Article 29 of the Vienna Convention on Diplomatic Relations of 18 April 1961.

(b) The living quarters and office premises occupied by the inspection team carrying out continuous monitoring activities pursuant to the Convention shall be accorded the inviolability and protection accorded the premises of diplomatic agents pursuant to Article 30 of the Vienna Convention on Diplomatic Relations.

(c) The papers and correspondence, including records, of the inspection team shall enjoy the inviolability accorded to all papers and correspondence of diplomatic agents pursuant to Article 30 of the Vienna Convention on Diplomatic Relations. The inspection team shall have the right to use codes for their communications with the Secretariat.

(d) Samples and approved equipment carried by members of the inspection team shall be inviolable subject to provisions contained in the Convention and exempt from all customs duties. Hazardous samples shall be transported in accordance with relevant regulations.

(e) The members of the inspection team shall be accorded the immunities accorded diplomatic agents pursuant to paragraphs 1, 2 and 3 of Article 31 of the Vienna Convention on Diplomatic Relations.

(f) The members of the inspection team carrying out prescribed activities pursuant to the Convention, including continuous monitoring activities, shall be accorded the exemption from dues and taxes accorded to diplomatic agents pursuant to Article 34 of the Vienna Convention on Diplomatic Relations.

(g) The members of the inspection team shall be permitted to bring into the territory of the inspected State Party or host State, without payment of any customs duties or related charges, articles for personal use, with the exception of articles the import or export of which is prohibited by law or controlled by quarantine regulations.

(h) The members of the inspection team shall be accorded the same currency and exchange facilities as are accorded to representatives of foreign Governments on temporary official missions.

(i) The members of the inspection team shall not engage in any professional or commercial activity for personal profit on the territory of the inspected State Party or that of the host State.

3. Without prejudice to their privileges and immunities the members of the inspection team shall be obliged to respect the laws and regulations of the inspected State Party or host State and, to the extent that is consistent with the inspection mandate, shall be obliged not to interfere in the internal affairs of that State. If the inspected Party or host State Party considers that there has been an abuse of privileges and immunities specified in this Verification Annex, consultations shall be held between the Party and the Director-General of the Secretariat to determine whether such an abuse has occurred and, if so determined, to prevent a repetition of such an abuse.

4. The immunity from jurisdiction of members of the inspection team may be waived by the Director-General of the Secretariat in those cases when the Director-General is of the opinion that immunity would impede the course of justice and that it can be waived without prejudice to the implementation of the provisions of the Convention. Waiver must always be express.

5. Observers shall be accorded the same privileges and immunities accorded inspectors pursuant to this section, except for that accorded pursuant to paragraph 2 (d) above.

#### IV. STANDING ARRANGEMENTS

##### A. Points of entry

1. Each State Party shall designate the points of entry and shall supply the required information to the Secretariat not later than 30 days after the Convention enters into force. These points of entry shall be such that the inspection team can reach any inspection site from at least one point of entry within 12 hours. Locations of points of entry shall be provided to all States Parties by the Secretariat.

2. Each State Party may change the points of entry by giving notice of such change to the Secretariat. Changes shall become effective 15 days after the Secretariat receives such notification to allow appropriate notification to all States Parties.

3. If the Secretariat considers that there are insufficient points of entry for the timely conduct of inspections or that changes to the points of entry proposed by a State Party would hamper such timely conduct of inspections, it shall enter into consultations with the State Party concerned to resolve the problem.

4. In cases where facilities or areas of an inspected State Party are located in the territory of another State Party or where the access from the point of entry to the facilities or areas subject to inspection requires transit through the territory of another State Party, the inspected State Party shall exercise the rights and obligations concerning such inspections in accordance with this Annex. States Parties on whose territory facilities or areas of other States Parties subject to inspection are located shall facilitate the inspection of those facilities and shall provide for the necessary support to enable the inspection team to carry out its tasks in a timely and effective manner. States Parties on whose territory transit is required to inspect facilities or areas of an inspected State Party shall facilitate such transit.

5. In cases where facilities or areas of an inspected State Party are located in the territory of a non-State Party the State Party subject to inspection shall take all necessary measures to ensure that inspections of those facilities can be carried out in accordance with the provisions of this Annex. A State Party that has one or more facilities on the territory of a non-State Party shall take all necessary measures to ensure acceptance by the host State of inspectors and inspection assistants designated to that State Party. If an inspected State Party is unable to ensure access, it shall demonstrate that it took all necessary measures to ensure access.

6. In cases where the facility or areas sought to be inspected are those of a non-State Party located in the territory of a State Party, the State Party shall negotiate access to such facilities or areas with the non-State Party to allow inspections to be conducted in accordance with the provisions of this Annex.

## B. Arrangements for use of unscheduled aircraft

1. For inspections pursuant to Article IX and for other inspections where timely travel is not feasible using scheduled commercial transport, an inspection team may need to utilize aircraft owned or chartered by the Secretariat. Within 30 days after entry into force of the Convention, each State Party shall inform the Secretariat of the standing diplomatic clearance number for non-scheduled aircraft transporting inspection teams and equipment necessary for inspection into and out of the territory in which an inspection site is located. Aircraft routings to and from the designated point of entry shall be along established international airways that are agreed upon between the States Parties and the Secretariat as the basis for such diplomatic clearance.

2. When a non-scheduled aircraft is used, the Secretariat shall provide the inspected State Party with a flight plan, through the National Authority, for the aircraft's flight from the last airfield prior to entering the airspace of the State in which the inspection site is located to the point of entry, no less than six hours before the scheduled departure time from that airfield. Such a plan shall be filed in accordance with the procedures of the International Civil Aviation Organisation applicable to civil aircraft. For its owned or chartered flights, the Secretariat shall include in the remarks section of each flight plan the standing diplomatic clearance number and the notation: "Inspection aircraft. Priority clearance processing required".

3. No less than three hours prior to the scheduled departure of the inspection team from the last airfield prior to entering the airspace of the country in which the inspection is to take place, the inspected State Party or host State Party shall ensure that the flight plan filed in accordance with paragraph 2 of this section is approved so that the inspection team may arrive at the point of entry by the estimated arrival time.

4. The inspected State Party shall provide parking, security protection, servicing and fuel as required for the aircraft of the inspection team at the point of entry when such aircraft is owned or under charter to the Secretariat. Such aircraft shall not be liable for landing fees, departure tax, and similar charges. The Secretariat shall bear the cost of such fuel, security and servicing.

## C. Administrative arrangements

The inspected State Party shall provide or arrange for the amenities necessary for the inspection team such as communication means, interpretation services to the extent necessary for the performance of interviewing and other tasks, transportation, working space, lodging, meals and medical care of the inspection team. In this regard, the inspected State Party shall be reimbursed by the Organization for such costs incurred by the inspection team.

D. Approved equipment

1. Subject to paragraph 3 of this section there shall be no restriction by the inspected State Party on the inspection team bringing on to the inspection site such approved equipment which the Secretariat has determined to be necessary to fulfil the inspection requirements.

2. The equipment shall be in the custody of the Secretariat and be designated, calibrated and approved by the Secretariat. The Secretariat shall, to the extent possible, select that equipment which is specifically designed for the specific kind of inspection required. Designated and approved equipment shall be specifically protected against unauthorized alteration.

3. The inspected State Party shall have the right, without prejudice to the prescribed time-frames, to inspect the equipment in the presence of inspection team members at the point of entry, i.e., to check the identity of the equipment brought in or removed from the territory of the inspected State Party or host State. To facilitate such identification, the Secretariat shall attach documents and devices to authenticate its designation approval of the equipment. The inspection of the equipment shall also ascertain to the satisfaction of the inspected State Party that the equipment meets the description of the approved equipment for the particular type of inspection. The inspected State Party may exclude equipment not meeting that description or equipment without the above-mentioned authentication documents and devices. Agreed procedures for the inspection of equipment shall be developed by the Preparatory Commission.

4. In cases where the inspection team finds it necessary to use equipment available on site not belonging to the Secretariat and requests the inspected State Party to enable the team to use such equipment, the inspected State Party shall comply with the request to the extent it can.

V. PRE-INSPECTION ACTIVITIES

A. Notification

1. The Director-General of the Secretariat shall notify the State Party prior to the planned arrival of the inspection team at the point of entry and within the prescribed time-frames where specified of its intention to carry out an inspection.

2. Notifications made by the Director-General of the Secretariat shall include the following information:

- (a) The type of inspection;
- (b) The point of entry;
- (c) The date and estimated time of arrival at the point of entry;
- (d) The means of arrival at the point of entry;

(e) The names of Inspectors and inspection assistants;

(f) If appropriate, aircraft clearance and special flights;

(g) The name of the observer of the requesting State Party in the case of a challenge inspection.

3. The inspected State Party shall acknowledge the receipt of a notification by the Secretariat of an intention to conduct an inspection immediately upon receipt of such notification.

4. In the case of an inspection of a facility of a State Party located in the territory of another State Party both States Parties shall be simultaneously notified in accordance with paragraphs 1, 2 and 3 of this section.

B. Entry into the territory of the inspected State Party or host State and transfer to the inspection site

1. The State Party or host State Party which has been notified of the arrival of an inspection team, shall ensure its immediate entry into the territory and shall through an in-country escort or by other means do everything in its power to ensure the safe conduct of the inspection team and its equipment and supplies, from its point of entry to the inspection site(s) and to its point of exit.

2. The inspected State Party or host State Party shall as necessary assist the inspection team in reaching the inspection site within 12 hours from the arrival at the point of entry or, in the case of inspections, conducted pursuant to Part VIII of this Annex, from agreement on the final perimeter of the inspection site.

C. Pre-inspection briefing

Upon arrival at the inspection site and prior to the commencement of the inspection, the inspection team shall be briefed, with the aid of maps and other documentation as appropriate, by facility representatives on the facility, the activities carried out there, safety measures and administrative and logistic arrangements necessary for the inspection. The time spent for the briefing shall be limited to the minimum necessary and in any event not exceeding three hours.

## VI. CONDUCT OF INSPECTIONS

A. General Rules

1. The members of the inspection team shall discharge their functions in accordance with the articles and annexes of the Convention, this Verification Annex as well as rules established by the Director-General of the Secretariat and facility agreements between States Parties and the Organization.

2. The inspection team dispatched shall strictly observe the inspection mandate issued by the Director-General of the Secretariat. It shall refrain from activities going beyond this mandate.
3. The activities of the inspection team shall be so arranged as to ensure on the one hand the timely and effective discharge of the Inspector's functions and, on the other, the least possible inconvenience to the State concerned and disturbance to the facility or other location inspected. The inspection team shall avoid unnecessarily hampering or delaying the operation of a facility and avoid affecting its safety. In particular, the inspection team shall not operate any facility and shall avoid affecting its safety. If inspectors consider that, to fulfil their mandate, particular operations should be carried out in a facility, they shall request the designated representative of the management of the facility to have them performed. The representative shall carry out the request to the extent possible.
4. In the performance of their duties on the territory of an inspected State Party, the members of the inspection team shall, if the inspected State Party so requests, be accompanied by representatives of this State, but the inspection team must not thereby be delayed or otherwise hindered in the exercise of its functions.
5. Detailed procedures for the conduct of inspections shall be developed by the Preparatory Commission for inclusion in the Inspection Manual.

B. Safety

In carrying out their activities, Inspectors and inspection assistants shall observe safety regulations established at the inspection site, including those for the protection of controlled environments within a facility and for personal safety. In order to implement these requirements, appropriate detailed procedures shall be developed by the Preparatory Commission.

C. Communications

Inspectors shall have the right throughout the in-country period to communicate with the Headquarters of the Secretariat. For this purpose they may use their own, duly certified, approved equipment and/or may request that the inspected State Party or host State Party provide them with access to other telecommunications. The inspection team shall have the right to use its own two-way system of radio communications between personnel patrolling the perimeter and other members of the inspection team.

D. Inspection team and inspected State Party rights

1. The inspection team shall, in accordance with the relevant articles and annexes of this Convention as well as with facility agreements and procedures set out in the Inspection Manual, have the right to unimpeded access to the inspection site. The items to be inspected will be chosen by the inspectors.
2. Inspectors shall have the right to interview any facility personnel in the presence of representatives of the inspected State Party with the purpose of establishing relevant facts. Inspectors shall only request information and

data which are necessary to the conduct of the inspection, and the inspected State Party shall furnish such information upon request. The inspected State Party shall have the right to object to questions posed to the facility personnel if those questions are deemed not relevant to the inspection. If the inspection team chief objects and states their relevance, the questions shall be provided in writing to the Inspected Party for reply. The inspection team may note any refusal to permit interviews or to allow questions to be answered and any explanations given, in that part of the Inspection Report that deals with the co-operation of the Inspected State Party.

3. Inspectors shall have the right to inspect documentation and records they deem relevant to the conduct of their mission.

4. Inspectors shall have the right to have photographs taken at their request by representatives of the inspected State Party. The capability to take instant development photographic prints shall be available.

The inspection team shall determine whether photographs conform to those requested, and if not, repeat photographs shall be taken. The inspection team and the inspected State Party shall each retain one copy of every photograph.

5. The inspected State Party shall have the right to accompany the inspection team at all times during the in-country period and observe all their verification activities.

6. The inspected State Party shall receive copies, at its request, of the information and data gathered about its facility(ies) by the Secretariat.

7. Inspectors shall have the right to request clarifications in connection with ambiguities that arise during an inspection. Such requests shall be made promptly through the representative of the inspected State Party. The representative of the inspected State Party shall provide the inspection team, during the inspection, with such clarification as may be necessary to remove the ambiguity. In the event that questions relating to an object or a building located within the inspection site are not resolved, the object or building shall be photographed for the purpose of clarifying its nature and function. If the ambiguity cannot be removed during the inspection, the Inspectors shall notify the Secretariat immediately. The Inspectors shall include any such unresolved question, relevant clarifications and a copy of any photographs taken in the inspection report.

E. Collection, handling and analysis of samples

1. Representatives of the inspected State Party or of the inspected facility shall take samples at the request of the inspection team in the presence of inspectors. If so agreed in advance with the representatives of the inspected State Party or of the inspected facility, the inspection team may take samples themselves.

2. Where possible, the analysis of samples shall be performed on-site. The inspection team shall have the right to perform on-site analysis of sample

using approved equipment brought by them. At the request of the Inspection Team, the inspected State Party shall, in accordance with agreed procedures, provide assistance for the analysis of samples on-site.

Alternatively, the inspection team may request that appropriate analysis on-site be performed in their presence.

3. The inspected State Party has the right to retain portions of all samples taken or take duplicate samples and be present when samples are analysed on-site.

4. The inspection team shall, if they deem it necessary, transfer samples for analysis off-site at laboratories designated by the Organization.

5. The Director-General of the Secretariat shall have the primary responsibility for the security, integrity and preservation of samples and for ensuring that the confidentiality of samples transferred for analysis off-site is protected. The Director-General shall do so in accordance with procedures developed by the Preparatory Commission for inclusion in the Inspection Manual.

6. When off-site analysis is to be performed samples shall be analysed in at least two designated laboratories. The Secretariat shall ensure the expeditious processing of the analysis. The samples shall be accounted for by the Secretariat and any unused samples or portions thereof shall be returned to the Secretariat.

7. The Secretariat shall compile the results of the laboratory analysis of samples relevant to compliance with the Convention and include them in the final inspection report. The Secretariat shall include in the report detailed information concerning the equipment and methodology employed by the designated laboratories.

#### F. Extension of Inspection Duration

Periods of inspection may be extended by agreement with the in-country escort.

#### G. Debriefing

1. Upon completion of an inspection the inspection team shall meet with representatives of the inspected State Party and the personnel responsible for the inspection site to review the preliminary findings of the inspection team and to clarify any ambiguities. The inspection team shall provide to the representatives of the inspected State Party its preliminary findings in written form according to a standardized format together with a list of any samples and copies of written information and data gathered and other material to be taken off site. The document shall be signed by the head of the inspection team. In order to indicate that he has taken notice of the contents of the document the representative of the inspected State Party shall countersign the document. This meeting shall be completed within 24 hours of the completion of the inspection.

## VII. DEPARTURE

In the case of inspections conducted pursuant to Articles IV, V, VI and IX, upon completion of the post-inspection procedures, the inspection team shall then leave, as soon as possible, the territory of that State.

## VIII. REPORTS

1. Within 10 days after the inspection, Inspectors shall prepare a factual final report on the activities conducted by them and on their findings. It shall only contain facts relevant to compliance with the Convention, as provided for under the inspection mandate. The report shall also provide information as to the manner in which the State Party inspected cooperated with the inspection team. Differing observations made by Inspectors may be attached to the report. The report shall be kept confidential.
2. The final report shall immediately be submitted to the inspected State Party. Any written comments, which the inspected State Party may immediately make on its findings shall be annexed to it. The final report together with annexed comments made by the inspected State Party shall be submitted to the Director-General of the Secretariat not later than 30 days after the inspection.
3. Should the report contain uncertainties, or should co-operation between the National Authority and the Inspectors not measure up to the standards required, the Director-General of the Secretariat shall approach the State Party for clarification.
4. If the uncertainties cannot be removed or the facts established are of a nature to suggest that obligations undertaken under the Convention have not been met, the Director-General of the Secretariat shall inform the Executive Council without delay.

## IX. APPLICATION OF GENERAL PROVISIONS

The provisions of this Part shall apply to all inspections conducted pursuant to this Convention, except that where the provisions of this Part differ from the provisions set forth for specific types of inspections in Parts III through IX of this Verification Annex, the latter provisions related to specific types of inspections shall take precedence.

PART II: ROUTINE INSPECTIONS PURSUANT TO  
ARTICLES IV, V AND VI: GENERAL

I. INITIAL INSPECTIONS AND FACILITY AGREEMENTS

1. Each facility declared and subject to on-site inspection pursuant to Articles IV, V and VI (Part V) shall be liable to receive an initial inspection from the Inspectors promptly after the facility is declared. The purpose of the initial inspection of the facility shall be to verify information provided and to obtain any additional information needed for planning future verification activities at the facilities, including on-site inspections and the use of continuous on-site instruments and to work on the facility agreements.
2. States Parties shall ensure that the verification of declarations and the initiation of the systematic monitoring can be accomplished by the Secretariat at all facilities within the agreed time frames after the Convention enters into force.
3. Each State Party shall conclude a facility agreement with the Organization for each facility declared and subject to on-site inspection pursuant to Articles IV, V, VI (Part V). Except for a chemical weapons destruction facility, these agreements shall be completed within 180 days after the Convention enters into force for the State or after the facility has been declared for the first time. For a chemical weapons destruction facility, the facility agreement shall be completed no less than 11 months before the facility begins operation. The facility agreements shall be based on models for such agreements and provide for detailed arrangements which shall govern inspections at each facility. The Model Agreement shall include provisions to take into account future technological developments.
4. Each facility declared pursuant to Part VI of this Annex shall be liable to receive an initial inspection not later than three years after entry into force of the Convention for the State Party concerned. The question of the requirement for individual facility agreements for plants covered in Part VI of this Annex shall be addressed by the Preparatory Commission, and the recommendations subsequently endorsed by the Conference of the States Parties. Each State Party shall conclude a facility agreement within 180 days after the initial visit for facilities designated as requiring an individual facility agreement.
5. The Secretariat may retain at each site a sealed container for photographs, plans and other information that it may wish to refer to in the course of subsequent inspections.

II. STANDING ARRANGEMENTS .

1. Where applicable, the Secretariat shall have the right to instal and use continuous monitoring instruments and systems and seals in conformity with the relevant provisions in the Convention and the facility agreements between States Parties and the Secretariat. Such installation shall take place in the presence of the representatives of the inspected State Party.

2. The inspected State Party shall, in accordance with agreed procedures, have the right to inspect any instrument used or installed by the inspection team and to have it tested in the presence of representatives of the inspected State Party.

3. In order to implement paragraphs 1 and 2 above, appropriate detailed procedures shall be developed by the Preparatory Commission and approved by the Secretariat.

4. The inspection team shall verify during each inspection that the monitoring system functions correctly and that emplaced seals have not been tampered with. In addition, visits to service the monitoring system may be required to perform any necessary maintenance or replacement of equipment, or to adjust the coverage of the monitoring system as required.

5. In the event that the monitoring system indicates any anomaly, the Secretariat shall immediately take action to determine whether this resulted from equipment malfunction or activities at the facility. If, after this examination the problem remains unresolved, the Secretariat shall immediately ascertain the actual situation, including through immediate on-site inspection of, or visit to, the facility if necessary. The Secretariat shall report any such problem immediately after its detection to the State Party which shall assist in its resolution.

### III. PRE-INSPECTION ACTIVITIES

1. The inspected State Party shall be notified of routine inspections no less than 24 hours in advance of the planned arrival of the inspection team at the point of entry.

2. The inspected State Party shall be notified of initial inspections no less than 72 hours in advance of the estimated time of arrival of the inspection team at the point of entry. Such notifications shall in addition to the information specified in Part I, Section V A, paragraph 2 also include the specification of the inspection site.

PART III: ROUTINE INSPECTION PURSUANT TO ARTICLE IV:  
CHEMICAL WEAPONS

I. DECLARATIONS

1. The declaration of chemical weapons by a State Party pursuant to Article III, paragraph 1 (a) (iv), shall include the following:

(a) The aggregate quantity of each chemical declared;

(b) The precise location of each declared chemical weapons storage facility, expressed by:

(i) Name;

(ii) Geographical coordinates; and

(iii) A detailed site diagram.

(c) The detailed inventory for each declared chemical weapons storage facility:

(i) Chemicals defined as chemical weapons in accordance with Article I:

(a) Chemicals shall be declared in accordance with the Schedules specified in the Annex on Chemicals;

(b) For a chemical not listed in the Schedules in the Annex on Chemicals the information required for possible assignment of the chemical to one of the proper Schedules shall be provided, including the toxicity of the pure compound. For a precursor chemical, the toxicity and identity of the principal final reaction product(s) shall be provided;

(c) Chemicals shall be identified by chemical name in accordance with current IUPAC (International Union of Pure and Applied Chemistry) nomenclature, structural formula and Chemical Abstracts Service registry number, if assigned. For a precursor chemical, the toxicity and identity of the principal final reaction product(s) shall be provided;

(d) In cases involving mixtures of two or more chemicals, each chemical shall be identified and the percentage of each shall be provided, and the mixture shall be declared under the category of the most toxic chemical. If a component of a binary chemical weapon consists of a mixture of two or more chemicals, each chemical shall be identified and the percentage of each provided;

(e) Binary chemical weapons shall be declared under the relevant end product within the framework of the agreed categories of chemical weapons. The following supplementary information shall be provided for each type of binary chemical munition/device;

- (i) The chemical name of the toxic end product;
- (ii) The chemical composition and quantity of each component;
- (iii) The actual weight ratio between the components;
- (iv) Which component is considered the key component;
- (v) The projected quantity of the toxic end product calculated on a stoichiometric basis from the key component, assuming 100 per cent yield. A declared quantity (in tonnes) of the key component intended for a specific toxic end product shall be considered equivalent to the quantity (in tonnes) of this toxic end product calculated on a stoichiometric basis assuming 100 per cent yield.

(f) For multicomponent chemical weapons, the declaration shall be analogous to that envisaged for binary chemical weapons;

(g) For each chemical the form of storage, i.e. munitions, sub-munitions, devices, equipment or bulk containers and other containers shall be declared. For each form of storage the following shall be listed:

- (i) Type;
- (ii) Size or calibre;
- (iii) Number of items; and
- (iv) Nominal weight of chemical fill per item.

(h) For each chemical the total weight present at the storage facility shall be declared;

(i) In addition, for chemicals stored in bulk, the percentage purity shall be declared, if known.

2. For each type of unfilled munitions and/or sub-munitions and/or devices and/or equipment, defined as chemical weapons, the information shall include:

- (a) The number of items;
- (b) The nominal fill volume per item;
- (c) The intended chemical fill, if known.

3. Equipment specifically designed for use directly in connection with the employment of munitions, sub-munitions, devices or equipment under paragraphs 1 and 2 above.

4. Chemicals specifically designed for use directly in connection with the employment of munitions, sub-munitions, devices or equipment under paragraphs 1 and 2 above.

5. Detailed procedures for reporting on any chemical weapons on the territory of a State Party which are in any place under the jurisdiction or control of others, or that are possessed or owned by others, including a State not Party to the Convention shall be developed by the Preparatory Commission and subsequently endorsed by the Conference of the States Parties, keeping in mind Article IV, paragraphs 11 and 13.

## II. PAST TRANSFERS AND RECEIPTS

1. A State Party that has transferred or received chemical weapons since 1 January 1946 shall declare these transfers or receipts, provided the amount transferred or received exceeded 1 tonne per chemical per year in bulk and/or munition form. This declaration shall be made according to the inventory format in Section I, paragraph 1 (c) above. This declaration shall also indicate the supplier and recipient countries, the timing of the transfers or receipts and, as precisely as possible, the current location of the transferred items. When not all the specified data are available for transfers or receipts of chemical weapons for the period between 1 January 1946 and 1 January 1970, the State Party shall declare whatever information is still available to it and provide an explanation as to why it cannot submit a full declaration.

## III. GENERAL PLANS FOR DESTRUCTION OF CHEMICAL WEAPONS

1. The general plan for destruction of chemical weapons submitted pursuant to Article III shall provide an overview of the entire national chemical weapons destruction programme of the State Party and information on the efforts of the State Party to fulfil the destruction requirements contained in the Convention. The plan shall specify:

(a) A general schedule for destruction, giving types and approximate quantities of chemical weapons planned to be destroyed in each year for each destruction facility;

(b) The number of chemical weapons destruction facilities existing or planned to be operated over the destruction period;

(c) For each existing or planned chemical weapons destruction facility:

(i) Name and location; and

(ii) The types and approximate quantities of chemical weapons, and the type (for example, nerve agent or blister agent) and approximate quantity of chemical fill, to be destroyed;

(d) Program and schedule for training personnel for the operation of destruction facilities;

(e) National standards for safety and emissions that the destruction facilities must satisfy;

(f) Information on the development of new methods for destruction of chemical weapons and on the improvement of existing methods;

(g) Cost estimates for destroying the chemical weapons; and

(h) Any issues which could adversely impact on the national destruction programme.

#### IV. STORAGE FACILITY DESCRIPTION

1. At the time of the submission of its declaration of chemical weapons, in accordance with Article III, a State Party shall provide the Secretariat with the detailed description and location of its storage facility(ies) containing:

(a) Boundary map;

(b) Location of bunkers/storage areas, within the facility;

(c) The detailed inventory of the facility.

#### V. MEASURES TO SECURE THE STORAGE FACILITY AND STORAGE FACILITY PREPARATION

1. Not later than when submitting its declaration of chemical weapons, a State Party shall take such measures as it considers appropriate to secure its storage facility(ies) and shall prevent any movement of its chemical weapons out of the facility, except their removal for destruction.

2. A State Party shall ensure that its chemical weapons at its storage facility(ies) are configured to allow ready access for verification.

3. While the storage facility remains closed for any movement of chemical weapons out of the facility other than their removal for destruction, activities necessary for maintenance and safety monitoring by national authorities, including standard maintenance of chemical weapons, may continue at the facility.

4. Maintenance activities of chemical weapons shall not include:

(a) Replacement of agent or of munition bodies;

(b) Modification of the original characteristics of munitions, or parts or components thereof.

5. All maintenance activities shall be subject to monitoring by the Secretariat.

## VI. DESTRUCTION

### A. Principles and methods for destruction of chemical weapons

1. Destruction of chemical weapons means a process by which chemicals are converted in an essentially irreversible way to a form unsuitable for production of chemical weapons, and which in an irreversible manner renders munitions and other devices unusable as such.

2. Each State Party possessing chemical weapons shall determine how it shall destroy them, except that the following processes may not be used: dumping in any body of water, land burial or open-pit burning. It shall destroy chemical weapons only at specifically designated and appropriately designed and equipped facility(ies).

3. The State Party shall ensure that its chemical weapons destruction facility(ies) are constructed and operated in a manner to ensure the destruction of the chemical weapons; and that the destruction process can be verified under the provisions of this Convention.

### B. Order of destruction

#### 1. Guidelines

The order of destruction of chemical weapons is based on the obligations specified in Article II and the other Articles of the Convention, including obligations regarding systematic international on-site verification: it takes into account interests of States Parties for undiminished security during the destruction period; confidence-building in the early part of the destruction stage; gradual acquisition of experience in the course of destroying chemical weapons and applicability irrespective of the actual composition of the stockpiles and the methods chosen for the destruction of the chemical weapons. The order of destruction is based on the principle of levelling out.

#### 2. Categories and time-frames

(a) For the purpose of destruction, chemical weapons declared by each State Party are divided into three categories:

Category 1: Chemical weapons on the basis of Schedule 1 chemicals and their parts and components;

Category 2: Chemical weapons on the basis of all other chemicals and their parts and components;

Category 3: Unfilled munitions and devices, and equipment specifically designed for use directly in connection with employment of chemical weapons.

3. Each State Party possessing chemical weapons:

(a) Shall start the destruction of Category 1 chemical weapons not later than one year from the date the Convention enters into force for it, and shall complete the destruction not later than 10 years after the entry into force of the Convention. Taking into account the principle of levelling out, Category 1 chemical weapons shall be destroyed, in equal annual increments, from the beginning of the destruction process until the end of the eighth year after the Convention enters into force; the maximum quantity remaining at the end of the eighth year after the entry into force of the Convention shall not exceed 500 tonnes or 20 per cent of the quantity of chemical weapons declared by the State Party at the entry into force for it, whichever is less. The remaining quantity of Category 1 chemical weapons shall be destroyed in equal annual increments in the following two years. The comparison factor is chemical weapon agent tonnes.

(b) Shall start the destruction of Category 2 chemical weapons not later than one year from the date the Convention enters into force for it and shall complete the destruction not later than five years after the entry into force of the Convention. Category 2 chemical weapons shall be destroyed in equal annual increments throughout the destruction period; the comparison factor for such weapons is the weight of the chemicals within such Category.

(c) Shall start the destruction of Category 3 chemical weapons not later than one year from the date the Convention enters into force for it, and shall complete the destruction not later than five years after the entry into force of the Convention. Category 3 chemical weapons shall be destroyed in equal annual increments throughout the destruction period; the comparison factor for unfilled munitions and devices is expressed in fill volume ( $m^3$ ) and for equipment in number of items.

Binary chemical weapons

4. For the purposes of the order of destruction, a declared quantity (in tonnes) of the key component intended for a specific toxic end product shall be considered equivalent to the quantity (in tonnes) of this toxic end product calculated on a stoichiometric basis assuming 100 per cent yield.

5. A requirement to destroy a given quantity of the key component shall entail a requirement to destroy a corresponding quantity of the other component, calculated from the actual weight ratio of the components in the relevant type of binary chemical munition/device.

6. If more of the other component is declared than is needed, based on the actual weight ratio between components, then the excess shall be destroyed over the first two years after destruction operations begin.

7. At the end of each subsequent operational year a State Party may retain an amount of the other declared component that is determined on the basis of the actual weight ratio of the components in the relevant type of binary chemical munition/device.

Multicomponent chemical weapons

8. For multicomponent chemical weapons the order of destruction shall be analogous to that envisaged for binary chemical weapons.

C. Detailed plans for destruction

Submission of detailed plans and facility information

The detailed plans submitted to the Secretariat pursuant to Article IV 180 days before each destruction period shall specify for each chemical weapons destruction facility:

- (a) Name, address, and location;
- (b) A detailed site diagram;
- (c) The quantity of each specific type of chemical weapon planned to be destroyed at the facility in the coming year; and
- (d) Detailed schedule of activities for the coming year, identifying time allocation to design, construction or modification of the facility, installation of equipment, equipment check-out and operator training, destruction operations for each specific type of chemical weapon, and anticipated periods of inactivity.

2. The inspected State Party shall provide, for each of its chemical weapons destruction facilities, detailed facility information to assist the Secretariat in developing preliminary inspection procedures for use at the facility.

3. The detailed facility information for each destruction facility shall include the following information:

- (a) Name, address and location;
- (b) Detailed, annotated facility drawings;
- (c) Facility design drawings, process drawings, and piping and instrumentation design (P&ID) drawings;
- (d) Detailed technical descriptions, including design drawings and instrument specifications, for the equipment required for: removing the chemical fill from the munitions, devices, and containers; temporary storing the drained chemical fill; destroying the chemical agent; and destroying the munitions, devices, and containers;
- (e) Detailed technical descriptions of the destruction process, including material flow rates, temperatures and pressures, and designed destruction efficiency;
- (f) Design capacity for each specific type of chemical weapon;

(g) A detailed description of the products of destruction and the method of their ultimate disposal;

(h) A detailed technical description of measures to facilitate inspections in accordance with the Convention;

(i) A detailed description of any temporary holding area at the destruction facility that will be used to provide chemical weapons directly to the destruction facility, including site and facility drawings and information on the storage capacity for each specific type of chemical weapon to be destroyed at the facility;

(j) A detailed description of the safety and medical measures in force at the facility;

(k) A detailed description of the living quarters and working premises for the Inspectors; and

(l) Suggested measures for international verification.

4. The State Party shall provide, for each of its chemical weapons destruction facilities, the plant operations manuals, the safety and medical plans, the laboratory operations and quality assurance and control manuals, and environmental permits that have been obtained, except that this shall not include material previously provided.

5. Each State Party shall promptly notify the Secretariat of any developments that could affect inspection activities at its destruction facilities.

6. Agreed deadlines for submission of the information specified in paragraphs 4 and 5 of this section shall be developed by the Preparatory Commission for the approval of the Conference of the States Parties.

7. After a review of the detailed facility information for each destruction facility, the Secretariat, if the need arises, shall enter into consultation with the State Party concerned in order to ensure its chemical weapons destruction facility(ies) is (are) designed to assure the destruction of chemical weapons, to allow advanced planning on how verification measures may be applied and to ensure that the application of verification measures is consistent with proper facility(ies) operation, and that the facility(ies) operation allows appropriate verification.

## VII. VERIFICATION

### A. International verification of declarations of chemical weapons by on-site inspections

1. The purpose of the international verification of declarations of chemical weapons shall be to confirm through on-site inspections the accuracy of the declarations made in accordance with Article III.

2. The Inspectors shall conduct this verification promptly after a declaration is submitted. They shall, inter alia, verify the quantity and identity of chemicals, types and number of munitions, devices and other equipment.
3. They shall employ, as appropriate, agreed seals, markers or other inventory control procedures to facilitate an accurate inventory of the chemical weapons at each storage facility.
4. As the inventory progresses, Inspectors shall instal such agreed seals as may be necessary to clearly indicate if any stocks are removed, and to ensure the securing of the storage facility during the inventory. After completion of the inventory, such seals shall be removed.

B. Systematic monitoring of storage facilities

1. The purpose of the international systematic monitoring of storage facilities shall be to ensure that no undetected removal of chemical weapons takes place.
2. The international systematic monitoring shall be initiated as soon as possible after the declaration of chemical weapons is submitted and shall continue until all chemical weapons have been removed from the storage facility. It shall be ensured, in accordance with the agreement on subsidiary arrangements, through a combination of monitoring with on-site instruments and systematic verification by international on-site inspections.
3. When all chemical weapons have been removed from the storage facility, the Secretariat shall certify the declaration of the National Authority to that effect. After this certification, the Secretariat shall terminate the international systematic monitoring of the storage facility.

C. Inspections and visits

1. The particular storage facility to be inspected shall be chosen by the Secretariat in such a way as to preclude the prediction of precisely when the facility is to be inspected. During each inspection, the Inspectors will verify the inventory in agreed percentage of bunkers and storage areas.

The guidelines for determining the frequency of systematic on-site inspections are to be elaborated by the Director-General of the Secretariat, taking into account guidelines drawn up by the Preparatory Commission.

2. The Secretariat shall notify the State Party of its decision to inspect or visit the storage facility 48 hours prior to the planned arrival of the inspection team at the facility for systematic inspections or visits. In the event of inspections or visits to resolve urgent problems, this period may be shortened. The Secretariat shall specify the purpose(s) of the inspection or visit.

3. A State Party shall make any necessary preparations for the arrival of the Inspectors and shall ensure their expeditious transportation from their point of entry on the territory of the State Party to the storage facility. The agreement on subsidiary arrangements will specify administrative arrangements for Inspectors.

4. Inspectors shall, in accordance with agreements on subsidiary arrangements:

(a) Have unimpeded access to all parts of the storage facilities including any munitions, devices, bulk containers, or other containers therein. While conducting their activity, Inspectors shall comply with the safety regulations at the facility. The items to be inspected will be chosen by the Inspectors; and

(b) Tag devices and bulk containers and other containers at the facility for eventual sampling at a destruction facility before they are destroyed.

D. Notification

The inspected State Party shall notify, in writing, the inspection team leader at a chemical weapons destruction facility no less than four hours prior to the departure of each shipment of chemical weapons from a chemical weapons storage facility to that destruction facility. This notification shall specify the name of the storage facility, the estimated times of departure and arrival, the specific types and quantities of chemical weapons being transported, whether any tagged items are being moved, and the method of transportation. This notification may include notification of more than one shipment. The inspection team leader shall be promptly notified, in writing, of any changes in this information.

E. International verification of the destruction of chemical weapons

The purpose of verification of destruction of chemical weapons shall be:

(a) To confirm the identity and quantity of the chemical weapons stocks to be destroyed; and

(b) To confirm that these stocks have been destroyed.

F. Review of detailed plans for the verification of the destruction of chemical weapons

1. On the basis of the Convention and the detailed destruction facility information, and as the case may be, on experience from previous inspections, the Secretariat shall prepare a draft plan for inspecting the destruction of chemical weapons at each destruction facility. The plan shall be completed and provided to the State Party for comment no less than 16 months before the facility begins destruction operations pursuant to the agreement. Any differences between the Secretariat and the State Party should be resolved through consultations. Any unresolved matter shall be forwarded to the Executive Council for appropriate action with a view to facilitating the full implementation of the Convention.

2. The Secretariat shall conduct an initial visit to each chemical weapons destruction facility of the State Party, by no less than 14 months before each facility begins destruction operations pursuant to the agreement, to allow it to familiarize itself with the facility and assess the adequacy of the inspection plan.

3. In the case of an existing facility where chemical weapons destruction operations have already been initiated, the State Party shall not be required to decontaminate the facility before the Secretariat conducts an initial visit. The duration of the visit shall not exceed 5 days and the number of visiting personnel shall not exceed 15.

4. The agreed detailed plans for verification, with an appropriate recommendation by the Secretariat, shall be forwarded to the members of the Executive Council for review. The members of the Executive Council shall review the plans with a view to approving them, consistent with verification objectives and obligations under the Convention. It should also confirm that verification schemes for destruction are consistent with verification objectives and are efficient and workable. This review should be completed not less than 60 days before the destruction period.

5. Each member of the Executive Council may consult with the Secretariat on any issues regarding the adequacy of the plan for verification. If there are no objections by any members of the Executive Council, the plan shall be put into action.

6. If there are any difficulties, the Executive Council shall enter into consultations with the State Party to reconcile them. If any difficulties remain unresolved they should be referred to the Conference of the States Parties.

7. The detailed facility agreements for chemical weapons destruction facilities shall specify, taking into account the specific characteristics of the destruction facility and its mode of operation:

(a) Detailed on-site inspection procedures; and

(b) Provisions for continuous monitoring by on-site instruments and human presence.

8. Inspectors shall be granted access to each chemical weapons destruction facility no less than 120 days before the commencement of the destruction, pursuant to the Convention, at the facility. Such access shall be for the purpose of supervising the installation of the inspection equipment, inspecting this equipment and testing its operation, as well as for the purpose of carrying out a final engineering review of the facility. For the case of an existing facility where chemical weapons destruction operations have already been initiated, destruction operations shall be stopped for the minimum amount of time required, not to exceed 120 days, for installation and testing of the inspection equipment. Depending on the results of the testing and review, the State Party and the Secretariat may agree on additions or changes to the detailed facility agreement for the facility.

G. Chemical weapons storage facilities at chemical weapons destruction facilities

1. The Inspectors shall verify the arrival of the chemical weapons at the destruction facility and shall verify the accuracy of the inventory of the chemical weapons transported and the storing of these chemical weapons. They shall employ, as appropriate, agreed seals, markers or other inventory control procedures to facilitate an accurate inventory of the chemical weapons in this storage facility.

2. As soon and as long as chemical weapons are stored at chemical weapons storage facilities at chemical weapons destruction facilities, these storage facilities shall be subject to international systematic monitoring, as referred to in relevant provisions of paragraph B.2 above, in conformity with the relevant agreements on subsidiary arrangements.

3. At the end of an active destruction phase, Inspectors will make an inventory of the chemical weapons that have been removed from the storage facility to be destroyed. They shall verify the accuracy of the inventory of the chemical weapons remaining employing inventory control procedures as referred to above under paragraph 1.

H. Systematic international on-site verification of destruction of chemical weapons

1. The Inspectors will be granted access to conduct their activities at the chemical weapons destruction facilities and the chemical weapons storage facilities thereat during the entire active phase of destruction.

2. At each chemical weapons destruction facility, to provide assurance that no chemical weapons are diverted and that the destruction process has been completed, Inspectors shall have the right to monitor by physical presence, observation and agreed equipment:

(a) The receipt of chemical weapons at the facility;

(b) The temporary holding area for chemical weapons and the specific type and quantity of chemical weapons stored in that area;

(c) The specific type and quantity of chemical weapons being destroyed;

(d) The process of destruction;

(e) The end product of destruction;

(f) The mutilation of metal parts; and

(g) The integrity of the destruction process and of the facility as a whole.

3. Inspectors shall have the right to tag, for sampling, munitions, devices, or containers located in the temporary holding areas at the chemical weapons destruction facilities.

4. To the extent that it meets inspection requirements, information from routine facility operations, with appropriate data authentication, shall be used for inspection purposes.

5. After the completion of each period of destruction, the Secretariat shall certify the declaration of the National Authority, reporting the completion of destruction of the designated quantity of chemical weapons.

6. Inspectors shall, in accordance with agreements on subsidiary arrangements:

(a) Have unimpeded access to all parts of the destruction facilities, and the storage facilities thereat, any munitions, devices, bulk containers, or other containers, therein. The items to be inspected will be chosen by the Inspectors in accordance with the verification plan that has been agreed to by the State Party and approved by the Executive Council;

(b) Monitor the systematic on-site analysis of samples during the destruction process; and

(c) Receive, if necessary, samples taken at their request from any devices, bulk containers and other containers at the destruction facility or the storage facility thereat.

PART IV: ROUTINE INSPECTION PURSUANT TO ARTICLE V:  
CHEMICAL WEAPONS PRODUCTION FACILITIES

I. DEFINITIONS

The equipment mentioned in the definition of Chemical Weapons Production Facility in Article I covers Specialized Equipment and Standard Equipment, as set out in the Definitions Section of this Annex.

II. DECLARATIONS

A. Declarations of chemical weapons production facilities

The declaration shall contain for each facility:

1. The name of the facility, its mailing address, its location and the name of its owner.

2. A statement whether it is a facility for the manufacture of chemicals that are defined as chemical weapons or whether it is a facility for the filling of chemical weapons, or both.

3. The date when the construction of the facility was completed and the periods during which any modifications to the facility were made, including the installation of new or modified equipment, that significantly changed the production process characteristics of the facility.

4. The chemicals defined as chemical weapons that were manufactured at the facility; the munitions, devices, and containers that were filled at the facility, and the dates of the beginning and cessation of such manufacture or filling.

(a) For chemicals defined as chemical weapons that were manufactured at the facility, such information shall be expressed in terms of the specific types of chemicals manufactured, indicating the chemical name in accordance with the applicable International Union of Pure and Applied Chemistry nomenclature, structural formula, and the Chemical Abstracts Service Registry number, if applicable, and in terms of the amount of each chemical expressed by weight of chemical in metric tonnes.

(b) For munitions, devices and containers that were filled at the facility, such information shall be expressed in terms of the specific type of chemical weapons filled and the weight of the chemical fill per unit.

5. The production capacity of the chemical weapons production facility.

(a) For a facility where chemical weapons were manufactured, such capacity shall be expressed in terms of the annual quantitative potential for manufacturing a specific substance on the basis of the technological process actually used or, in the case of processes not actually used, planned to be used at the facility.

(b) For a facility where chemical weapons were filled, such capacity shall be expressed in terms of the quantity of chemical that the facility can fill into each specific type of chemical weapon a year.

6. For each chemical weapons production facility that has not been destroyed, a description of the facility including:

(a) A site diagram;

(b) A process flow diagram of the facility; and

(c) An inventory of buildings at the facility, and specialized equipment at the facility and of any spare parts for such equipment.

7. The present status of the facility, stating:

(a) The date when chemical weapons were last produced at the facility;

(b) Whether the facility has been destroyed, including the date and manner of its destruction; and

(c) Whether the facility has been used or modified prior to the date of the entry into force of the Convention for an activity not related to the production of chemical weapons, and if so, information on what modifications have been made, the date such non-chemical weapons related activity began and the nature of such activity, indicating, if applicable, the kind of product.

8. A description of the measures that have been taken or that will be taken by the State Party to inactivate the facility.

9. The normal pattern of activity for safety and security at the inactivated facility.

10. A statement as to whether the facility will be converted for the destruction of chemical weapons and, if so, the dates for such conversions.

**B. Declarations of transfers**

1. Chemical Weapons Production Equipment means:

(a) Specialized equipment;

(b) Equipment for the production of equipment specifically designed for use directly in connection with chemical weapons employment; and

(c) Equipment designed or used exclusively for producing non-chemical parts for chemical munitions.

2. The declaration shall specify:

(a) Who received/transferred chemical weapons production equipment;

(b) The identity of the equipment;

- (c) Date of transfer;
- (d) Whether the equipment was destroyed, if known;
- (e) Current disposition, if known.

3. A State Party that has transferred or received chemical weapons production equipment since 1 January 1946 shall declare these transfers and receipts in accordance with paragraph 2 above. When not all the specified data are available for the period between 1 January 1946 and 1 January 1970, the State Party shall declare whatever information is still available to it and provide an explanation as to why it cannot submit a full declaration.

C. General Plans

1. For each facility the following information shall be supplied:

- (a) Envisaged time-frame for measures to be taken; and
- (b) Methods of destruction.

2. In relation to temporary conversion into chemical weapons destruction facility:

- (a) Envisaged time-frame for conversion into a destruction facility;
- (b) Envisaged time for utilizing the facility as a destruction facility;
- (c) Description of the new facility;
- (d) Method of destruction of special equipment;
- (e) Time-frame for destruction of the converted facility after it has been utilized to destroy chemical weapons;
- (f) Method of destruction of the converted facility.

D. Annual declarations on destruction

1. The annual plan for destruction, to be submitted at least 90 days in advance of the coming destruction year, shall specify:

- (a) Capacity to be destroyed;
- (b) Location of the facilities where destruction will take place;
- (c) List of buildings and equipment that will be destroyed at each facility;
- (d) Planned method of destruction.

2. The annual report on destruction, to be submitted within 90 days after the previous destruction year shall specify:

- (a) Capacity destroyed;
- (b) Location of the facilities where destruction took place;
- (c) List of buildings and equipment that were destroyed at each facility;
- (d) Method of destruction.

E. Declarations with respect to chemical weapons production facilities located in any place under the jurisdiction or control of others on the territory of the State Party

All elements contained in Section II A and D above shall be declared. It is the responsibility of the State Party to make appropriate arrangements with the State that has jurisdiction or control over any place located on the territory of the State Party in which the chemical weapons production facility is located to ensure that the declarations are made. If the State Party is not able to fulfil this obligation, it shall state the reasons thereof.

### III. DESTRUCTION

A. Principles and methods for closure, maintenance, temporary conversion and destruction of chemical weapons production facilities

#### General

Each State Party shall decide on methods to be applied for the destruction of declared chemical weapons production facilities, according to the principles laid down in Article V and in this Annex.

#### Closure and methods for closing the facility

1. The purpose of the closure of a chemical weapons production facility is to render it inoperable.
2. Agreed measures for closure will be taken by the State Party with due regard to the specific characteristics of each facility. Such measures shall include, inter alia:
  - (a) Prohibition of occupation of the Specialized Buildings and Standard Buildings of the facility except for agreed activities;
  - (b) Disconnection of equipment directly related to the production of chemical weapons to include, inter alia, process control equipment and utilities;
  - (c) Decommissioning of protective installations and equipment used exclusively for the safety of operations of the chemical weapons production facility;

(d) Installation of blind flanges and other devices to prevent the addition of chemicals to, or the removal of chemicals from, any specialized process equipment for synthesis, separation or purification of chemicals defined as a chemical weapon, any storage tank, or any machine for filling chemical weapons; and

(e) Interruption of rail, road and other access routes for heavy transport to the chemical weapons production facility except those required for agreed activities.

3. While the chemical weapons production facility remains closed, the State Party may continue safety and physical security activities at the facility.

Technical maintenance of chemical weapons production facilities prior to their destruction

1. A State Party may carry out standard maintenance activities only for safety reasons at declared chemical weapons production facilities, including visual inspection, preventive maintenance, and routine repairs.

2. All planned maintenance activities shall be specified in the general and detailed plan for destruction. Maintenance activities shall not include:

(a) Replacement of any process equipment;

(b) Modification of the characteristics of the chemical process equipment;

(c) Production of chemicals of any type.

3. All maintenance activities shall be subject to monitoring by the Secretariat.

Activities related to temporary conversion of chemical weapons production facilities into chemical weapons destruction facilities

1. Measures pertaining to the temporary conversion of chemical weapons production facilities into chemical weapons destruction facilities shall ensure that the regime for the temporarily converted facilities is at least as stringent as the regime for facilities that have not been converted.

2. Chemical weapons production facilities converted into chemical weapons destruction facilities before the Convention enters into force shall be declared under the category of chemical weapons production facilities.

They shall be subject to an initial visit by Inspectors who shall confirm the correctness of the information about those facilities. Verification that the conversion of these facilities was performed in such a manner as to render them inoperable as chemical weapons production facilities shall also be required, and shall fall within the framework of measures provided for the facilities that are to be rendered inoperable within three months after the Convention enters into force.

3. A State Party which intends to carry out a conversion of facilities shall submit to the Secretariat, not later than 30 days after entry into force for it, or not later than 30 days after a decision has been taken for temporary conversion, a general facility conversion plan, and subsequently shall submit annual plans.

4. Should the State Party have the need to convert to a chemical weapons destruction facility an additional chemical weapons production facility that had been closed after the Convention entered into force for it, it shall inform the Secretariat thereof at least 90 days in advance. The Secretariat, in conjunction with the State Party, shall make sure that necessary measures are taken to render that facility, after its conversion, inoperable as a chemical weapons production facility.

5. A facility converted for the destruction of chemical weapons shall not be more fit for resuming chemical weapons production than a facility which has been closed and is under maintenance. Its reactivation shall require no less time.

6. Converted chemical weapons production facilities shall be destroyed not later than 10 years after the Convention enters into force.

7. Any measures for the conversion of any given chemical weapons production facility are facility-specific and shall depend upon its individual characteristics.

8. The set of measures carried out for the purposes of converting a chemical weapons production facility into a chemical weapons destruction facility shall not be less than that which is provided for the disabling of other facilities to be carried out during the three months after the Convention enters into force.

#### Activities related to destruction

1. Destruction of equipment and buildings covered by the definition of a Chemical Weapons Production Facility

(a) All Specialized Equipment and Standard Equipment shall be physically destroyed.

(b) All Specialized Buildings and Standard Buildings shall be physically destroyed.

2. Facilities for producing unfilled chemical munitions and equipment for chemical weapons employment

(a) Facilities used exclusively for production of: (a) non-chemical parts for chemical munitions or (b) equipment specifically designed for use directly in connection with chemical weapons employment, shall be declared and destroyed. The destruction process and its verification shall be conducted according to the provisions of Article V that govern destruction of chemical weapons production facilities.

(b) All equipment designed or used exclusively for producing non-chemical parts for chemical munitions shall be physically destroyed. Such equipment, which includes specially designed moulds and metal-forming dies, may be brought to a special location for destruction.

(c) All buildings and standard equipment used for such production activities shall be destroyed or converted for purposes not prohibited under the Convention, with confirmation as necessary through consultations and inspections as provided for under Article IX.

(d) Activities for purposes not prohibited under the Convention may continue while destruction or conversion proceeds.

## B. Order of destruction

1. The order of destruction is based on the obligations specified in Article II and the other Articles of the Convention, including obligations regarding systematic international on-site verification; it takes into account interests of States Parties for undiminished security during the destruction period; confidence-building in the early part of the destruction stage; gradual acquisition of experience in the course of destroying chemical weapons production facilities and applicability irrespective of the actual characteristics of the facilities and the methods chosen for their destruction. The order of destruction is based on the principle of levelling out.

2. A State Party shall, for each destruction period, determine which chemical weapons production facilities are to be destroyed and carry out the destruction in such a way that not more than what is specified below remains at the end of each destruction period. A State Party is not precluded from destroying its facilities at a faster pace.

3. The following provisions shall apply to chemical weapons production facilities that produce Schedule 1 chemicals:

(a) Each State Party possessing such facilities shall start the destruction not later than one year from the date the Convention enters into force for it, and shall complete it not later than 10 years after the Convention enters into force. For a State which is a Party at the entry into force of the Convention, this overall period shall be divided into three separate destruction periods, namely, years 2-5, years 6-8, and years 9-10. For States which become a Party after the entry into force of the Convention, the destruction periods shall be adapted, taking into account paragraphs 1 and 2 above;

(b) Annual Production Capacity, calculated in accordance with the definition of Production Capacity, shall be used as the comparison factor for such facilities. It shall be expressed in agent tonnes, taking into account the rules specified for binary chemical weapons;

(c) Appropriate agreed levels shall be established for the end of the eighth year after the Convention enters into force. Production capacity that exceeds the relevant level shall be destroyed in equal increments during the first two destruction periods;

(d) A requirement to destroy a given amount of capacity shall entail a requirement to destroy any other chemical weapons production facility that supplied the Schedule 1 facility or filled the Schedule 1 chemical produced there into munitions or devices;

(e) Chemical weapons production facilities that have been converted temporarily for destruction of chemical weapons shall continue to be subject to the obligation to destroy capacity according to the provisions of the paragraph.

4. Each State Party possessing chemical weapons production facilities not covered in paragraph 3 above shall start the destruction of these facilities not later than one year from the date the Convention enters into force for it, and should complete it not later than five years after the Convention enters into force.

C. Detailed plans for destruction

Submission of detailed plans

1. Six months before destruction of a chemical weapons production facility, a State Party shall provide to the Secretariat the detailed plans for destruction, including proposed measures for verification of destruction referred to in Section III.C.2 (f) below, with respect to, e.g.:

(a) Timing of the presence of the Inspectors at the facility to be destroyed; and

(b) Procedures for verification of measures to be applied to each item on the declared inventory.

2. The detailed plans for destruction of each facility shall contain:

(a) Detailed time schedule of the destruction process;

(b) Layout of the facility;

(c) Process flow diagram;

(d) Detailed inventory of equipment, buildings and other items to be destroyed;

(e) Measures to be applied to each item on the inventory;

(f) Proposed measures for verification;

(g) Security/safety measures to be observed during the destruction of the facility; and

(h) Working and living conditions to be provided for Inspectors.

3. If a State Party intends to convert temporarily a chemical weapons production facility for use in the destruction of chemical weapons, it shall notify the Secretariat not less than 120 days before undertaking any conversion activities. The notification shall:

(a) Specify the name, address, and location of the facility;

(b) Provide a site diagram indicating all structures and areas that will be involved in the destruction of chemical weapons and also identify all structures of the chemical weapons production facility that is to be temporarily converted;

(c) Specify the types of chemical weapons, and the type and quantity of chemical fill to be destroyed;

(d) Specify the destruction method;

(e) Provide a process flow diagram, indicating which portions of the production process and specialized equipment will be converted for the destruction of chemical weapons;

(f) Specify the seals and inspection equipment potentially affected by the conversion, if applicable; and

(g) Provide a schedule identifying the time allocated to design, temporary conversion of the facility, installation of equipment, equipment check-out, destruction operations, and closure.

4. In relation to the destruction of a facility that was temporarily converted for destruction of chemical weapons, information should be provided in accordance with Sections III.C.1 and III.C.2 above.

#### Review of detailed plans

1. On the basis of the detailed plan for destruction and proposed measures for verification submitted by the State Party, and on experience from previous inspections, the Secretariat shall prepare a plan for verifying the destruction of the facility, consulting closely with the State Party. Any differences between the Secretariat and the State Party concerning appropriate measures should be resolved through consultations. Any unresolved matters shall be forwarded to the Executive Council for appropriate action with a view to facilitating the full implementation of the Convention.

2. To ensure that the provisions of Article V and this Annex are fulfilled, the combined plans for destruction and verification shall be agreed upon between the Executive Council and the State Party. This agreement should be completed 60 days before the planned initiation of destruction.

3. Each member of the Executive Council may consult with the Secretariat on any issues regarding the adequacy of the combined plan for destruction and verification. If there are no objections by any members of the Executive Council, the plan shall be put into action.
4. If there are any difficulties, the Executive Council should enter into consultations with the State Party to reconcile them. If any difficulties remain unresolved they should be referred to the Conference of the States Parties. The resolution of any differences over methods of destruction should not delay the execution of other parts of the destruction plan that are acceptable.
5. If agreement is not reached with the Executive Council on aspects of verification, or if the approved verification plan cannot be put into action, verification of destruction will proceed by the continuous on-site monitoring and presence of Inspectors.
6. Destruction and verification should proceed according to the agreed plan. The verification should not unduly interfere with the destruction process and should be conducted through the presence of on-site Inspectors to witness the destruction.
7. If required verification or destruction actions are not taken as planned, all States Parties should be so informed.

#### IV. VERIFICATION

##### A. International verification of declarations of chemical weapons production facilities by initial on-site inspections

1. The Secretariat shall conduct an initial inspection of each chemical weapons production facility in the period between 90 and 120 days after the entry into force of the Convention.
2. The purposes of the initial inspection shall be:
  - (a) To confirm that the production of chemical weapons has ceased and that the facility has been completely inactivated;
  - (b) To permit the Secretariat to familiarize itself with the measures that have been taken to cease production of chemical weapons at the facility;
  - (c) To permit the inspectors to install temporary seals;
  - (d) To permit the inspectors to confirm the inventory of buildings and specialized equipment;
  - (e) To obtain information necessary for planning inspection activities at the facility, including use of tamper-indicating seals and other agreed equipment, which shall be installed pursuant to the detailed facility agreement for the facility; and

(f) To conduct preliminary discussions regarding a detailed agreement on inspection procedures at the facility;

3. Inspectors shall employ, as appropriate, agreed seals, markers or other inventory control procedures to facilitate an accurate inventory of the declared items at each chemical weapons production facility.

4. Inspectors shall install such agreed devices as may be necessary to indicate if any resumption of production of chemical weapons occurs or if any declared item is removed. They shall take the necessary precaution not to hinder closure activities by the State Party. Inspectors may return to maintain and verify the integrity of the devices.

5. If, on the basis of the initial inspection, the Director-General believes that additional measures are necessary to inactivate the facility, the Director-General may request, no later than 135 days after the entry into force of the Convention for a State, that such measures be implemented by the State Party no later than 180 days after entry into force of the Convention for it. At its discretion, the State Party may satisfy the request. If it does not satisfy the request, the State Party and the Director-General shall consult to resolve the matter.

B. International verification of chemical weapons production facilities and cessation of their activities

1. The purpose of the international systematic monitoring of a chemical weapons production facility shall be to ensure that no resumption of production of chemical weapons nor removal of declared items would go undetected at this facility.

2. The detailed facility agreement for each chemical weapons production facility shall specify:

(a) Detailed on-site inspection procedures, which may include:

(i) Visual examinations;

(ii) Checking and servicing of seals and other agreed devices, and

(iii) Obtaining and analysing samples;

(b) Procedures for using tamper-indicating seals and other agreed equipment to prevent the undetected reactivation of the facility, which shall specify:

(i) The type, placement, and arrangements for installation; and

(ii) The maintenance of such seals and equipment; and

(c) Other agreed measures.

3. The seals or other agreed equipment provided for in a detailed agreement on inspection measures for that facility shall be placed no later than 240 days after the entry into force of the Convention for a State. Inspectors shall be permitted to visit each chemical weapons production facility for the installation of such seals or equipment.

4. During each calendar year, inspectors shall be permitted to conduct up to four inspections of each chemical weapons production facility.

5. The Director-General of the Secretariat shall notify the State Party of its decision to inspect or visit a chemical weapons production facility 48 hours prior to the planned arrival of the inspection team at the facility for systematic inspections or visits. In the event of inspections or visits to resolve urgent problems, this period may be shortened. The Director-General of the Secretariat shall specify the purpose(s) of the inspection or visit.

6. Inspectors shall, in accordance with agreements on subsidiary arrangements, have unimpeded access to all parts of the chemical weapons production facilities. The items on the declared inventory to be inspected will be chosen by the Inspectors.

7. The guidelines for determining the frequency of systematic on-site inspections are to be elaborated by the Preparatory Commission and subsequently endorsed by the Conference of the States Parties. The particular production facility to be inspected shall be chosen by the Secretariat in such a way as to preclude the prediction of precisely when the facility is to be inspected.

C. International verification of destruction of chemical weapons production facilities

1. The purpose of international verification of destruction of chemical weapons production facilities shall be to confirm that the facility is destroyed in accordance with the obligations under the Convention and that each item on the declared inventory is destroyed in accordance with the agreed detailed plan for destruction.

2. When all items on the declared inventory have been destroyed, the Secretariat shall certify, in writing, the declaration of the State Party to that effect. After this certification, the Secretariat shall terminate the international systematic monitoring of the chemical weapons production facility and will promptly remove all devices and monitoring equipment installed by the Inspectors.

3. After this certification, the State Party will make the declaration that the facility has been destroyed.

D. International verification of temporary conversion of a chemical weapons production facility into a chemical weapons destruction facility

1. No later than 90 days after receiving the initial notification of the intent to convert temporarily a production facility, the inspectors shall have the right to visit the facility to familiarize themselves with the proposed temporary conversion and to study possible inspection measures that will be required during the conversion.
2. No later than 60 days after such a visit, the Secretariat and the State Party shall conclude a transition agreement containing additional inspection measures for the temporary conversion period. The transition agreement shall specify inspection procedures, including the use of seals, monitoring equipment, and inspections, that will provide confidence that no chemical weapons production takes place during the conversion process. This agreement shall remain in force from the beginning of the temporary conversion activity until the facility begins operation as a chemical weapons destruction facility.
3. The State Party shall not remove or convert any portion of the facility, or remove or modify any seal or other agreed inspection equipment that may have been installed pursuant to the Convention or this Annex until after the conclusion of the transition agreement.
4. Once the facility begins operation as a chemical weapons destruction facility, it shall be subject to the provisions of this Annex applicable to chemical weapons destruction facilities. Arrangements for the pre-operation period shall be governed by the transition agreement.
5. During destruction operations the inspectors shall have access to all portions of the temporarily converted production facilities, including those that are not directly involved with the destruction of chemical weapons.
6. Prior to the commencement of work at the facility to convert it temporarily for chemical weapons destruction purposes and after the facility has ceased to function as a facility for chemical weapons destruction, the facility shall be subject to the provisions of this Annex applicable to chemical weapons production facilities.

PART V: ROUTINE INSPECTIONS PURSUANT TO ARTICLE VI:  
REGIME FOR CHEMICALS ON SCHEDULE 1

I. GENERAL PROVISIONS

1. A State Party shall not produce, acquire, retain or use chemicals on Schedule 1 outside the territories of States Parties and shall not transfer such chemicals outside its territory except to another State Party.

2. A State Party shall not produce, acquire, retain, transfer or use chemicals in Schedule 1 unless:

(a) The chemicals are applied to research, medical, pharmaceutical or protective purposes, and

(b) The types and quantities of chemicals are strictly limited to those which can be justified for such purposes, and

(c) The aggregate amount of such chemicals at any given time for such purposes is equal to or less than one metric tonne, and

(d) The aggregate amount for such purposes acquired by a State Party in any calendar year through production, withdrawal from chemical weapons stocks and transfer is equal to or less than one metric tonne.

II. TRANSFERS

1. A State Party may transfer chemicals on Schedule 1 outside its territory only to another State Party and only for research, medical, pharmaceutical or protective purposes in accordance with paragraph 2 above.

2. Chemicals transferred shall not be retransferred to a third State.

3. Thirty days prior to any transfer to another State Party both States Parties shall notify the Secretariat.

4. Each State Party shall make a detailed annual declaration regarding transfers during the previous calendar year. The declaration shall be submitted within three months after the end of that year and shall for each chemical on Schedule 1 which has been transferred, include the following information:

(a) The chemical name, structural formula and Chemical Abstracts Service Registry Number (if assigned);

(b) The quantity acquired from other States or transferred to other States Parties. For each transfer the quantity, recipient and purpose should be included.

### III. PRODUCTION

#### A. Single Small Scale Facility

1. (a) Each State Party which produces chemicals on Schedule 1 for research, medical, pharmaceutical or protective purposes shall carry out the production at a single small-scale facility approved by the State Party, the only exceptions being those set out in paragraphs 2 and 4 below.

(b) The production at a single small-scale facility shall be carried out in reaction vessels in production lines not configured for continuous operation; the volume of such a reaction vessel shall not exceed 100 litres while the total volume of all reaction vessels with a volume exceeding 5 litres shall not be more than 500 litres.

#### B. Other Facilities

2. (a) Production of Schedule 1 chemicals in aggregate quantities not exceeding 10 kg per year may be carried out for protective purposes at one facility outside a single small-scale facility.

(b) Production of Schedule 1 chemicals in quantities of more than 100 g per year may be carried out for research, medical or pharmaceutical purposes outside a single small-scale facility in aggregate quantities not exceeding 10 kg per year per facility.

Such facilities shall be approved by the State Party.

3. Each State Party, during production under paragraphs 1 and 2, shall assign the highest priority to ensuring the safety of people and to protecting the environment. Each State Party shall conduct such production in accordance with national standards for safety and emissions.

4. Synthesis of Schedule 1 chemicals for research, medical or pharmaceutical purposes, but not for protective purposes, may be carried out at laboratories in aggregate quantities less than 100 g per year per facility.

### IV. SINGLE SMALL-SCALE FACILITY

#### A. Declarations

##### 1. Initial declarations

Each State Party which plans to operate such a facility shall provide the Secretariat with the location and a detailed technical description of the facility, including an inventory of equipment and detailed diagrams. For existing facilities, this information shall be provided not later than 30 days after the Convention enters into force for the State Party. Information on new facilities shall be provided 180 days before operations are to begin.

2. Advance notifications

Each State Party shall give advance notification to the Secretariat of planned changes related to the initial declaration. The notification shall be submitted not later than 90 days before the changes are to take place.

3. Annual declarations

(1) Each State Party possessing a facility shall make a detailed annual declaration regarding the activities of the facility for the previous calendar year. The declaration shall be submitted within 90 days after the end of that year and shall include:

(a) Identification of the facility

(b) For each chemical on Schedule 1 produced, acquired, consumed or stored at the facility, the following information:

- (i) The chemical name, structural formula and Chemical Abstracts Service Registry Number (if assigned);
- (ii) The methods employed and quantity produced;
- (iii) The name and quantity of precursor chemicals listed on Schedules 1, 2, Part A or 3 used for production of chemicals in Schedule 1;
- (iv) The quantity consumed at the facility and the purpose(s) of the consumption;
- (v) The quantity received from or shipped to other facilities within the State Party. For each shipment the quantity, recipient and purpose should be included;
- (vi) The maximum quantity stored at any time during the year;
- (vii) The quantity stored at the end of the year.

(c) Information on any changes at the facility during the year compared to previously submitted detailed technical descriptions of the facility including inventories of equipment and detailed diagrams.

(2) Each State Party possessing a facility shall make a detailed annual declaration regarding the projected activities and the anticipated production at the facility for the coming calendar year. The declaration shall be submitted not later than 90 days before the beginning of that year and shall include:

(a) Identification of the facility

(b) For each chemical on Schedule 1 produced, consumed or stored at the facility, the following information:

- (i) The chemical name, structural formula and Chemical Abstracts Service Registry Number (if assigned);
- (ii) The quantity anticipated to be produced and the purpose of the production.

(c) Information on any anticipated changes at the facility during the year compared to previously submitted detailed technical descriptions of the facility including inventories of equipment and detailed diagrams.

#### B. Verification

1. The aim of verification activities at the facility shall be to verify that the quantities of Schedule 1 chemicals produced are correctly declared and, in particular, that their aggregate amount does not exceed one metric tonne.
2. The single small-scale facility shall be subject to systematic international on-site verification, through on-site inspection and monitoring with on-site instruments.
3. The number, intensity, duration, timing and mode of inspections for a particular facility shall be based on the risk to the objectives of the Convention posed by the relevant chemicals, the characteristics of the facility and the nature of the activities carried out there. Guidelines for assessing such risk shall be developed by the Preparatory Commission and subsequently endorsed by the Conference of the States Parties.
4. The purpose of the initial inspection shall be to verify information provided concerning the facility, including verification of the limits on the reaction vessels as required under this Annex.
5. Within 180 days after the entry into force of the Convention each State Party possessing a facility shall conclude an agreement, based on a model agreement, with the Organization, covering detailed inspection procedures for the facility.
6. Each State Party planning to establish such a facility after the entry into force of the Convention shall conclude an agreement, based on a model agreement, with the Organization, covering detailed inspection procedures for the facility before it begins operation or is used.
7. Model agreements shall be developed by the Preparatory Commission and subsequently endorsed by the Conference of the State Parties.

## V. "OTHER FACILITIES" COVERED BY SECTION B PARAGRAPH 2 ON PRODUCTION

A. Declarations

## 1. Initial declarations

Each State Party shall provide the Secretariat with the name, location and a detailed technical description of each facility or its relevant part(s) as requested by the Secretariat. The facility producing Schedule 1 chemicals for protective purposes shall be specifically identified. For existing facilities, this information shall be provided not later than 30 days after the Convention enters into force for the State Party. Information on new facilities shall be provided not less than 90 days before operations are to begin.

## 2. Advance notifications

Each State Party shall give advance notification to the Secretariat of planned changes related to the initial declaration. The notification shall be submitted not later than 90 days before the changes are to take place.

## 3. Annual declarations

(1) Each State Party shall, for each facility, make a detailed annual declaration regarding the activities of the facility for the previous calendar year. The declaration shall be submitted within 90 days after the end of that year and shall include:

(a) Identification of the facility

(b) For each chemical on Schedule 1 the following information:

(i) The chemical name, structural formula and Chemical Abstracts Service Registry Number (if assigned);

(ii) The quantity produced;

And, in case of production for protective purposes, methods employed;

(iii) The name and quantity of precursor chemicals listed on Schedules 1, 2 Part A, or 3 used for production of chemicals in Schedule 1;

(iv) The quantity consumed at the facility and the purpose of the consumption;

(v) The quantity transferred to other facilities within the State Party. For each transfer the quantity, recipient and purpose should be included;

(vi) The maximum quantity stored at any time during the year;

(vii) The quantity stored at the end of the year.

(c) Information on any changes at the facility or its relevant part(s) during the year compared to previously submitted detailed technical description of the facility.

(2) Each State Party shall, for each facility, make a detailed annual declaration regarding the projected activities and the anticipated production at the facility for the coming calendar year. The declaration shall be submitted not later than 90 days before the beginning of that year and shall include:

(a) Identification of the facility

(b) For each chemical on Schedule 1 the following information:

(i) The chemical name, structural formula and Chemical Abstracts Service Registry Number (if assigned);

(ii) The quantity anticipated to be produced, the time period(s) when the production is anticipated to take place and the purposes of the production.

(c) Information on any anticipated changes at the facility or its relevant part(s), during the year compared to previously submitted detailed technical descriptions of the facility.

## B. Verification

1. The aim of verification activities at the facility shall be to verify that:

(a) The facility is not used to produce any chemical listed on Schedule 1, except for the declared chemical;

(b) The quantities of the chemical listed on Schedule 1 produced, processed or consumed are correctly declared and consistent with needs for the declared purpose;

(c) The chemical listed on Schedule 1 is not diverted or used for other purposes.

2. The facility shall be subject to systematic international on-site verification through on-site inspection and monitoring with on-site instruments.

3. The number, intensity, duration, timing and mode of inspections for a particular facility shall be based on the risk to the objectives of the Convention posed by the quantities of chemicals produced, the characteristics of the facility and the nature of the activities carried out there. The guidelines for assessing such risk shall be developed by the Preparatory Commission and subsequently endorsed by the Conference of the States Parties.

4. Within 180 days after the entry into force of the Convention each State Party possessing such (a) facility (facilities) shall conclude (an) agreement(s), based on a model for an agreement, with the Organization, covering detailed inspection procedures for the facility (facilities).

5. Each State Party planning to establish such a facility after the entry into force of the Convention shall conclude an agreement with the Organization before the facility begins operation or is used.

#### VI. NOTIFICATION OF INSPECTION

A State Party shall be notified by the Director-General of the Secretariat of the decision to inspect a facility 24 hours prior to the arrival of the inspection team at the site.

PART VI: ROUTINE INSPECTION PURSUANT TO ARTICLE VI: REGIME FOR  
CHEMICALS ON SCHEDULE 2 PARTS A AND B AND FACILITIES  
RELATED TO SUCH CHEMICALS

I. DECLARATIONS

The Initial and Annual Declarations to be provided by a State Party under paragraphs 3 and 4 of Article VI shall include:

A. Declaration of aggregate national data

1. Aggregate national data above 1 tonne for the previous calendar year on the quantities produced, processed, consumed, imported and exported of each chemical listed on Schedule 2, as well as a quantitative specification of import and export for each country involved.

2. Such quantities shall be calculated:

(a) In case of production, processing and consumption on the basis of individual facility data above a threshold of 500 kg;

(b) In case of foreign trade on the basis of individual export and import transactions above a threshold of 500 kg.

B. Declaration of plants

1. General

(a) Initial Declarations are required for:

(i) All plants that produced, processed or consumed during any of the previous three years or are anticipated to produce, process or consume in the next year more than 1 tonne of a chemical listed on Schedule 2;

(ii) Plants that produced at any time since 1 January 1946 a chemical on Schedule 2 for chemical weapons purposes;

(b) Annual Declarations are required for all plants declared under paragraph 1 (a) above.

2. Declaration on past activities

For each plant, declarations shall include the following information on Schedule 2 chemicals as well as on the plant itself, as well as any other information considered appropriate:

Chemical(s)

(a) The chemical name, common or trade name used by the facility, structural formula, and Chemical Abstracts Service Registry Number (if assigned);

(b) The total amount produced, processed, consumed, imported and exported in the previous calendar year, or in the case of the initial declaration as required in Article VI, paragraph 3, in the three previous calendar years;

(c) The purpose(s) for which the chemical(s) are produced, consumed or processed:

- (i) Processing and consumption on site (specify product type);
- (ii) Sale or transfer within the country (specify either other domestic industry, trader or other destination, and if possible, final product type);
- (iii) Direct export (specify which country);
- (iv) Other - specify;

Plant

(d) The name of the plant and the owner, company, or enterprise operating the plant;

(e) The name of the plant site in which the plant is located and the name of the owner, company, or enterprise operating the plant site;

(f) The precise location of the plant (including the address, location of the plant site, location of the plant within the plant site including the specific building or structure number, if any);

(g) The main orientation (purpose) of the plant;

(h) Whether the plant is dedicated to producing, processing or consuming the listed chemical or is multi-purpose;

(i) The approximate production capacity of the plant for the declared Schedule 2 chemical(s);

(j) Which of the following activities are performed with regard to the Schedule 2 chemicals:

- (i) Production;
- (ii) Processing;
- (iii) Conversion;
- (iv) Other - specify (e.g. storage).

3. Notification of anticipated activities

The notification relating to anticipated activities as required in paragraph C.1 below shall follow the same format as provided for in the preceding paragraph. In addition, the anticipated time period(s) of production, processing, or consumption are to be included in the notification.

4. Declarations required under paragraph 1 (a) (ii) above shall include the following information:

- (i) The chemical name, common or trade name used by the plants for chemical weapon production purposes, structural formula, and Chemical Abstracts Service Registry Number (if assigned);
- (ii) The dates the chemical was produced and the quantity produced;
- (iii) The location to which the chemical was delivered and the final product produced there (if known).

C. Procedural provisions

Each State Party shall submit, when the Convention enters into force for it:

1. Initial declarations not more than 30 days later (Article VI, paragraph 3);
2. Annual declarations relating to past activities by the end of March for the preceding calendar year, starting in the year which follows the year of entering into force;
3. Annual notifications relating to anticipated activities by the end of October, for the following calendar year. Subsequently planned notifiable activities in the same reporting year shall be notified not later than five days before this additional planned activity begins. The first annual notification is due by the end of the first October during which the Convention has been in force.

D. Information to States Parties

The list of plants declared under this Annex together with the information provided under paragraph 2, parts (a), (d), (f), (g) and (j) shall be transmitted by the Secretariat to all States Parties within 30 days after declarations have become due.

II. VERIFICATION

A. General

1. International on-site verification provided for in paragraph 6 of Article VI shall, under this Annex, be carried out by the Secretariat through routine inspections of those declared plants which have declared producing, processing or consuming or are anticipated to produce, process or consume in the next year more than 10 tonnes of a chemical listed in Schedule 2, and have, after the completion of an initial inspection, been designated for routine on-site inspection. Plants declared under this part of the Verification Annex which, after completion of an initial inspection, are not designated for systematic on-site inspection shall be eligible for inspections pursuant to the regime outlined in Part VII of this Verification Annex.

2. The draft programme and budget of the Organization to be submitted by the Executive Council shall contain, as a separate item, an indicative draft programme and budget for verification under this Annex.

3. The Secretariat shall:

(a) Perform initial inspections of declared plants in accordance with Section B below;

(b) Select plants for systematic inspection in accordance with Section C below.

B. Initial inspections

Each plant specified in paragraph 1 (a) above shall receive an initial inspection not later than three years after entry into force of the Convention. Plants declared under this Annex are eligible for inspections under Part VII of this Verification Annex until the completion of an initial inspection.

C. Routine inspections

1. Having received the initial inspection, each plant designated in paragraph 1 of Section A shall be subject to routine inspections.

2. In selecting particular plants for inspection, the Secretariat shall:

(a) Give due consideration to the risk to the objectives of the Convention posed by the relevant chemical, the characteristics of the plant and the nature of the activities carried out there;

(b) Take into account, on the basis of subsequent declarations, such operational modifications of plants it deems relevant;

(c) Choose the particular plant to be inspected in such a way as to preclude the prediction of precisely when the plant is to be inspected;

(d) Not inspect one plant more than twice per year.

D. Inspection aims

The general aim of inspections shall be to verify that activities are in accordance with obligations under the Convention and with the information provided in declarations on individual plants. Particular aims of inspections at plants declared under this Annex shall include verification of:

(a) Consistency with declarations of levels of production, processing or consumption of Schedule 2 chemicals;

(b) The absence of non-declared chemicals listed in Schedule 1, 2 or 3 above thresholds for declaration;

(c) Non-diversion of chemicals listed on Schedule 2 for purposes prohibited under the Convention.

#### E. Inspection procedures

1. Inspections shall be carried out in accordance with agreed guidelines and other relevant provisions of this Annex and the Confidentiality Annex.

2. The question of the requirement for individual facility agreements for plants covered in this Section of the Annex shall be addressed by the Preparatory Commission and its recommendations endorsed by the Conference of the States Parties.

3. The areas of a facility to be inspected under subsidiary arrangements may, inter alia, include:

- (i) Areas where feed chemicals (reactants) are delivered and/or stored;
- (ii) Areas where manipulative processes are performed upon the reactants prior to addition to the reaction vessel;
- (iii) Feed lines as appropriate from subparagraph (i) and/or subparagraph (ii) to the reaction vessel together with any associated valves, flow meters, etc.;
- (iv) The external aspect of the reaction vessel and its ancillary equipment;
- (v) Lines from the reaction vessel leading to long- or short-term storage or for further processing of the designated chemical;
- (vi) Control equipment associated with any of the items under subparagraphs (i) to (v);
- (vii) Equipment and areas for waste and effluent handling;
- (viii) Equipment and areas for disposition of off-specification chemicals.

#### III. NOTIFICATION OF INSPECTION

A State Party shall be notified by the Director-General of the Secretariat of the decision to inspect a facility 24 hours prior to the arrival of the inspection team at the site.

PART VII: ROUTINE INSPECTIONS PURSUANT TO ARTICLE VI: REGIME FOR  
CHEMICALS ON SCHEDULE 3, FACILITIES RELATED TO SUCH  
CHEMICALS, AND OTHER FACILITIES RELEVANT TO THE  
OBJECTIVES OF THE CONVENTION

I. DECLARATIONS

The Initial and Annual Declarations to be provided by a State Party under paragraphs 3 and 4 of Article VI shall include:

A. Declarations of aggregate national data

1. Annual declarations of aggregate national data for the previous calendar year shall include quantities produced, processed or consumed, imported and exported of each chemical listed on Schedule 3, as well as a quantitative specification of import and export for each country involved.

2. Such quantities shall be calculated:

(a) In case of production, processing and consumption, on the basis of individual plant data above a threshold of 10 tonnes;

(b) In case of foreign trade, on the basis of individual export and import transactions above a threshold of 10 tonnes.

B. Declarations of plant sites

1. General

Declarations are required for all:

(a) Plant sites that produced, processed or consumed during the previous year or are anticipated to produce in the next year more than 100 tonnes of chemicals listed on Schedule 3;

(b) Plant sites that produced at any time since 1 January 1946 a chemical on Schedule 3 for chemical weapons purposes;

(c) Plant sites that produced during the previous year or are anticipated to produce in the next year more than 100 tonnes of discrete organic chemicals, except those that only produce chemicals containing only carbon and hydrogen and those that only refine petroleum;

(d) Plant sites as defined in subparagraph 6 (b) (ii) of Article I.

2. Declarations on past activities

(a) Declarations required under paragraph 1 (a) above shall include the following information on the Schedule 3 chemical(s):

(i) The chemical name, common or trade name used by the facility, structural formula, and Chemical Abstracts Service Registry Number (if assigned);

- (ii) The approximate amount of production, processing or consumption of the chemical in the previous calendar year, expressed in the ranges: 30 to 100 tonnes specified to the nearest 10 tonnes, up to 1,000 tonnes specified to the nearest 100 tonnes, and above 1,000 tonnes specified to the nearest 1,000 tonnes;
- (iii) Purpose(s) for which the chemical(s) are produced, processed or consumed;

(b) Declarations required under paragraph 1 (b) above shall include the following information:

- (i) The chemical name, common or trade name used by the facility, structural formula, and Chemical Abstracts Service Registry Number (if assigned);
- (ii) The dates the chemical was produced and the quantity produced;
- (iii) The location to which the chemical was delivered and the final product produced there (if known);

(c) Declarations required under paragraph 1 (a), (b) or (c) shall include the following information on the plant site and its plant(s):

- (i) The name of the plant site and the owner, company, or enterprise operating the plant site;
- (ii) The precise location of the plant site including its address;
- (iii) The number of the plants within the same plant site which fall under the definitions of paragraph 1 (a) or (b) above;
- (iv) Within the plant site, the number of plants which are declared under Part VI of this Annex;
- (v) The number of the plant(s) declared under Part VII of this Annex and of the owner, company or enterprise operating the plant(s) if different from the information provided for the plant site under subparagraph (i) above.

### 3. Notifications of anticipated activities

The notifications relating to anticipated activities as required in paragraph 1, shall follow the same format as provided for in the preceding paragraph.

C. Procedural provisions

Each State Party shall submit, when the Convention enters into force for it:

1. Initial declarations not more than 30 days later (Article VI paragraph 3);
2. Annual declarations relating to past activities by the end of March for the preceding calendar year, starting in the year which follows the year after the entry into force;
3. Annual notifications relating to past activities by the end of October for the following calendar year. Subsequently planned notifiable activities in the same reporting year shall be notified not later than five days before this additionally planned activity begins. The first annual notification is due by the end of the first October during which the Convention has been in force.

D. Information to States Parties

The list of all plant sites declared under Part VII of this Annex together with the information provided under paragraph 2 (c) above, shall be transmitted by the Secretariat to all States Parties within 60 days after declarations have become due.

II. VERIFICATION

A. General

1. International on-site verification provided for in paragraph 6 of Article VI shall be carried out by the Secretariat through routine inspections at plant sites declared under Part VII of the Annex.
2. The draft programme and budget of the Organization to be submitted by the Executive Council shall contain, as a separate item, a draft programme and budget for verification under this Part VII of the Annex.
3. The selection of plant sites for inspection shall be performed by the Secretariat. The selection shall be based on random selection from nominations made both by States Parties and by the Secretariat, the latter themselves being randomly made:

(a) Each State Party has the right to nominate plant sites declared under Part VII of this Annex, and plants declared under Part VI of the same Annex that have not completed their initial inspections, or that are not designated for inspection on a routine basis for inspection. The maximum number of such plants and plant sites each State Party may nominate for inspection shall be decided annually by the Executive Council on the basis of estimates provided by the Secretariat in the context of setting an overall annual quota of nominations for inspections. This number shall be commensurate with the verification budget and the number of States Parties.

(b) Nominations for inspection by States Parties shall be communicated to the Secretariat at any time during the year for which the inspections are proposed. The Secretariat shall ensure that the identity of the plants nominated for inspection and the proponents are not revealed.

(c) A State Party may transfer some or all of its nomination quota to the Secretariat. The Secretariat shall use these quotas to nominate, on a random basis, plant sites declared under Part VII of this Annex and those plants declared under Part VI of this same Annex that have not completed their initial inspections, or that are not identified for inspection on a routine basis. The Secretariat shall ensure that in all such transfers the identity of the State Party and the number of nominations offered up are not revealed.

(d) Twice during the year, the Secretariat shall then, from the combined nominations, randomly select the plant sites and plants to be inspected in such a way as to ensure that it is not possible to determine whether the plant or plant site selected was originally proposed by a State Party or whether it was a Secretariat nomination, and also to preclude prediction of when the inspection takes place.

(e) Under Part VII of this Annex, the number of inspections a State Party is obligated to receive per year shall be no more than three plus 5 per cent of the number of its declarations under this Annex.

4. No plant site shall receive more than two inspections per year under the provisions of Part VII of this Annex. This does not limit inspections pursuant to Article IX, Part VI of this Annex, or inspections recommended by the Secretariat to investigate anomalies.

#### B. Inspection aims

1. At plant sites declared under Part VII of this Annex and those plants declared under Part VI of the same Annex, that are not identified for inspection on a systematic basis, the general aim of inspections shall be to verify that activities of those plants are consistent with obligations under the Convention. In particular, it shall be verified that non-declared chemicals listed in Schedule 1, 2 or 3 are not present at the plant in quantities above thresholds for declarations.

2. Inspections of plant sites declared under Part VII of this Annex shall not lead to a duplication of inspection regimes provided for plants declared under Part VI of this Annex. However, such plants, if located within a plant site inspected under this Annex, may be inspected according to the provisions of this Annex.

#### C. Inspection procedures

1. Inspection procedures shall be carried out in accordance with the relevant provisions of the Confidentiality Annex.

2. At the beginning of the inspection of the plant site, the inspected State Party shall indicate the precise location of all Schedule 2, Schedule 3 and other relevant plants, and related common infrastructure, including relevant

feedstock storage areas, product storage areas, and central effluent and waste treatment areas. The inspection team shall select for inspection from these plants and areas.

3. The inspection team shall also have the right to visually inspect other parts of the plant site, in consultation with the inspected State Party.

4. If the inspected State Party indicates the existence of a facility, such as a research and development laboratory or an explosives plant, which it wishes to limit access to or exempt from inspection, it is obliged by this Convention to make every reasonable effort, in accordance with the managed access procedures set out in Section III.B of Part VIII of this Annex, to demonstrate that the activities at the facility in question are consistent with all its obligations under the Convention.

5. Details of inspection procedures shall be developed and elaborated by the Preparatory Commission and subsequently endorsed by the Conference of the States Parties.

### III. NOTIFICATION OF INSPECTION

A State Party shall be notified by the Director-General of the Secretariat of the decision to inspect a facility 24 hours prior to the arrival of the inspection team at the site.

PART VIII: CHALLENGE INSPECTIONS CONDUCTED PURSUANT  
TO ARTICLE IX

I. DESIGNATION AND SELECTION OF INSPECTORS AND INSPECTION ASSISTANTS

1. Inspections under Article IX shall only be performed by Inspectors and inspection assistants especially designated for this function. In order to designate Inspectors and inspection assistants for inspections under Article IX, the Director-General of the Secretariat shall, by selecting Inspectors and inspection assistants from among the full-time Inspectors and inspection assistants for routine inspection activities, establish a list of proposed Inspectors and inspection assistants. It shall comprise a sufficiently large number of Inspectors and inspection assistants having the necessary qualification, experience, skill and training, to allow for rotation and availability of Inspectors. The designation of Inspectors and inspection assistants shall follow the procedures under Part I, Section II of this Annex.

2. The Director-General shall select the members of an inspection team also taking into account the circumstances of a particular request. Each inspection team shall be kept to a minimum necessary for the proper execution of its task. No national of the requesting State Party, or the inspected State party shall be a member of the inspection team.

II. PRE-INSPECTION ACTIVITIES

A. Notification

1. The request for an on-site challenge inspection shall be submitted to the Director-General of the Secretariat and shall contain at least the following information:

(a) The State Party to be inspected and, if applicable, the host State;

(b) The point of entry to be used;

(c) The location and size of the inspection site to be specified in accordance with Section II.A paragraph 4 below;

(d) The concerns regarding compliance with the Convention including a specification of the relevant provisions of the Convention about which these concerns have arisen, and of the nature and circumstances of the suspected non-compliance;

(e) The name of the observer of the requesting State Party;

(f) Any additional information the requesting State Party deems necessary.

2. The Director-General of the Secretariat shall within one hour acknowledge to the requesting State Party the receipt of its request.

3. If the requested perimeter specified by the requesting State Party includes both a declared and undeclared facility or location, which are contiguous, separate inspections shall be conducted for both in accordance with the provisions specified for declared and undeclared facilities or locations in this part of the Verification Annex. Such inspections shall constitute separate requests for an on-site challenge inspection, unless the requesting State Party decides to modify its request to cover only one of the facilities or locations covered by its original request prior to the arrival of the inspection team at the point of entry. In the event of two such separate requests, the requesting State Party shall have the right to indicate in its inspection request that more than one inspection team may be required.

4. When the request is presented to the Director-General of the Secretariat by the requesting State Party, the site to be inspected shall be designated as specifically as possible by providing a site diagram related to a reference point with geographic coordinates specified to the nearest second if possible. Where specification to the nearest second is not possible owing to the absence of sufficiently detailed maps, or where it would be helpful, site diagrams shall be supplemented by written descriptions. If possible, the requesting State Party shall also provide a map with a general indication of the inspection site and a diagram specifying precisely the boundaries of the site to be inspected.

5. The requested perimeter shall:

- (a) Run at least a 10 metre distance outside any building;
- (b) Not cut through existing security enclosures;
- (c) Run at least a 10 metre distance outside any existing security enclosures that the requesting State Party intends to include within the requested perimeter.

If the requested perimeter does not conform with the above specifications, it shall be redrawn by the inspection team so as to conform with this provision.

6. The Director-General of the Secretariat shall notify the inspected State Party and the members of the Executive Council not less than 12 hours prior to the planned arrival of the inspection team at the point of entry. The notification shall contain the following information:

- (a) The name of the requesting State Party and the name of the observer of the requesting State Party;
- (b) The point of entry to be used;
- (c) The size of the inspection site;
- (d) The size of the inspection team;

(e) Concerns regarding compliance with the Convention, including a specification of the relevant provisions of the Convention about which these concerns have arisen and of the nature and circumstances of the suspected non-compliance;

(f) The site subject to inspection as presented to the Director-General in accordance with Section II A.4 above; and

(g) Relevant information regarding aircraft arrangements.

B. Entry into the territory of the inspected State Party or host State

1. The Director-General of the Secretariat shall dispatch an inspection team as soon as possible after a request is received by the Secretariat. The inspection team shall arrive at the point of entry specified in the request in the minimum time possible, consistent with the provisions of Section II A.6 above.

2. If the requested perimeter is acceptable to the inspected State Party, it shall be designated as the final perimeter as early as possible but in no case later than 36 hours after the inspected State Party has been informed of the location of the challenged site. The inspected State Party shall transport the inspection team to the final perimeter of the inspection site. Such transportation shall be accomplished as soon as practicable, but in any case shall take no more than 12 hours after agreement on the perimeter.

3. For all declared facilities (Articles III, IV, V and VI), the following procedures will apply:

(a) If the requested perimeter is contained within or conforms with the declared perimeter, the declared perimeter shall be considered the final perimeter, with one exception: if agreed by the inspected State Party, the final perimeter may be made smaller to conform with that requested by the requesting State Party;

(b) The inspected State Party shall transport the inspection team to the final perimeter as soon as practicable, but in any case shall ensure their arrival at the perimeter no later than 12 hours after arrival by the inspection team at the point of entry.

C. Alternative Determination of Final Perimeter

1. At the point of entry, if the inspected State Party cannot accept the requested perimeter, it shall propose an alternative perimeter as soon as possible, but in any case no later than 36 hours after having been informed of the location of the challenged site. Differences shall be negotiated between the inspected State Party and the inspection team with the aim of reaching agreement on a final perimeter.

2. The alternative perimeter should be designated as specifically as possible in accordance with Section II A.4 above. It shall include the challenged site and should bear a close relationship to the requested perimeter taking into account natural terrain features and man-made

boundaries. It should bear a close relationship to the surrounding security barrier if such a barrier exists. The inspected State Party could seek to establish such a relationship between the perimeters by one or more of the following means:

(a) An alternative perimeter that does not extend to an area significantly greater than that of the requested perimeter;

(b) An alternative perimeter that is a short, uniform distance from the requested perimeter;

(c) At least part of the requested perimeter is visible from the alternative perimeter.

3. If the alternative perimeter is acceptable to the inspection team, it shall become the final perimeter and the inspection team shall be transported from the point of entry to that perimeter as soon as possible, but in any case no longer than 12 hours after acceptance.

4. If no agreement is reached at the point of entry, within a maximum period of 36 hours after the inspected State Party has been informed of the location of the challenged site, the inspected State Party shall transport the inspection team to a location at the alternative perimeter as soon as practicable, but in any case shall ensure their arrival at the location no later than 12 hours after agreement on, or designation of, the alternative perimeter.

5. Once at the location, the inspected State Party shall provide the inspection team with prompt access to the alternative perimeter to facilitate negotiations and agreement on the final perimeter and access within the final perimeter.

6. If no agreement is reached within 72 hours after the arrival of the inspection team at the location, the alternative perimeter shall be designated the final perimeter.

#### D. Verification of location

1. The inspection team shall have the right to use location-finding equipment and have such equipment and other approved equipment installed according to its directions. The inspection team may verify its location by reference to local landmarks identified from maps. The inspected State Party is to assist them in this task.

#### E. Securing the Site

1. No later than 24 hours after the inspected State Party has been informed of the location of the challenged site, it must identify all exit points for all land, air and water vehicles from the requested perimeter and provide the inspection team with evidence of all vehicular exit activity from the requested perimeter. Such evidence must consist of at least one of the following, to be selected by the inspected State Party:

- (a) Traffic logs;
- (b) Photographs;
- (c) Video recordings;
- (d) Chemical evidence equipment provided by the inspection team to observe but not interfere with such exit activity;
- (e) Allowing one or more members of the inspection team independently to maintain traffic logs, take photographs, make video recordings of exiting traffic, use chemical evidence equipment, and conduct other activities as may be agreed between the inspected State Party and team members.

2. Immediately upon the inspection team's arrival at the alternative perimeter or final perimeter, whichever occurs first, and up to the completion of the inspection, securing the site through exit monitoring procedures by the inspection team shall begin:

(a) The inspection team has the right to inspect on a managed access basis vehicular traffic exiting the site except personnel and personal passenger vehicles exiting. Personnel and vehicles entering the site will not be subject to inspection;

(b) Exit monitoring procedures by the inspection team shall include: identification of vehicular exits; producing traffic logs; taking photographs, and video recordings made by the inspection team;

(c) The inspection team has the right to go, under escort, to any other part of the perimeter to check there is no other exit activity;

(d) Additional procedures as agreed upon by the inspection team and the inspected State Parties could include:

(i) Provisions for shrouding of equipment;

(ii) Use of sensors;

(iii) Random selective access;

(iv) Sample analysis;

(e) The inspected State Party shall make every reasonable effort to demonstrate to the inspection team that any vehicle subject to inspection, to which the inspection team is not granted full access, is not being used for purposes related to the compliance concerns raised in the inspection request.

#### F. Perimeter Activities

1. As soon as the inspection team arrives at the perimeter as determined at the point of entry, it shall have the right to commence immediately perimeter activities in accordance with the procedures set out in this section, and to continue these activities until the completion of the inspection, or longer at the discretion of the inspected State Party.

2. The inspection team shall have the right at the perimeter as determined at the point of entry around the inspection site to:

(a) Conduct perimeter inspection using monitoring instruments (consistent with Part I, Section IV.D of this Verification Annex);

(b) Take wipes, air, soil or effluent samples; and

(c) Conduct any additional activities which may be agreed between the inspection team and the inspected State Party.

3. The perimeter activities of the inspection team may be conducted within a band around the outside of the perimeter as determined at the point of entry up to 50 meters in width measured outward from the perimeter. If the inspected State Party permits, the inspection team may also have access to any building or structure within the perimeter band. All directional monitoring shall be oriented inward. For declared facilities under Articles III, IV, V and VI, at the discretion of the inspected State Party, the band could run inside, outside, or on both sides of the declared perimeter.

#### G. Pre-inspection briefing and Inspection Plan

1. To facilitate development of an inspection plan, the inspected State Party shall provide a safety and logistical briefing to the inspection team prior to access. The team shall be briefed by facility representatives, with the aid of maps and other documentation as appropriate, on the activities carried out at the facility, safety measures, and administrative and logistical arrangements necessary for the inspection. The time spent for the briefing shall be limited to the minimum necessary.

2. In the course of the pre-inspection briefing, the inspected State Party may indicate to the inspection team the equipment, documentation or areas it considers sensitive and not related to the purpose of the inspection. The Inspectors shall take note of the proposals. Additionally, personnel responsible for the site will brief the team on the physical layout and other relevant characteristics of the site. The team shall be provided with a map or sketch drawn to scale showing all the structures and significant geographic features at the site. The team shall also be briefed on availability of facility personnel and records.

3. After the pre-inspection briefing the inspection team shall prepare, on the basis of the information available to it, an initial inspection plan which specifies the activities to be carried out by the inspection team, including the specific areas of the site to which access is desired. The inspection plan shall be provided to the representatives of the inspected State Party and the inspection site. Its implementation shall be consistent with the provisions of Section III below, including those related to access and activities.

4. The plan shall specify whether the inspection team will be divided into subgroups. The representatives of the inspected State Party and of the inspected site may suggest modifications to the plan. The inspection team

shall have the right to modify its inspection plan at any time. The inspection briefing as well as the establishment and discussion of the inspection plan shall not exceed the general time-limit provided for in part I of Section V.C of this Verification Annex. Its implementation shall be consistent with the provisions of Section III below, including those related to access and activities.

### III. CONDUCT OF INSPECTIONS

#### A. General Rules

1. The inspected State Party shall provide access within the requested perimeter as soon as possible, but in any case no later than 120 hours after specification of the location of the challenged site in order to clarify the compliance concern raised by the inspection request.
2. Subject to the provisions under section B and this section the inspection team shall have the access at the site it deems necessary for the conduct of its mission.
3. Upon arrival at the final perimeter of facilities declared under Articles IV, V and VI, access shall be granted following the pre-inspection briefing and discussion of the inspection plan which shall be limited to the minimum necessary and, in any event, shall not exceed 3 hours. For facilities declared under Article III, paragraph 1 (d) negotiations will be conducted and managed access commenced within 12 hours of arrival at the final perimeter.
4. The inspected State Party shall make every reasonable effort to demonstrate to the inspection team that any object, building, structure, container or vehicle to which the inspection team has not had full access, is not being used for purposes related to the compliance concern raised in the inspection request.
5. The inspection team shall be guided by the principle of conducting the inspection in the least intrusive manner possible, consistent with the effective and timely accomplishment of its mission. Wherever possible, the inspection team shall begin with the least intrusive procedures it deems acceptable and proceed to more intrusive procedures only as it deems necessary.
6. In carrying out the inspection in accordance with the request, the inspection team shall use only those methods necessary to provide sufficient relevant facts to clarify doubts about compliance with the provisions of the Convention, and shall refrain from activities not relevant thereto. It shall collect and document such evidence as is related to the compliance with the Convention by the inspected State Party, but shall neither seek nor document information which is clearly not related thereto, unless the inspected State Party expressly requests it to do so. Any material collected and subsequently found not to be relevant shall not be retained.

B. Managed Access

1. In meeting the requirement to provide access within the requested perimeter, the inspected State Party shall be obliged to allow the greatest degree of access possible in accordance with its obligations to demonstrate compliance and in accordance with the parameters of the managed access provisions set out below.
2. The inspection team shall take into consideration suggested modifications of the inspection plan and proposals which may be made by the inspected State Party, at whatever stage of the inspection including the pre-inspection briefing, to ensure that sensitive equipment, information or areas not related to chemical weapons are protected.
3. The inspected State Party shall designate the perimeter entry/exit points. At the inspected State Party's request, the inspection team and the inspected State Party may negotiate: the extent of access to any particular place or places within the requested and final perimeters as provided in paragraph 4-6 below; the particular inspection activities to be conducted by the inspection team; the performance of particular activities by the inspected State Party; and the provision of particular information by the inspected State Party.
4. In conformity with the relevant provisions of the Confidentiality Annex the inspected State Party shall have the right to take measures to protect sensitive installations and prevent disclosure of confidential data not related to chemical weapons. Such measures, may include inter alia:
  - (a) Removal of sensitive papers from office spaces and securing them in safes;
  - (b) Shrouding of sensitive displays, stores and equipment that cannot be secured in safes;
  - (c) Shrouding of sensitive pieces of equipment, such as computer or electronic systems;
  - (d) Logging off of computer systems and turning off of data indicating devices;
  - (e) Restriction of sample analysis to presence or absence of chemicals on schedules 1, 2 and 3 or appropriate degradation products;
  - (f) Random selective access whereby the inspectors are requested to select a given percentage or number of buildings of their choice to inspect; the same principle can apply to the interior and content of sensitive buildings;
  - (g) In exceptional cases only, giving individual inspectors access to certain parts of the inspection site.

5. In the event the inspected State Party restricts or denies requested access to places, activities, or information, it is obliged by this Convention to make every reasonable effort to provide alternative means to satisfy the compliance concerns which generated the challenge inspection.

6. For facilities declared under Articles IV, V and VI the following shall apply:

(a) For facilities with facility agreements, access and activities within the final perimeter shall be unimpeded within the boundaries established by the agreements;

(b) For facilities without facility agreements, negotiation of access and activities shall be governed by the applicable general inspection guidelines established under the Convention;

(c) Access greater than that granted for inspections under Articles IV, V and VI shall be managed in accordance with procedures in paragraphs 3 and 4 of this section.

7. For facilities declared under Article III, paragraph 1 (d), if access is restricted or denied to areas or structures not related to chemical weapons, using procedures in paragraphs 3 and 4 in this section, the inspected State Party shall make every effort to satisfy the compliance concern.

#### C. Observer

1. The requesting State Party shall have the right to send a representative to observe the conduct of a challenge inspection. It shall liaise with the Secretariat to coordinate the arrival of its observer at the same point of entry as the inspection team. The observer's arrival time should be planned to coincide as closely as possible with the inspection team's arrival.

2. The observer of the requesting State Party shall have the right throughout the period of inspection to be in communication with the embassy of the requesting State located in the host State or, in the case of absence of an embassy, with the requesting State itself. The observer shall have the right to either use the communications provided by the requested State Party or that of the inspection team.

3. The observer shall have the right to make recommendations to the inspection team, which the team shall take into account only to the extent it deems appropriate. The observer shall generally have the access to the inspection site as granted by the inspected State Party to the inspection team. However, if there is a place into which the inspected State Party is willing to allow the inspection team or a team member to go, but into which it does not wish the observer to go, the observer shall remain outside. Throughout the inspection, the inspection team shall keep the observer informed about the conduct of the inspection and the findings.

4. Throughout the in-country period, the inspected State Party shall provide or arrange for the amenities necessary for the observer such as communication means, interpretation services, transportation, working space, lodging, meals and medical care. All the costs in connection with the stay of the observer on the territory of the inspected State Party or the host State shall be borne by the requesting State Party.

D. Extension of Inspection Site

If the inspection team considers it necessary, for the purpose of the inspection, to visit any other contiguous location outside the boundaries of the final perimeter, the inspection site may be extended by agreement between the inspection team and the inspected State Party. A request to visit an additional contiguous location shall not extend the overall period of inspection unless agreed in accordance with section E. below.

E. Duration of an Inspection

The period of inspection shall not exceed 96 hours. It may be extended by agreement with the inspected State Party.

IV. DEPARTURE

Upon completion of the post-inspection procedures at the inspection site, the inspection team and the observer of the requesting State Party shall then leave the territory of that State as soon as possible.

V. REPORTS

A. Contents

The inspection report shall summarize in a general way the activities conducted by the inspection team and the factual findings of the inspection team with regard to the ambiguities or suspected non-compliance cited in the request for the challenge inspection and in accordance with Article IX, paragraph 18. It shall also include an assessment by the inspection team of the degree and nature of access and cooperation granted to the inspectors and the extent to which this enabled them to fulfill their mandate. Detailed information relating to the concerns regarding compliance with the Convention cited in the request for the challenge inspection shall be submitted as an Appendix to the final report and be retained within the Secretariat under appropriate safeguards to protect sensitive information.

B. Procedures

The Inspectors shall within 72 hours of their return to their primary work location submit a preliminary inspection report to the Director-General of the Secretariat. The Director-General shall promptly transmit the preliminary report to the requesting State Party, the inspected State Party and the Executive Council. A draft final report shall be made available to the inspected State Party within 20 days of the completion of the inspection for identification of any information not related to chemical weapons it considers

should not, due to its confidentiality, be circulated outside the Secretariat. The Secretariat shall consider proposals for changes to their draft final report made by the inspected State Party and using its own discretion, wherever possible, adopt them. The final report shall be submitted within 30 days of the completion of the inspection and be circulated to States Parties.

## VI. NUMBER AND DURATION OF INSPECTIONS

The following provisions shall apply to inspections conducted pursuant to this Part:

1. There shall be no limits on the number or frequency of on-site challenge inspections of facilities declared pursuant to Articles III, IV, V and VI that a State Party is obligated to receive, or shall have the right to propose.
2. The frequency of on-site challenge inspections of undeclared facilities or locations which a State Party is obligated to receive shall not exceed 12 in any 12 month period. No more than 3 such inspections shall be conducted at the same time within the territory or in any other place under the jurisdiction or control of a State Party. In addition, no undeclared facility or location shall receive more than 3 challenge inspections in any 12 month period.

PART IX: PROCEDURES IN CASES OF ALLEGED USE  
OF CHEMICAL WEAPONS

I. GENERAL

1. Investigations of alleged use of chemical weapons, initiated pursuant to Articles IX and/or X of the Convention, shall be conducted in accordance with this Verification Annex and detailed procedures to be established by the Director-General of the Secretariat.

2. The following additional provisions address specific procedures required in cases of alleged use of chemical weapons.

II. PRE-INSPECTION ACTIVITIES

A. Request for an investigation

The request for an investigation of an alleged use of chemical weapons to be submitted to the Director-General of the Secretariat, to the extent possible, should include the following information:

(a) The State Party on whose territory use of chemical weapons is alleged to have taken place;

(b) The point of entry or other suggested safe routes of access;

(c) Location and characteristics of the area(s) where chemical weapons are alleged to have been used;

(d) When chemical weapons are alleged to have been used;

(e) Types of chemical weapons believed to have been used;

(f) Extent of alleged use;

(g) Characteristics of the possible toxic chemicals;

(h) Effects on humans, animals and vegetation;

(i) Request for specific assistance, if applicable.

The requesting State Party may submit at any time any additional information it deems necessary.

B. Notification

1. The Director-General of the Secretariat shall immediately acknowledge receipt to the requesting State Party of its request and inform the Executive Council and all States Parties.

2. If applicable, the Director-General of the Secretariat shall notify the State Party on whose territory an investigation has been requested. The Director-General shall also notify other States Parties if access to their territories might be required during the investigation.

C. Assignment of inspection team

1. The Director-General shall prepare a list of qualified experts whose particular field of expertise could be required in an investigation of alleged use of chemical weapons and constantly keep this list updated. This list shall be communicated, in writing, to all States Parties within 30 days of the entry into force of the Convention and after each change to the list. Any qualified expert included in this list shall be regarded as designated unless a State Party, within 30 days after its receipt of the list declares its non-acceptance.

2. The Director-General shall select the leader and members of an inspection team from the full-time inspectors already designated for challenge inspections taking into account the circumstances and specific nature of a particular request. In addition, inspection team members may be selected from the list of qualified experts when, in the view of the Director-General, expertise not available among inspectors already designated is required for the proper conduct of a particular investigation.

3. When briefing the inspection team the Director-General shall include any additional information provided by the requesting State, or any other sources, to ensure that the inspection can be carried out in the most effective and expedient manner.

D. Dispatch of inspection team

1. Immediately upon the receipt of a request for an investigation of alleged use of chemical weapons the Director-General shall, through contacts with the relevant States Parties, request and confirm arrangements for the safe reception of the team.

2. The Director-General shall dispatch the team at the earliest opportunity, taking into account the safety of the team.

3. If the team has not been dispatched within 24 hours from the receipt of the request, the Director-General shall inform the Executive Council and the States Parties concerned about the reasons for the delay.

E. Briefings

1. The inspection team shall have the right to be briefed by representatives of the inspected State Party upon arrival and at any time during the inspection.

2. Before the commencement of the inspection the inspection team shall prepare an inspection plan to serve, inter alia, as a basis for logistic and safety arrangements. The inspection plan shall be updated as the need arises.

### III. CONDUCT OF INSPECTIONS

#### A. Access

The inspection team shall have the right of access to any and all areas which could be affected by the alleged use of chemical weapons. It shall also have the right of access to hospitals, refugee camps and other locations it deems relevant to the effective investigation of the alleged use of chemical weapons. For such access, the inspection team shall consult with the inspected State Party.

#### B. Sampling

1. The inspection team shall have the right to collect samples, of types and in quantities it considers necessary. If the inspection team deems it necessary, and if so requested by it, the inspected State Party shall assist in the collection of samples under the supervision of inspector(s) or inspection assistant(s). The inspected State Party shall also permit and cooperate in the collection of appropriate control samples from areas neighbouring the site of the alleged use and from other areas as requested by the inspection team.

2. Samples of importance in the investigation of alleged use include toxic chemicals, munitions and devices, remnants of munitions and devices, environmental samples (air, soil, vegetation, water, snow, etc.) and biomedical samples from human or animal sources (blood, urine, excreta, tissue etc.).

3. When duplicate samples cannot be taken and the analysis is performed at off-site laboratories, any remaining sample shall, if so requested, be returned to the State Party after the completion of the analysis.

#### C. Extension of the inspection site

When the inspection team during an inspection deems it necessary to extend the investigation into a neighbouring State Party the Director-General of the Secretariat shall notify that State Party about the need for access to its territory and request and confirm arrangements for the safe reception of the team.

#### D. Extension of inspection duration

If the inspection team deems that safe access to a specific area relevant to the investigation is not possible, the requesting State Party shall be informed immediately. If necessary, the period of inspection shall be extended until safe access can be provided and the inspection team will have concluded its mission.

#### E. Interviews

The inspection team shall have the right to interview and examine persons who may have been affected by the alleged use of chemical weapons. It shall also have the right to interview eyewitnesses of the alleged use of chemical

weapons and medical personnel and/or other persons who have treated or have come into contact with persons who may have been affected by the alleged use of chemical weapons. The inspection team shall have access to medical histories, if available, and be permitted to participate in autopsies as appropriate of the persons who may have been affected by the alleged use of chemical weapons.

#### IV. REPORTS

##### A. Procedures

1. The inspection team shall within 24 hours from its arrival in the inspected State Party send a situation report to the Director-General of the Secretariat. It shall further throughout the investigation send progress reports as necessary.
2. The inspectors shall within 72 hours of their return to their primary work location submit an interim report to the Director-General of the Secretariat. The Director-General shall promptly transmit the report to the Executive Council and all States Parties. The final report shall be submitted to the Director-General of the Secretariat within 30 days of their return to their primary work location.

##### B. Contents

1. The situation report shall indicate any urgent need for assistance and any other relevant information. The progress reports shall indicate any further need for assistance that might be identified during the course of the investigation.
2. The final report shall summarize the factual findings of the inspection, particularly with regard to the alleged use cited in the request. In addition a report of an investigation of an alleged use shall include a description of the investigation process, tracing its various stages, with special reference to (i) the locations and time of sampling and in situ analyses; and (ii) supporting evidence, such as the records of interviews, the results of medical examinations and scientific analyses, and the documents examined by the inspection team.
3. If the inspection team collects any information in the course of its investigation that might serve to identify the origin of any chemical weapons used, inter alia, through identification of any impurities or other substances during laboratory analysis of samples taken, that information shall be included in the report.

#### V. STATES NOT PARTY

In the case of alleged use of chemical weapons involving a non-State Party or on territory not controlled by a State Party, the Organization shall closely cooperate with the Secretary-General of the United Nations. If so requested, the Organization shall put its resources at the disposal of the Secretary-General of the United Nations.



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I. GUIDELINES FOR SCHEDULES OF CHEMICALS

A. Guidelines for Schedule 1

The following criteria shall be taken into account in considering whether a chemical should be included on Schedule 1:

1. (a) It has been developed, produced, stockpiled or used as a Chemical Weapon as defined in Article I;

or

(b) It poses otherwise a high risk to the objectives of the Convention by virtue of its high potential for use for activities prohibited under the Convention because one or more of the following conditions is met:

- (a) It possesses a chemical structure closely related to that of other toxic chemicals listed on Schedule 1 and has, or can be expected to have, comparable properties;
- (b) It possesses such lethal or incapacitating toxicity as well as other properties that might enable it to be weaponized and used as a chemical weapon;
- (c) It may be used as a precursor in the final single technological stage of production of a toxic chemical listed on Schedule 1, regardless of whether this stage takes place in facilities, in munitions or elsewhere;

and

2. It has little or no use for purposes not prohibited under the Convention.

B. Guidelines for Schedule 2 Part A

The following criteria shall be taken into account in considering whether a precursor to a Schedule 1 or Schedule 2B chemical should be included in Schedule 2 Part A:

- 1. It may be used in one of the chemical reactions at the final stage of formation of a chemical listed on Schedule 1 or Schedule 2 Part B.
- 2. It may pose a significant risk to the objectives of the Convention by virtue of its importance in the production of a chemical listed on Schedule 1 or Schedule 2 Part B.
- 3. It is produced in quantities consistent with the aim of fulfilling the verification measures stipulated in Article VI.

C. Guidelines for Schedule 2 Part B

The following criterion shall be taken into account in considering whether a toxic chemical which is not included in Schedule 1 should be included on Schedule 2 Part B:

it poses a significant risk to the objectives of the Convention because it possesses such lethal or incapacitating toxicity as well as other properties that might enable it to be weaponized and used as a chemical weapon.

D. Guidelines for Schedule 3

The following criteria shall be taken into account when considering whether a dual purpose chemical or a precursor chemical, not listed in other schedules, should be included on Schedule 3:

Toxic chemical:

1. It has been stockpiled as a chemical weapon;
  - or
  2. It may pose a risk to the objectives of the Convention because it possesses such lethal or incapacitating toxicity as well as other properties that might enable it to be weaponized and used as a chemical weapon;
- and
3. It may be produced in large commercial quantities for purposes not prohibited under the Convention.

Precursor:

1. It may pose a risk to the objectives of the Convention by virtue of its importance in the production of one or more chemicals listed on Schedule 1 or Schedule 2;
- and
2. It may be produced in large commercial quantities for purposes not prohibited under the Convention.

## II. MODALITIES FOR REVISION OF SCHEDULES AND GUIDELINES

### A. General provisions

1. The revisions envisaged consist of additions to, deletions from, or shifts between the Schedules and modifications of, additions to or deletions from the guidelines.
2. If the Director-General of the Secretariat has any information which, in the opinion of the Director-General, may require a revision of the Schedules or one or more of the guidelines. That information shall be communicated to all States Parties and the Executive Council.
3. Proposals for revision of Schedules and guidelines shall be made by States Parties in accordance with paragraphs 1 and 5 (a) of Article XIV.

### B. Decisions regarding revisions of Schedules

4. When a proposal is made regarding a deletion of a chemical from a Schedule or a shift between Schedules, the regime for that chemical shall be maintained while a decision on the proposed deletion or shift is being reached.
5. When an addition to a Schedule of chemicals is proposed no regime shall be applied to that chemical until a decision has been taken to include it on one of the Schedules.
6. The decision on a proposed revision of the Schedules shall be taken in accordance with the modification procedure set out in paragraph 5 of Article XIV.

### C. Decisions regarding revision of guidelines

7. When a proposal has been made for a revision of one or more of the guidelines, the Director-General shall undertake a review of the Schedules affected by such a revision and communicate the results to all States Parties and the Executive Council at least 30 days before the proposal is examined by the Executive Council.
8. The decision on a proposed revision of the guidelines shall be taken in accordance with the modification procedure set out in paragraph 5 of Article XIV.

III. SCHEDULES OF CHEMICALS (CAS number)

A. Schedule 1

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-dimethylphosphoramidocyanidate (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 and protonated salts  
  
e.g. VX: O-ethyl S-2-diisopropylaminoethyl  
methyl phosphonothiolate (50782-69-9)
4. Sulphur mustards:
  - 2-Chloroethylchloromethylsulphide (2625-76-5)
  - bis(2-chloroethyl)sulphide: Mustard gas (H) (505-60-2)
  - bis(2-chloroethylthio)methane (63869-13-6)
  - 1,2-bis(2-chloroethylthio)ethane: Sesquimustard (Q) (3563-36-8)
  - 1,3-bis(2-chloroethylthio)-n-propane (63905-10-2)
  - 1,4-bis(2-chloroethylthio)-n-butane
  - 1,5-bis(2-chloroethylthio)-n-pentane
  - bis(2-chloroethylthiomethyl)ether
  - bis(2-chloroethylthioethyl)ether: O-Mustard (T) (63918-89-8)
5. Lewisites:
  - Lewisite 1: 2-chlorovinylchloroarsine (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

9. Alkyl (Me, Et, n-Pr or i-Pr) phosphonyldifluoride  
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 and protonated salts  
  
e.g. QL: O-ethyl O-2-diisopropylaminoethyl  
methylphosphonite (57856-11-8)
11. Chloro Sarin: O-isopropyl methylphosphonochloridate (1445-76-7)
12. Chloro Soman: O-pinacolyl methylphosphonochloridate (7040-57-5)

B. Schedule 2 Part A

1. 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 (765-79-6)

Exemption:

- Fonofos: O-ethyl S-phenyl ethylphosphonodithioate (944-22-9)
2. N,N-Dialkyl (Me, Et, n-Pr or i-Pr) phosphoramidic  
dihalides
  3. Dialkyl (Me, Et, n-Pr or i-Pr) N,N-dialkyl  
(Me, Et, n-Pr or i-Pr)-phosphoramidates
  4. Arsenic trichloride (7784-34-1)
  5. 2,2-Diphenyl-2-hydroxyacetic acid (76-93-7)
  6. Quinuclidin-3-ol (1619-34-7)
  7. N,N-Dialkyl (Me, Et, n-Pr or i-Pr)  
aminoethyl-2-chlorides and corresponding  
protonated salts
  8. N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-ols  
and corresponding protonated salts

Exemptions:

N,N-dimethylamino ethanol and corresponding  
protonated salts (108-01-0)

(8-77-301) N,N-diethylamino ethanol and corresponding protonated salts (100-37-8)

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

10. Bis (2-hydroxyethyl)sulphide (thiodiglycol) (111-48-8)

11. 3,3-Dimethylbutan-2-ol (pinacolyl alcohol) (464-07-3)

C. Schedule 2 Part B

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

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

3. 3-Quinuclidinyl benzilate (BZ) (6581-06-2)

D. Schedule 3

1. Phosgene (75-44-5)

2. Cyanogen chloride (506-77-4)

3. Hydrogen cyanide (74-90-8)

4. Trichloronitromethane (chloropicrin) (76-06-2)

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. Triethanolamine (102-71-6)
16. Ethyldiethanolamine
17. Methyldiethanolamine
18. Fonofos (944-22-9)
19. N,N-dimethylamino ethanol and corresponding protonated salts (108-01-0)
20. N,N-diethylamino ethanol and corresponding protonated salts (100-37-8)

#### IV. MODIFICATIONS

The contents of the Annex on Chemicals shall be subject to modification in accordance with the procedures in paragraph 5 of Article XV.

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ANNEX 3: CONFIDENTIALITY ANNEX



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CONFIDENTIALITY ANNEX

A. General Principles for the Handling of Confidential Information

1. The obligation to protect confidential information shall pertain to the verification of both civil and military activities and facilities. Pursuant to the general obligation set out in Article VIII, the Organization shall:

(a) Require only the minimum amount of information and data necessary for the timely and efficient carrying out of its responsibilities under the Convention;

(b) Take measures necessary to ensure that inspectors and other staff members of the Secretariat meet the highest standards of efficiency, competence, and integrity;

(c) Develop agreements and regulations to implement the provisions of the Convention and shall specify as precisely as possible the information to which the Organization shall be given access by a State party.

2. The Director-General of the Secretariat shall have the primary responsibility for ensuring the protection of confidential information. The Director-General shall establish a stringent regime governing the handling of confidential information by the Secretariat, and in doing so, shall observe the following guidelines:

(a) Information shall be considered confidential if:

(i) It is so designated by the State party from which the information was obtained and to which the information refers; or

(ii) In the judgement of the Director-General, its unauthorised disclosure could reasonably be expected to cause damage to the State party to which it refers or to the mechanisms for implementation of the Convention;

(b) All data and documents obtained by the Secretariat shall be evaluated by the appropriate unit of the Secretariat in order to establish whether they contain confidential information. Data required by States parties to be assured of the continued compliance with the Convention by other States parties shall be routinely provided to them. Such data shall encompass:

(i) The initial and annual reports and declarations provided by States parties under Articles III, IV, V and VI;

(ii) General reports on the results and effectiveness of verification activities; and

(iii) Information to be supplied to all States parties in accordance with the provisions of the Convention;

(c) No information obtained by the Organization in connection with implementation of the Convention shall be published or otherwise released, except, as follows:

- (i) General information on the implementation of the Convention may be compiled and released publicly in accordance with the decisions of the Conference of the States parties or the Executive Council;
- (ii) Any information may be released with the express consent of the State party to which the information refers;
- (iii) Information classified as confidential shall be released by the Organization only through agreed procedures which ensure that the release of information only occurs in strict conformity with the needs of the Convention;

(d) The level of sensitivity of confidential data or documents shall be established, based on criteria to be applied uniformly in order to ensure their appropriate handling and protection. For this purpose, a classification system shall be introduced, which by taking account of relevant work undertaken in the preparation of the Convention shall provide for clear criteria ensuring the inclusion of information into appropriate categories of confidentiality and the justified durability of the confidential nature of information. While providing for the necessary flexibility in its implementation the classification system shall protect the rights of States parties providing confidential information. Work on the classification system may commence in the Preparatory Commission;

(e) Confidential information shall be stored securely at the premises of the Organization. Some data or documents may also be stored with the National Authority of a State party. Sensitive information, inter alia, photographs, plans and other documents required only for the inspection of a specific facility may be kept under lock and key at this facility in conformity with the facility agreement to be concluded on the basis of a relevant model;

(f) To the greatest extent consistent with the effective implementation of the verification provisions of the Convention, information shall be handled and stored by the Secretariat in a form that precludes direct identification of the facility to which it pertains;

(g) The amount of confidential information removed from a facility shall be kept to the minimum necessary for the timely and effective implementation of the verification provisions of the Convention;

(h) Access to confidential information shall be regulated in accordance with its classification. The dissemination of confidential information within the Organization shall be on a strictly need-to-know basis;

(i) The Director-General shall report annually to the Conference of the States parties on the implementation of this regime.

3. States parties shall treat information which they receive from the Organization in accordance with the level of confidentiality established for that information. Upon request, States parties shall provide details on the handling of information provided to them by the Organizations.

B. Employment and Conduct of Personnel in the Secretariat

1. Conditions of staff employment shall be such as to ensure that access to and handling of confidential information shall be in conformity with the procedures established by the Director-General in accordance with part A of this Annex.

2. Each position in the Secretariat shall be governed by a formal position description that specifies the scope of access to confidential information, if any, needed in that position.

3. The Director-General of the Secretariat, the inspectors and other members of the staff shall not disclose even after termination of their functions to any unauthorised persons any confidential information coming to their knowledge in the performance of their official duties. They shall not communicate to any State, organisation or person outside the Secretariat any information to which they have access in connection with their activities in relation to any State party.

4. In the discharge of their function inspectors shall only request the information and data which are necessary to fulfil their mandate. They shall not make any records of information collected incidentally and not related to verification of compliance with the Convention.

5. The staff shall enter into individual secrecy agreements with the Secretariat covering their period of employment and a period of five years after it is terminated.

6. In order to avoid improper disclosures, inspectors and staff members shall be appropriately advised and reminded about security considerations and of the possible penalties that they would incur.

7. Not less than 30 days before an employee is given clearance for access to confidential information that refers to activities within the territory, or in any place under the jurisdiction or control, of a State party, the State party concerned shall be notified of the proposed clearance. For inspectors the notification of a proposed designation shall fulfil this requirement.

8. In evaluating the performance of inspectors and any other employees of the Secretariat, specific attention shall be given to the employee's record regarding protection of confidential information.

C. Measures to Protect Sensitive Installations and Prevent Disclosure of Confidential Data in the Course of On-Site Verification Activities

1. States parties shall have the right to take such measures as they deem necessary to protect confidentiality, and shall have the right and the obligation to make every reasonable effort to demonstrate compliance with the

provisions of this Convention. Receiving an inspection they may indicate to the inspection team the equipment, documentation or areas that they consider sensitive and not related to the purpose of the inspection.

2. Teams shall be guided by the principle of conducting on-site inspections in the least intrusive manner possible, consistent with the effective and timely accomplishment of their mission. They shall consider proposals which may be made by the State party receiving the inspection, at whatever stage of the inspection, to ensure that sensitive equipment or information, not related to chemical weapons, is protected.

3. Inspection teams shall strictly abide by the provisions set out in the relevant Articles and Annexes of this Convention governing the conduct of inspections. They shall fully respect the procedures designed to protect sensitive installations and to prevent the disclosure of confidential data.

4. In the elaboration of subsidiary arrangements/facility attachments due regard shall be paid to the requirement of protecting confidential information. Agreements on inspection procedures for individual facilities shall also include specific and detailed arrangements with regard to the determination of those areas of the facility to which inspectors are granted access, the storage of confidential information on-site, the scope of the inspection effort in agreed areas, the taking of samples and their analysis, the access to records and the use of instruments and continuous monitoring equipment.

5. The report to be prepared after each inspection shall only contain facts relevant to compliance with the Convention. The report shall be handled in accordance with the regulations established by the Organization governing the handling of confidential information. If necessary, the information contained in the report shall be processed into less sensitive forms before it is transmitted outside the Secretariat and the inspected State party.

D. Procedures in Case of Breaches or Alleged Breaches of Confidentiality

1. The Director-General of the Secretariat shall establish necessary procedures to be followed in case of breaches or alleged breaches of confidentiality, taking into account recommendations made by the Preparatory Commission.

2. The Director-General of the Secretariat shall oversee the implementation of individual secrecy agreements and promptly initiate an investigation if there is any indication that obligations concerning the protection of confidential information have been violated and if the Director-General considers such an indication sufficient. The Director-General shall also promptly initiate an investigation if an allegation concerning a breach of confidentiality is made by a State party.

3. The Director-General of the Secretariat shall impose appropriate punitive and disciplinary measures on staff members who have violated their obligations to protect confidential information. In case of serious breaches the immunity from legal process may be waived by the Director-General.

4. States parties shall, to the extent possible, cooperate and support the Director-General of the Secretariat in investigating any breach or alleged breach of confidentiality and in taking appropriate action in case a breach has been established.

5. The Organization shall not be held liable for any breach of confidentiality committed by members of the Secretariat.

6. For breaches involving both a State party and the Organization a "Commission for the settlement of disputes related to confidentiality", set up as a subsidiary ad hoc body of the Conference of the States parties, shall consider the case. This Commission shall be appointed by the Conference of the States parties. Rules governing its composition and operating procedures shall be adopted by the Conference of the States parties at its first session.

E. Amendments and Modifications

Part A of this Confidentiality Annex shall be subject to amendment in accordance with the procedures in paragraphs 2 and 3 of Article XIV. Parts B, C and D of this Confidentiality Annex shall be subject to modification in accordance with the procedures in paragraph 5 of Article XV.

1. For the purpose of carrying out the necessary preparatory work for the Convention and for preparing the Convention, the Commission shall be composed of all States which have signed the Convention and of other States which may be invited by the Commission.

2. The Commission shall be composed of all States which have signed the Convention and of other States which may be invited by the Commission.

3. The Commission shall be composed of all States which have signed the Convention and of other States which may be invited by the Commission.

4. The Commission shall be composed of all States which have signed the Convention and of other States which may be invited by the Commission.

**ANNEX 4: ANNEX ON THE PREPARATORY COMMISSION**

1. The Commission shall be composed of all States which have signed the Convention and of other States which may be invited by the Commission.

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9. The Commission shall be composed of all States which have signed the Convention and of other States which may be invited by the Commission.

10. The Commission shall be composed of all States which have signed the Convention and of other States which may be invited by the Commission.

ANNEX ON THE PREPARATORY COMMISSION

1. For the purpose of carrying out the necessary preparations for the effective operation of the provisions of the Convention and for preparing for the first session of the Conference of the States parties, the Secretary-General of the United Nations shall convene a Preparatory Commission not later than 30 days after the Convention has been signed by 50 States.
2. The Commission shall be composed of all States which sign the Convention before its entry into force. Each signatory State shall have one representative in the Preparatory Commission, who may be accompanied by alternates and advisers.
3. The Commission shall be convened at the seat of the Organization and remain in existence until the first session of the Conference of the States parties has convened.
4. The expenses of the Commission, as well as of the provisional Secretariat, shall be met by the States signatories to the Convention, participating in the Commission, in accordance with the United Nations scale of assessment, adjusted to take into account differences between the United Nations membership and the participation of States signatories in the Commission. States which accede to the Convention will share the expenses of the preparatory activity through an appropriate mechanism of reimbursement. The Commission and the provisional Secretariat may also benefit from voluntary contributions.
5. All decisions of the Commission should be taken by consensus. If, notwithstanding the efforts of representatives to achieve consensus, an issue comes up for voting, the Chairman of the Commission shall defer the vote for 24 hours and during this period of deferment shall make every effort to facilitate achievement of consensus, and shall report to the Commission prior to the end of the period. If consensus is not possible at the end of 24 hours, the Commission shall take decisions on questions of procedure by a simple majority of the members present and voting. Decisions on questions of substance shall be taken by two-thirds majority of the members present and voting. When the issue arises as to whether the question is one of substance or not, that question shall be treated as one of substance unless otherwise decided by the Commission by the majority required for decisions on questions of substance.
6. The Commission shall:
  - (a) Elect its Chairman and other officers, adopt its rules of procedure, determine its place of meeting, meet as often as necessary and establish such committees as it deems useful;
  - (b) Appoint its Executive Secretary;
  - (c) Establish a provisional Secretariat to assist the Commission in its activity and to exercise such functions as the Commission may determine, appoint the necessary staff in charge of preparatory work concerning the main

activities to be carried out by the Secretariat to be established by the Convention. Only nationals of signatory States can be appointed to the provisional Secretariat;

(d) Develop draft rules on procedures and guidelines as specified in the Convention and its Annexes for subsequent endorsement as a matter of substance by the Conference of the States parties in accordance with paragraph 16 of Article VIII;

(e) Make arrangements for the first session of the Conference of the States parties, including the preparation of a draft agenda and draft rules of procedure;

(f) Undertake, inter alia, the following tasks on subjects requiring immediate attention after the entry into force of the Convention:

- (i) The detailed staffing pattern of the Secretariat, including decision-making flow charts;
- (ii) Assessments of personnel requirements;
- (iii) Staff rules for recruitment and service conditions;
- (iv) Recruitment and training of technical personnel;
- (v) Standardization and purchase of equipment;
- (vi) Organization of office and administrative services;
- (vii) Recruitment and training of support staff;
- (viii) Review the scale of financial contribution for the Organization;
- (ix) Establishment of administrative and financial regulations;
- (x) Preparation of the agreement required pursuant to paragraph 3 of Article XIII;
- (xi) Preparation of host country agreement;
- (xii) Preparation of the draft Model Agreements and facility agreements;
- (xiii) Preparation of guidelines for initial inspections;
- (xiv) Preparation of the inspection manual;
- (xv) Preparation of programme of work and budget of the first year of activities of the Organization;
- (xvi) Preparation of such studies, reports and recommendations as it deems necessary.

7. The Commission shall prepare a final report on all matters within its mandate for the first session of the Conference of the States parties and the first meeting of the Executive Council. It shall make recommendations to the Conference of the States parties, including on the transfer of functions, property and records from the provisional Secretariat to the Secretariat.

8. At the first session of the Conference of the States parties, the property and records of the Commission shall be transferred to the Organization.

ANNEX 5

ANNEX ON THE COMPOSITION OF THE EXECUTIVE COUNCIL

The Executive Council shall be appointed in Article VIII of the Convention, composed of 20 States parties which shall be as follows:

(a) The six States parties, to be elected by the Conference of the States parties which have the most significant national chemical industry, will be especially involved in the implementation of the Convention; and

(b) Twenty-four States parties, to be elected by the Conference of the States parties, providing regional representation as follows:

(i) Four from the Americas (North, Central, and South America);

(ii) Five from Europe;

(iii) Five from the Middle East and South Asia;

(iv) Five from Africa;

(v) Five from North and East Asia and the Pacific.

It is understood that, within each region, the member shall be the State party with the most significant chemical industry, which by virtue of this will be selected in accordance with paragraph 1(a).

**ANNEX 5: ANNEX ON THE COMPOSITION OF THE EXECUTIVE COUNCIL**

1. For the first year of the Executive Council's operation the six States parties under sub-paragraph 1(a), as well as the five regional States parties under sub-paragraph 1(b) which have the most significant national chemical industries, will be determined by the Preparatory Commission. The remaining 19 regional States parties shall be elected by the Conference of the States parties.

2. After the first year of the Executive Council's operation, the members of the Council shall review the membership of the 11 members serving by virtue of their status as States with the most significant chemical industries in the light of changes in the international distribution of chemical industries. Independent reviews by the Executive Council of these positions will be conducted every two years.

3. In the first year after entry into force of the Convention, the 11 members chosen by virtue of their status as States with the most significant chemical industries will serve a one-year term and the remaining 19 regional members shall serve a two-year term. Thereafter, all members of the Executive Council shall serve a two-year term.

4. The Executive Council shall elect its Chairman in accordance with rules of procedure to be developed by the Preparatory Commission and subsequently adopted by the Conference of the States parties at its first session.

ANNEX 5

ANNEX ON THE COMPOSITION OF THE EXECUTIVE COUNCIL

1. The Executive Council shall, as specified in Article VIII of the Convention, consist of 30 States parties which shall comprise the following:

(a) The six States parties, to be elected by the Conference of the States parties which, having the most significant national chemical industry, will be especially involved in the implementation of the Convention; and

(b) Twenty-four States parties, to be elected by the Conference of the States parties, providing a regional representation as follows:

- (i) Four from the Americas (North, Central, and South America);
- (ii) Five from Europe;
- (iii) Five from the Middle East and South Asia;
- (iv) Five from Africa;
- (v) Five from North and East Asia and the Pacific.

It is understood that, within each region, one member shall be the State party with the most significant chemical industry, (which by virtue of this will be especially involved in the Convention's implementation), that has not been selected in accordance with subparagraph (a).

2. For the first year of the Executive Council's operation, the six States parties under subparagraph 1 (a), as well as the five regional States parties under subparagraph 1 (b) which have the most significant national chemical industries, will be determined by the Preparatory Commission. The remaining 19 regional States parties shall be elected by the Conference of the States parties.

3. After the first year of the Executive Council's operation, the members of the Council shall review the membership of the 11 members serving by virtue of their status as States with the most significant chemical industries in the light of changes in the international distribution of chemical industries. Subsequent reviews by the Executive Council of these positions will be conducted every two years.

4. In the first year after entry into force of the Convention, the 11 members chosen by virtue of their status as States with the most significant chemical industries will serve a one-year term and the remaining 19 regional members shall serve a two-year term. Thereafter, all members of the Executive Council shall serve a two-year term.

5. The Executive Council shall elect its Chairman in accordance with rules of procedure to be developed by the Preparatory Commission and subsequently endorsed by the Conference of the States parties at its first session.





# CONFERENCE ON DISARMAMENT

CD/1146

CD/CW/WP.392

17 March 1992

Original: ENGLISH

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## POLAND

### Solid-phase extraction as a possible way of chemical warfare agents sampling for their analysis in laboratories under the Chemical Weapons Convention

The problem of sampling chemical warfare agents and transporting such samples to an analytical laboratory is difficult and not fully resolved yet. The sampling procedure and the form in which the sample is transported or stored may be decisive for the result of the analysis.

In contemporary analytical methods which allow identification of substances by comparison with standards or which allow their structures to be determined the quantity of sample may be very small. This is also true for quantitative analysis. Therefore small samples are sufficient for a full analysis of substances suspected to be chemical warfare agents.

To sample different toxic substances such as polyaromatic hydrocarbons and pesticides, solid-phase extraction (SPE) is very often used. To date it is not used for sampling chemical warfare agents. But it may be used in many cases for the purpose. Using this method, samples may be taken from installations, from water and from solutions in different organic solvents. Such solutions may be obtained after washing off some contaminated materials or by extraction of soil. SPE may also be used for the isolation of chemical warfare agents or their metabolites from biological matrices such as plasma or serum. The matrix frequently interferes with the determination of the analyte and SPE is a way of separating them.

The SPE method relies on adsorbing the substance to be analysed on adsorbent in a column; liquid chemical warfare agents directly and liquid and solid ones from solvent by an adsorbent. In this manner instead of transporting liquid or a large volume of solution we need only to transport a small column with adsorbed substance. The columns after closing firmly may be transported safely. Even after damage to the columns the adsorbed substance is desorbed very slowly and the chance of producing a harmful concentration of the substance in air is very small.

The adsorbed substance is eluted from the column using small amount of proper solvent receiving pure solution, much more concentrated in comparison with initial solution and good for analysis using different analytical methods.

Commercial columns filled with different adsorbents are available. The materials and equipment for SPE are produced by several firms.

J.T. Baker SPE system e.g. comprises polypropylene columns preppacked with high capacity sorbents contained between two polyethylene sinters. Glass columns with teflon sinters are also available. The sorbent choices comprise reverse phase, normal phase or ion exchange silica gel-based bonded phases. Columns are also available packed with normal phase adsorbents or size exclusion gel.

The volume of columns for extraction are 1, 3 or 6 ml. According to their capacity the weight of adsorbents in them is 100, 200, 500 or 1,000 mg.

The scheme of the SPE column is shown in figure 1.

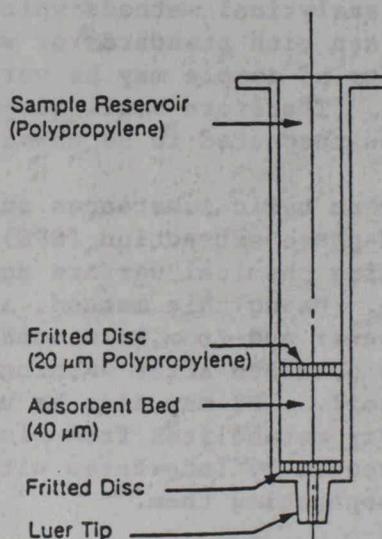


Fig. 1. Disposable extraction column.

Using the SPE columns it is possible to extract substances from sample solution volumes which range from a few hundred microlitres to several hundred millilitres.

SPE columns can be processed by vacuum, positive pressure or centrifugation. The most convenient is to process the columns by vacuum using a special system - figure 2.

SPE is a sample preparation technique based on the separation mechanisms of liquid chromatography. In SPE the solubility and functional group interactions of substance to be analysed, sorbent and solvent are optimized to effect retention or elution.

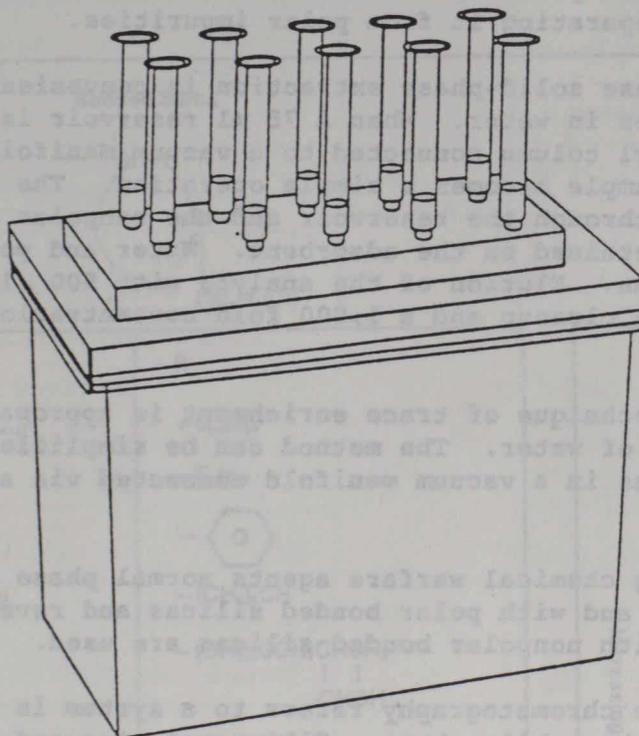


Fig. 2. Vacuum manifold extraction system.

When the analyst has a liquid substance to be analysed he is able to sorb it on the adsorbent at a place of sampling and to elute it in the laboratory. For a polar analyte a polar adsorbent should be used. For nonpolar substances to be analysed nonpolar adsorbents and solvents are recommended.

Having analytical samples as solutions sample cleanup and concentration are possible. When the analyst has a sample containing an analyte more polar than associated impurities, normal phase conditions should be selected. In this case the sample should be dissolved in a solvent (e.g. methylene chloride) less polar than the adsorbent (silica). Upon passing the solution through the column, the polar analyte is adsorbed by the silica; the relatively nonpolar impurities have greater affinity for the solvent and pass through the column. The polar analyte is then removed from the column by the addition of a more polar solvent which competes more effectively for the analyte than the silica itself. Thus, the polar analyte has actually been separated from the less polar impurities.

When the impurities are more polar than the analyte, a reversed phase system applies. The sample is dissolved in a polar medium and the solution is passed through a nonpolar adsorbent. The polar impurities remain in the solvent system and pass through the column. The less polar analyte is adsorbed by the low polarity adsorbent. Addition of a nonpolar solvent then elutes it thus separating it from polar impurities.

Reversed phase solid-phase extraction is convenient for concentrating organic substances in water. When a 75 ml reservoir is attached to 6 ml nonpolar octadecyl column connected to a vacuum manifold, the processing of a 500 ml aqueous sample becomes a simple operation. The entire 500 ml aqueous sample is drawn through the reservoir and the nonpolar organic trace components are retained on the adsorbent. Water and polar components pass through the column. Elution of the analyte with 500  $\mu$ l of appropriate solvent provides a simple cleanup and a 1,000 fold concentration of the analyte in the eluate.

The above technique of trace enrichment is appropriate for field sampling of large volumes of water. The method can be simplified by the insertion of disposable columns in a vacuum manifold connected via a trap to a small portable pump.

For sampling chemical warfare agents normal phase chromatography with polar adsorbents and with polar bonded silicas and reversed phase chromatography with nonpolar bonded silicas are used.

Normal phase chromatography refers to a system in which the adsorbent is more polar than the mobile phase. Silica, alumina and activated magnesium silicate are used for SPE; silica is the most common. The polar surface of silica adsorbs slightly or moderately polar compounds dissolved in nonpolar or slightly polar organic solvents. Such analytes are eluted from the column with polar solvents. However, water soluble organics are too polar as they adhere so tightly to silica that elution by any solvent is impractical.

Using normal phase chromatography with polar bonded silicas compounds of moderate to strong polarity adsorb on them. The sample is dissolved in a solvent possessing as low polarity as possible; the analyte is eluted with a solvent of high polarity.

Reversed phase chromatography refers to any system in which the adsorbent is less polar than the mobile phase. Here nonpolar phenyl, octyl and octadecyl substituted siloxanes adsorb nonpolar or slightly polar analytes dissolved in polar solvents. These bonded phases are used for the analysis of trace organics in aqueous matrices in clinical and environmental analysis. The analytes are generally eluted from these sorbents with solvents of low polarity.

The examples of sorbents for SPE are shown in Table 1.

The scheme showing how the selection of an SPE system depends upon sample type is shown in Table 2.

Table 1. The examples of sorbents for solid-phase extraction

Bonded Silica	
Support	R
octadecyl (C <sub>18</sub> )	- C <sub>18</sub> H <sub>37</sub>
octyl	- C <sub>8</sub> H <sub>17</sub>
phenyl	-
cyanopropyl	- (CH <sub>2</sub> ) <sub>3</sub> CN
DIOL	- (CH <sub>2</sub> ) <sub>2</sub> CH(OH)CH <sub>2</sub> OH
aminopropyl (NH <sub>2</sub> )	- (CH <sub>2</sub> ) <sub>3</sub> NH <sub>2</sub>
diamino	- (CH <sub>2</sub> ) <sub>2</sub> NHCH <sub>2</sub> CH <sub>2</sub> NH <sub>2</sub>
silica gel	
aromatic sulfonic acid	- (CH <sub>2</sub> ) <sub>3</sub> SO <sub>3</sub> H
quaternary amine	- (CH <sub>2</sub> ) <sub>3</sub> N <sup>+</sup> (CH <sub>3</sub> ) <sub>3</sub> Cl <sup>-</sup>

Increasing Polarity

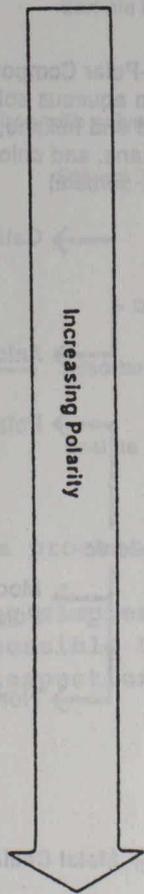
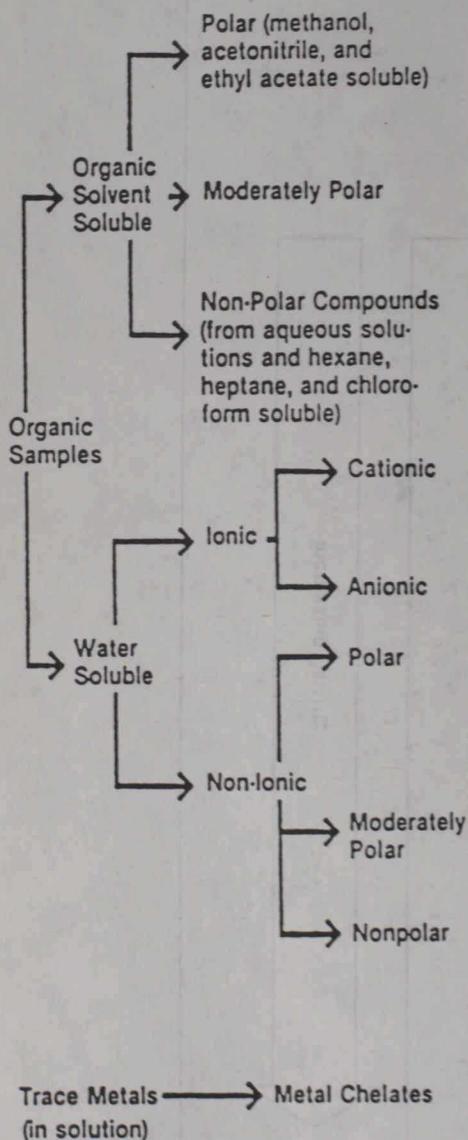


Table 2. The selection of solid-phase extraction system



Separation Mechanism <sup>1</sup>	Extraction Column <sup>2</sup>	Elution Solvent <sup>3,4</sup>
NPC	Diol Cyano Amino Diamino	Isopropanol Methanol
LSC	Silica Gel	Isopropanol Methanol
RPC	Octadecyl Octyl Phenyl Cyano	Hexane Chloroform Methanol
IEC	Aromatic Sulfonic Acid	Acid
IEC	Quaternary Amine	Base
NPC	Diol Cyano Amino Diamino	Isopropanol Methanol
LSC	Silica Gel	Isopropanol Methanol
RPC	Octadecyl Octyl Phenyl Cyano	Hexane Chloroform Methanol
IEC	Amino Diamino	Low pH Aqueous 1-8N HCl Strong Chelators (Thiourea)

<sup>1</sup>Separation Mechanisms

LSC: Liquid-Solid Chromatography (Adsorption)

NPC: Normal-Phase Chromatography (Bonded Phase Partition)

RPC: Reversed Phase Chromatography (Bonded Phase Partition)

IEC: Ion-Exchange Chromatography (Bonded Phase Ion-Exchange)

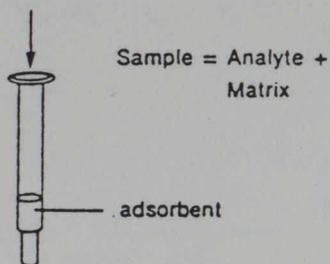
<sup>2</sup>Extraction columns listed in degree of increasing polarity

<sup>3</sup>Eluting solvents listed in degree of increasing polarity

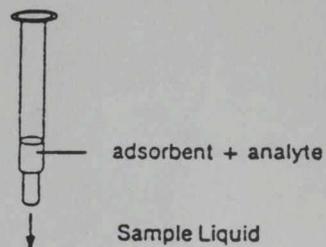
<sup>4</sup>Selective elution can be performed by combining two or more miscible solvents to achieve various degrees of polarity

Solid-phase extraction is performed in four steps - figure 4.

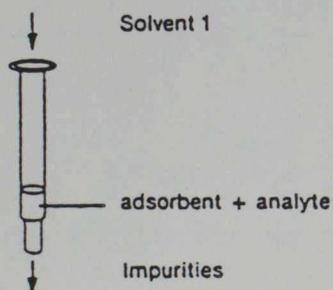
1. Apply sample to column.



2. Aspirate sample through adsorbent.



3. Remove impurities with solvent 1.



4. Elute analyte with solvent 2.

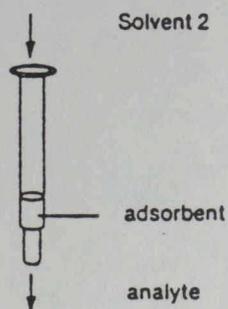


Fig. 4. Solid-phase extraction process

Ways of using SPE for collecting and preparing samples of chemical warfare agents are not well recorded. But it is possible to prepare procedures useful for sampling substances during inspections envisaged in the convention on chemical weapons.

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# CONFERENCE ON DISARMAMENT

CD/1152  
CD/CW/WP.410  
5 June 1992

ENGLISH  
Original: SPANISH

## SPAIN

### REPORT ON A TRIAL CHALLENGE INSPECTION

#### 1. INTRODUCTION

In May 1991, Spain carried out a trial inspection in a civilian chemical plant in an attempt to comply with the rules that the Convention on the prohibition of chemical weapons will in time lay down for systematic inspections of declared facilities producing or capable of producing substances listed in Schedules 2 and 3.

The Government of Spain recently decided to take the steps necessary to carry out a trial inspection at a military facility according to the rules for challenge inspection at an undeclared facility. That is the subject of the present report.

Among the main objectives of that operation there naturally stands out that of testing the currently foreseeable provisions of the final text of the Convention. However, the inspection was also aimed at:

Defining with greater precision the competence of the National Authority regarding the organization and conduct of this type of inspection;

Identifying the real difficulties that the effecting of a trial inspection may cause at the national level;

Testing the challenging State's observer status under the Convention;

Acquiring experience in searching for and processing evidence of the existence of chemical warfare agents in a military facility;

Analysing the suitable composition of inspection teams;

Studying criteria applicable to the protection of the confidentiality of information provided to inspectors and to the security in general terms of the challenged country.

The participants in the inspection included, for purely learning purposes, a far larger group of military and civilian experts than that described in this report. Those purposes being considered internal to the Spanish armed forces, the report contains no detailed information on the activities of the persons in question, their assignment falling outside the scope of the Convention.

The provisions taken into account for the conduct of the inspection were those contained in the rolling text in document CD/1116.

## 2. PREPARATION FOR THE INSPECTION

### 2.1 Facility inspected

At the first preparatory meeting for the inspection, it was decided that the site selected should be one where conditions were as difficult and realistic as possible. Consequently, of the alternatives available, the choice finally settled on a naval base where, within an area of 400 hectares, there are 138 structures comprising above-ground and underground munitions dumps, laboratories, workshops, fuelling stations and health and logistical support facilities, as well as administrative buildings and living quarters. The site lies in a deep valley surrounded by high hills and open to the sea, with rolling terrain largely covered by trees. The entire perimeter is closed off by a fence and there are two road entrances and an exclusively military harbour.

### 2.2 Challenge

The ground on which the implementation of the inspection machinery was based was taken to be a challenge for possible storage and handling in the facility of munitions filled with chemical warfare agents, i.e. for breach of articles I and VI of the Convention.

The challenge specified the location of the suspect facility by means of broad geographical coordinates and references that did not relate strictly to the facility, but to the zone in which it lies.

### 2.3 Composition of the teams

#### 2.3.1 Inspection team

A team leader with experience of CFE inspections;

A weapons engineer (chemist) from the La Marañosa National Factory with extensive knowledge of the Convention;

Two experts in CFE inspections;

An expert in nuclear, bacteriological and chemical (NBC) warfare and instructor at the Army NBC College.

### 2.3.2 Composition of the escort team

This team, which represented the National Authority, comprised:

A team leader with experience of CFE inspections;

An expert in NBC warfare and instructor at the Army NBC College;

A naval weapons engineer designated by the inspected facility;

Two experts in CFE inspections and arms control negotiations;

A chemist from the La Marañosa National Factory with expert knowledge of laboratory techniques;

A naval munitions specialist designated by the facility.

### 2.4 Observer from the challenged State

The person designated for this function was a nuclear engineer representing the General Directorate of Armaments and Equipment.

### 2.5 National observers

Although their presence is not provided for in the text of the Convention, the following persons participated, for learning purposes, as observers:

Two diplomats familiar with the text of the Convention;

Two representatives of the Ministry of Defence;

One representative of each verification cell from each of the three General Staffs.

## 3. CONDUCT OF THE INSPECTION

### 3.1 Prior stages

The sequence of events that triggered the inspection was taken to be the following:

The Director General of the Technical Secretariat notifies the Spanish Government of the existence of a challenge against Spain for possession and storage of chemical weapons in an undeclared facility identified by geographical coordinates;

The National Authority takes measures to facilitate the inspection team's entry to Spanish territory via the point of entry and sets in motion the machinery for the provision to the inspectors of escort and transport

services and assistance. The inspection team's arrival at the point of entry was assumed to have occurred within 24 hours of the notification to the Spanish Government;

At an initial coordination meeting between the inspection team and the Spanish authorities, the team spells out in greater detail the content of the challenge, its requirements for the inspection and the perimeter to which access is sought;

Simultaneously with this first meeting, the entrances to the perimeter requested by the inspection team are closed, except for one, chosen on a map provided by the National Authority, which is placed under surveillance by means of continuous video recordings;

Following the definition of the facility to which the challenge relates and the securing of the tentative perimeter, all participants in the inspection are flown to the airport closest to the zone containing the facility.

### 3.2 Negotiation concerning the perimeter and controlled access

The leader of the inspection team, the facility chief and the representative of the National Authority negotiated to reach agreement on the perimeter of the challenged facility.

In view of the geographical features of the terrain and of the need to apply the procedures and techniques of "controlled access" by the inspectors to the various buildings in the facility, thereby protecting effectively the security of the challenged State, the negotiation concerning the perimeter was assumed to be straightforward and the requested perimeter was made to match the agreed perimeter from the outset.

Immediately thereafter, and thus within the time-limit laid down in the text of the Convention, the inspection team was taken to the final perimeter.

To make the trial inspection as effective as possible while safeguarding the security of the facility, the next step was to define, within the agreed final perimeter, a system of controlled access defined as follows:

All the land entrances except one were kept closed, and a check was kept on entry and exit by goods vehicles via the only open such entrance and on berthings and sailings via the marine access;

Random access to the munitions tunnels, powder stores and workshops through the selection in each case of 20 per cent of the total, it being considered that the quantity chosen represented a sufficiently meaningful sample.

### 3.3 Inspection plan

On receiving the inspectors, the facility authorities conducted a briefing session and provided the inspectors with the following documentation:

1. A sketch map of the facility referring to all the significant elements within it;
2. A diagram of the wastewater system.

The authorities described the activities carried on within the facility and were simultaneously informed of the inspection team's logistical and administrative needs.

There followed a brief overflight of the perimeter immediately outside it in a helicopter without any type of sensor.

During the overflight, special attention was paid to the usable access points in the fence marking the perimeter of the facility.

The inspection plan was drawn up to allow for a maximum reasonable time for the inspection of 48 hours.

The members of the team, in keeping with the assumptions for the trial, were divided into the following groups:

- A. Management of the inspection and visual inspection.
- B. Taking, custody and, where appropriate, analysis of samples "in situ".
- C. Surveillance of the perimeter and of the inside of the facility.

The management groups assignment was to go through the specified facilities, to look for evidence and to decide what samples should be taken and where they should be taken.

The sampling group's assignment was to go only to the points identified by the management group in order to take the samples requested by that group and to seal and guard those samples.

The assignment of the perimeter surveillance group was to monitor the exit of goods vehicles by the land access point and the marine access point and to check that the other land entrances and the perimeter fence remained closed.

The buildings and facilities that it was agreed to inspect were the following:

Above-ground powder magazines: one from each module in each group;

Munitions storage tunnels: two from each group;

Laboratories: reagents, documentation, instruments, analytical equipment;

Workshops: infrastructure, ventilation system, etc.;

Wastewater disposal and treatment system: sampling;

Waste treatment plant: sampling of the air and of suspect containers;

Fuelling station: non-fuel chemicals;

Fire service: equipment for the neutralization of chemical agents;

Medical service: drugs, casualty records for chemical agents, etc;

Library: books and documents on the use and storage of chemical agents.

The itinerary drawn up for the inspection group precluded the transfer of munitions from uninspected to inspected buildings.

### 3.4 Search for evidence

#### 3.4.1 Munitions

The methods employed to investigate the presence of possible chemical agents in munitions were non-destructive.

The first step was to select and weigh various projectiles.

Then ultrasound was used to determine for each of them the thickness of their steel casing at various points.

On the one hand, these measures gave an idea of the inside shape of the projectile and on the other they provided information necessary for the subsequent gamma-radiographic examination.

This examination was made with the projectile placed at an inclination of 30° such that, had the charge been liquid, the horizontal surface line would have been detectable.

Once the gammagram was available, it was studied for the presence of cylinders, partitions, etc.

In any event, the gammagram made it possible to estimate the volume, and thus the weight of the metal section.

Deducting the weight of the metal section from the total weight of the projectile gave the weight of the charge; the volume of the charge being known, the final step was to deduce its density.

Had the density been between 1 and 1.5, there would have been grounds for suspecting the charge to comprise chemical agents and other, more conclusive types of test would have been made.

The non-destructive methods of analysis were supplemented by the taking of samples.

### 3.4.2 Facilities

As regards the search for evidence in other buildings and facilities, the procedure was as follows:

A search was made for the presence or otherwise of collective chemical protection systems such as water or air filters, the electrical capacity and installation were investigated, etc.;

In the munitions, gunpowder and explosives storage tunnels, the ventilation systems were also examined in a search for collective filters, and in conclusion air and powder samples were taken;

In the chemical laboratories, inspections were made of the equipment and reagents present and of the buildings' infrastructure;

In the workshops, checks were made of whether the tools and facilities could be used for the assembly, handling or filling of chemical munitions and whether the facility's structure and departments were capable of supporting such activities;

In the case of the fire service, a search was made for chemical protection and decontamination equipment;

In the infirmary, a search was made for evidence of the presence of antidotes to chemical warfare agents such as Oximas or any other pharmacological compound usable to treat lesions caused by chemical agents.

### 3.5 Collection of samples

Samples were taken in the places indicated and on the elements marked by the management group and all of them were held permanently in the custody of the sampling group.

All the samples were taken in duplicate, with one of them, after having been duly authenticated by the inspectors, being left in the control of the facility authorities.

#### 3.5.1 Gaseous samples

For the samples of ambient air, use was made of a Gibson-type constant-flow pump with an intake of 1 litre/minute through tubes filled with activated charcoal into an 8 x 70 mm column.

The selective samples of gases in projectiles explosives canisters were taken with small-diameter (6 mm) glass tubes filled with 0.1 gr of TENAX- and XAD-2-type resins. The plug replacing the fuse in the projectile was unscrewed without removing it completely and the tube with the resin was inserted into the canister and 250 cc of air were slowly absorbed.

### 3.5.2 Liquid samples

Samples of waste water were taken in two different forms:

Volume of 200 cc in glass flasks with an airtight Teflon plug;

Volume of 1 litre through glass tubes filled with TENAX resin.

### 3.5.3 Solid samples

Depending on their origin, these were collected using two different procedures:

Samples of earth, solids, rubber, fabrics, etc., were taken by placing in glass tubes with airtight Teflon plugs small quantities of the substance together with a small amount of anhydrous potassium sulphate to reduce hydrolysis during transport;

Samples of stains on concrete which could not be extracted by scraping with a spatula were obtained by using cotton wool soaked in dichloromethane that was then placed in an airtight tube with anhydrous potassium sulphate.

### 3.6 Transport of samples

The gaseous samples were suitably packaged and transported in an icebox with Jelly-Ice.

The liquid samples were transported in glass flasks with the products separated into TENAX- and XAD-4-type columns.

The solid samples, like the others, were sealed and labelled with a code corresponding to the record made out for each sample.

### 3.7 Analysis of samples

The analyses were carried out in the NBC laboratory of the La Marañosa National Factory after the inspection and lasted two days.

#### 3.7.1 Preparation of samples

The gaseous samples absorbed by the tubes of activated charcoal were extracted by the counterflow technique using 20 cc of dichloromethane and were then concentrated to 0.5 cc in a microconcentrator.

The liquid samples transported in glass bottles were passed by gravity through small glass tubes filled with 50 mg of XAD-4. After drying by centrifuging and the passage of dry nitrogen, they were extracted with 0.5 cc of ethyl acetate.

The solid samples were placed in a SOLHET extractor with 25 cc of dichloromethane. After being subjected to various extraction cycles, the solution was treated with anhydrous potassium sulphate and concentrated in a microconcentrator to a volume of 0.5 cc.

### 3.7.2 Qualitative analysis

The following methods were employed:

Gas chromatography with flame-photometric detector (GC-FPD);

Gas chromatography with selective mass detector (GC-MS);

Gas chromatography with infrared detector (GC-(FT)IR).

The first method is of high sensitivity for indicating the presence of agents containing sulphur or phosphorus.

The second is a more powerful means of identifying, with adequate precision, the compounds extracted.

In the event of the detection of a sufficiently high concentration of warfare agents in the sample, the most suitable method of confirming the result obtained by MS is considered to be GC-FIR analysis.

### 3.8 Taking of photographs

By prior agreement between the inspection team and the local authority, the photographs requested by the team were taken by personnel belonging to the facility. The camera was of the instantaneous development type and the photographs were taken in two copies, of which one was handed over to the inspection team and the other to the facility personnel.

Only photographs directly relating to disagreements arising during the inspection with regard to matters such as the capacity of ventilation systems, suitability of infrastructure, safety signs, etc., were taken.

## 4. ANALYSIS AND COMMENTS

### 4.1 Security of information

Meticulous preparation of the facility personnel and the escort team is necessary in order to avoid the disclosure of sensitive information and, at the same time, provide the information necessary for the inspection team to be able to do its work.

### 4.2 Composition of the inspection team

The number of inspectors will depend on factors that will vary with each facility, bearing in mind that the inspection must furnish the best possible guarantee of the non-presence of chemical weapons and that the inspection team should be kept as small as possible.

Account must be taken of the following:

In most cases, the inspection team will have to split into at least two subteams having similar or different functions and each comprising at least two inspectors;

Each subteam will have to have at least one assistant to help with record-making, the transport of equipment and the search for evidence.

#### 4.3 Composition of the escort team

The escort team will have to have a technical capability equivalent to that of the inspection team so that it can serve as a competent interlocutor between the inspection team and the inspected facility.

There should be at least one of its members in each of the groups into which the inspection team divides.

Lastly, the escort team will have to manage all the support services and infrastructure needed by the inspection team.

#### 4.4 Closing off of the perimeter of the facility

For understandable reasons of shortage of staff, and on the other hand, because of the need not to paralyse the activities of the facility, the closing-off and surveillance of the perimeter of the inspected facility turned out to be one of the inspection team's hardest tasks.

In the trial, control of the perimeter was achieved by closing and sealing all the access points in the perimeter except one, over which the inspection team exercised surveillance by making random checks of the goods vehicles entering or leaving the enclosed area.

In the trial in question, the ideal minimum number of staff assigned to the closing and controlling of the perimeter of the facility was set at four people, which, despite being a minimum figure, significantly increases (by almost 75 per cent) the ideal number of members of the inspection team, which may be estimated at about five.

While four men would have been sufficient in this case, it must be borne in mind that the military facility inspected on this occasion is perfectly delimited by the surrounding hills and by a well-nigh impenetrable fencing system and that there are very few vehicular entry or exit points.

#### 4.5 Initial tour of the facility

In most cases, the initial tour of the facility will be of substantial assistance in drawing up the inspection plan, even though it may in some instances take a considerable amount of time.

Sometimes the value of a tour made by terrestrial transport may be small if it is not supplemented by observation from a point dominating the entire

facility or by a short overflight by helicopter; the latter is considered very useful both from the point of view of time-saving and because it enables the inspection team to set an overall idea of the facility without revealing details that the inspected State may wish to keep secret.

#### 4.6 Taking of samples

Sample-taking is an arduous task that requires a great deal of time and therefore determines the rhythm of the inspection. Consequently, the inspection team should, if possible, be organized in such a way that the inspectors who are specifically concerned with sample-taking can begin their work as soon as possible and, if that can be managed, immediately following the initial tour of the facility after the team leaders have negotiated and agreed a mutually acceptable inspection plan with the authorities of the inspected facility.

Consequently, the inspection team's tasks should be flexibly organized so as to save time, even though that necessitates using more vehicles, means of communication and personnel, which will have to be supplied by the facility.

Each sample must be duplicated. This result can be achieved by simultaneous sampling by the inspection and escort teams using the same apparatus and procedures or by division of a single sample.

For each sample obtained, a record must be made out showing: the date, time and place of the taking of the sample; the procedure used to obtain the sample; the team employed; the type of sample; the inspector or technician who took the sample.

In many cases, sampling need not be destructive, since it is generally possible to determine whether a charge is chemical or not by means of sensitive non-destructive techniques.

The sampling groups must comprise one or two technicians from the inspection team, another from the escort team and at least one assistant to help with packing, registering, etc.

#### 4.7 Analysis of samples

Only in very specific cases will the evidence found enable definitive conclusions to be reached without the need to analyse the samples taken.

Moreover, carrying out the analyses at the inspected facility will, as a general rule, be impossible for one of the following reasons:

The inspected State or the facility's process of work will not permit it;

There will not be enough time for the analysis during the period set for the inspection;

The facility will not have the right staff or instruments to carry out the analysis.

Lastly, it should be borne in mind, that although "in situ" analysis is very convenient, qualitative analyses undertaken under such conditions cannot be very reliable. It is preferable to take the samples to a laboratory and to analyse them there.

#### 4.8 Photographs

The taking of photographs is one of the most delicate aspects of the security of the facility during the inspection and it must be ensured that it does not represent a breach of that security. For this reason, it is advisable that:

Photographs should be taken only of the documents or equipment that are needed as evidence in order to resolve a difference in interpretation;

In order to avoid unauthorized shots, photographs should be taken by the escort team at the request of the inspection team. Accordingly, the inspection team should not carry either still or video cameras;

The photographs that are taken should be made in two copies for the inspection and escort teams and should permit immediate verification, for which reason they should be of the instantaneous development type;

All the photographs taken should be attached to the inspection report and should be signed by the leaders of the inspection and escort teams, with an indication of the date, time and place of their taking and a brief description of what they show;

For the use of flash units in the taking of photographs, account should be taken of the safety regulations at the facility.

#### 4.9 Reliability of challenge inspections

Recourse by a State party to the future Convention on the prohibition of chemical weapons to the challenging of another State party before the Organization on the basis of reasonable evidence entails a definite political risk deriving from, inter alia, the fundamental limitations of such inspection at a party's request.

Challenge inspection has, indeed, a conceptual limitation that derives from its nature, by virtue whereof there can only be certainty as to its result if the latter is positive, that is, if evidence is found of the current or past presence of chemical weapons.

It is obvious that proof of non-presence, however exhaustive the operation may be, always leaves room for doubt; hence, also, the fundamental differences proven by the experts of the Spanish armed forces between this

system of inspection in the Convention on Chemical Weapons and the similar systems in the CFE Conventions, in which the object is to verify the existence of various equipment.

In view of all this, it was possible to prove in practice through the trial what was already a virtual certainty before the trial was carried out: challenge inspection must be a last resort, being markedly political in nature, and the more closely the interests of the inspected State and the inspection team coincide - a coincidence based on the desire on the one hand to dispel the doubts affecting the security of the challenging State, and the existence on the other hand of an overwhelming desire to prove the "innocence" of the inspected State and thereby its proper fulfilment of the provisions of the Convention - the more reliable will be its result.

Subject to these conditions, the institution of challenge inspection will be totally effective and will fill the role expected of it within the framework of the overall system of verification and the Convention on Chemical Weapons.

#### 4.10 Observer

As was foreseeable, the figure of the observer proved controversial and it was therefore agreed to restrict his access to and participation in the inspection to the strict limits compatible with his existence.

While the observer fulfils the important purpose of providing the challenging State with guarantees as to the efficiency with which the inspection team performs its duty, his constant presence in inspection activities is impossible because it transforms security problems into matters more important than the inspection itself and provokes on the part of the challenged State attitudes of excessive rejection and distrust that can vastly complicate an exercise of this nature.

Notwithstanding, the observer was informed, solely by the leader of the inspection team and/or the leader of the escort team, about all the aspects of the inspection, beginning from the time when the plan was drawn up until the preparation of the final report, and including all the intermediate stages.

The observer was prevented from having access to any type of documentation and to any of the facilities inspected and remained, with an escort, in a facility building until the operation was completed, with periodic reports being made to him on its progress.

#### 4.11 Time-limits

In conclusion, emphasis must be placed on the importance according to Spain's experience as described in this report of time-limits during the initial stages of the conduct of a challenge inspection. This point may indeed be of such importance as to compromise the very reliability of the

results obtained. The time that elapses between the notification to the challenged State and the completion of the negotiations concerning the perimeter and the actual entry of the inspection team into the area where it is to begin its work must be kept to the minimum compatible with the resolution of the difficulties there are to be overcome: the negotiations concerning the perimeter, while probably the greatest problem and the greatest point of concern for legitimate security reasons, can be reduced in importance if it is borne in mind that controlled access techniques are an effective means of catering to those security concerns and can thus lessen the drama of negotiating the final perimeter.

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# CONFERENCE ON DISARMAMENT

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CD/1153  
CD/CW/WP.412  
11 June 1992

ENGLISH ONLY

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LETTER DATED 11 JUNE 1992 FROM THE CHARGE D'AFFAIRES A.I. OF NORWAY  
ADDRESSED TO THE PRESIDENT OF THE CONFERENCE ON DISARMAMENT, TRANSMITTING  
A RESEARCH REPORT ENTITLED "VERIFICATION OF A CHEMICAL WEAPONS CONVENTION:  
RECOMMENDED OPERATING PROCEDURES FOR SAMPLING AND SAMPLE HANDLING, PART XI"

I have the honour to transmit to you a research report entitled  
"Verification of a Chemical Weapons Convention: Recommended Operating  
Procedures for Sampling and Sample Handling, Part XI". This research report  
represents a further contribution of Norway to the negotiations in the  
Conference on Disarmament on a Chemical Weapons Convention.

I would appreciate it if the report could be circulated as an official  
document of the Conference on Disarmament as well as the Ad Hoc Committee on  
Chemical Weapons.

(Signed)

Björn Skogmo  
Ambassador  
Chargé d'affaires a.i.

CONFERENCE ON DISARMAMENT

RESEARCH REPORT ON  
VERIFICATION OF A CHEMICAL  
WEAPONS CONVENTION

RECOMMENDED OPERATING PROCEDURES FOR  
SAMPLING AND SAMPLE HANDLING

PART XI

I have the honor to refer to the research report entitled "Verification of a Chemical Weapons Convention - Recommended Operating Procedures for Sampling and Sample Handling, Part XI". This research report represents a further contribution to the verification in the Chemical Weapons Convention.

I would like to express my appreciation to the Ad Hoc Committee on Chemical Weapons.

Yours faithfully,  
Ambassador  
Ole J. Dahl

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## SUMMARY

The collection and handling of samples is an important part in verification of a chemical weapons convention. Reliable results from sophisticated analytical equipment can only be obtained if the samples have been collected and treated properly. This report gives complete procedures for sampling and sample handling in connection with both verification of alleged use and verification of alleged production in a chemical facility.

The recommended operating procedures presented here are based on extensive field testing at the Norwegian Defence Research Establishment during the last ten years in order to reveal problems which do not arise in laboratory experiments.

The procedures deal with all parts of sampling and sample handling, including localization of the contaminated area, the amounts and sizes of samples which should be collected, and the preferred sample materials. Methods for packing, securing and transport of samples are also described together with sample handling in the laboratory.

One of the most important parts of the sampling procedure is proper documentation of the samples, sampling site and sampling procedures. A form has therefore been drawn up in which all information obtained during sampling should be written. A transport log which should follow the samples from the sampling site to their destination has also been worked out and is presented in this report.

The last part of sample handling is treatment of the sample in the laboratory. Procedures for sample homogenization, splitting and preparation before the final analysis have been developed.

It is important to have proper equipment available for sample collection and sample handling. A list of suitable equipment has therefore been included in this report.

## 1 INTRODUCTION

In order to implement a chemical weapons convention successfully, it must be possible to verify violation of any part of the convention. Procedures should be available in connection with verification of alleged use of chemical weapons, existing stocks, their destruction, and the non-production of chemical weapons by the chemical industry. Verification of alleged use requires somewhat different procedures from verification of a production facility. This paper presents one complete procedure for each of these separate activities, even if parts of the procedures are similar.

A complete verification procedure may be divided into several parts, including methods for localization of the contaminated area, sampling, sample handling including preservation, packaging, coding and documentation, transport, sample handling in the laboratory and laboratory analysis. In the context, the laboratory could either be a designated laboratory or the laboratory of the Technical Secretariat. All these stages must be carried out properly in order to ensure that verification is as reliable as possible.

The recommended operating procedures for sampling and sample handling, which are crucial steps in any verification procedure, are based on several years of extensive study. The reliability of verification is influenced by various factors such as where the samples are collected, the kinds of sample materials chosen and how the samples are treated before reaching the laboratory. During transport, it is important to ensure that the transport log is properly completed in order to maintain an unbroken chain of custody.

All the procedures recommended have been thoroughly tested in field trails, which are used to test all methods and techniques and make them functional for field use. Efforts have been made to develop procedures using readily available, unsophisticated equipment.

## 2 ALLEGED USE

### 2.1 Verification of location

Upon arrival in an area where use of chemical warfare agents is alleged to have taken place, the position (coordinates) should be checked against the information given by the requesting state party to ensure that the correct area is examined. This should be done by comparing the terrain with a map, or by using navigational aids such as the global positioning system (GPS).

### 2.2 Localization of the contaminated area

When the reported position has been verified according to the methods in Chapter 2.1, the area possibly contaminated with chemical warfare agents should be localized. This localization should be based on information collected in the following ways:

- Possible eye witnesses should be interviewed to obtain information about the attack, the existence of bomb craters, remnants from shells etc or about animals or people affected by the attack.
- Signs of battle activity, remnants of bombs, shells, etc., and the position of injured animals or people should be inspected and taken as an indication of the position of the contaminated area.
- A limited area may be examined using hand held detection devices such as the chemical agent monitor (CAM) and detection paper or reconnaissance vehicles (e.g. Fuchs). Such devices should also be used to define the pattern of contamination in the area. To make it easier to define the upwind edge of the contaminated area, the examination should

be started upwind of the area and be continued in the wind direction to the other side.

## 2.3 Sampling

### 2.3.1 Recommended sampling sites

When the contaminated area has been localized and examined in accordance with the methods described in Chapter 2.2, the sampling sites should be selected using the following criteria:

- Samples should be collected within the area where the highest concentrations of chemical agents are believed to be found, i.e. in the area where the highest concentrations have been indicated by the localization procedures (Chapter 2.2).
- Weather conditions influence the persistence of chemical warfare agents. Samples should therefore be collected from sites where weather conditions have least influence on the recovery of the various agents.
- If it is impossible to define the contaminated area, samples should be collected randomly over the whole area where the use of chemical warfare agents was alleged to have taken place.

### 2.3.2 Recommended sample materials

When samples are collected for verification of the use of chemical warfare agents, it is important to consider the sample materials which should be selected:

- Sample materials which adsorb the chemical warfare agents efficiently should be selected.
- It must be possible to desorb the agents from the sample materials for analysis.
- The sample material should not have properties which accelerate the breakdown rate of the chemical warfare agents.

Several different types of sample materials may be found in a battlefield environment, and the recommended types are listed below:

- *Liquids from bombs or shells.* If bombs or shells containing liquids are found, they should be sampled because the liquid is likely to be a chemical warfare agent.
- *Other liquids.* Liquids or damp spots found in the contaminated area should be checked with detection paper for the presence of chemical warfare agents. If the test result is positive, samples should be collected for further analysis.
- *Filter canisters.* Filter canisters used by personnel exposed to, or believed to be exposed to, the chemical warfare agents should be collected.
- *Textile materials, leather.* Samples of textile materials or leather used by personnel exposed to the chemical attack should be collected because these materials have been shown to adsorb chemical warfare agents efficiently.
- *Polymers.* Polymers such as rubber, plastic, paint etc. also adsorb chemical warfare agents efficiently and should be collected if they are found in the contaminated area.

*Environmental samples.* Environmental samples such as snow, sand, soil, vegetation, surface water, concrete, etc. should be collected from several sites in the contaminated area. Since experiments have shown low vertical diffusion rates for chemical warfare agents in solid samples, only the top layer (about 2 cm) should be collected.

Biological samples may be of interest, but may be more difficult to collect for religious or ethical reasons. Such sampling also requires special techniques and should be carried out by medical personnel.

*Body liquids.* Blood, urine or other body liquids should be collected from humans or animals exposed to the chemical warfare agents, since hydrophilic compounds will be concentrated in such liquids. The cholinesterase activity in blood should be measured to indicate possible exposure to nerve agents.

*Cadavers.* Tissues or organs from dead humans or animals believed to have been exposed to the chemical warfare agents should be collected. The organs which provide most information are the kidneys, liver, heart and fatty tissue. These organs concentrate lipophilic compounds. Absorbed chemical agent may also be found in hair samples. In addition, samples from the skin or lungs should be collected to document any damage caused by vesicants. Nervous tissue could be collected to document exposure to nerve agents or other agents affecting the nervous system.

### 2.3.3 Numbers and sizes of samples

It is important to consider the number of samples which are required to allow correct conclusions to be drawn from the results of the sample analysis. We normally have little or no knowledge of the background concentrations in environmental and biological samples. Controls are therefore of the utmost importance if we are to obtain conclusive results from the analyses of such samples.

The following instructions should be followed in collecting environmental and biological samples:

- At least two liquid samples from bombs or shells should be collected in separate containers.
- In order to achieve at least 90 % probability of verifying a chemical attack, 20 environmental or battlefield samples should be randomly collected per area of 100 000 m<sup>2</sup> where the use of chemical weapons is alleged to have taken place. Fewer samples are necessary if clear evidence of such an attack has been obtained using devices such as CAM or detection paper. Three controls should be collected well outside the contaminated area and treated in the same way as the samples. The controls should be of a matrix as similar as possible to that of the samples.
- If it is possible to collect biological samples from humans or animals, at least two samples should be taken from each individual. If only one individual is available, more (10) samples should be taken. Body liquids from individuals not exposed to chemical weapons should also be collected as controls.
- The sample size should be about 50 g in the case of environmental samples (snow, water, sand, soil, concrete, etc) and about 20 cm<sup>2</sup> in the case of polymers, clothing or leather. About 10-50 g of body liquids or organs from dead humans or animals is considered sufficient. If the

samples need to be split before analysis, larger samples should be collected to get the above-mentioned sizes of each sub-sample.

#### 2.3.4 Sample containers

The most satisfactory sample containers are glass bottles with leakproof caps, but mylar bags or metallized plastic bags may also be used. The containers should fulfil the following requirements:

- The containers should not release any chemicals which could contaminate the samples.
- It should not be possible for volatile compounds to escape from the containers.
- The containers should not consist of materials which strongly adsorb chemical warfare agents
- The containers should not accelerate the breakdown rate of chemical warfare agents.
- Gas samples should be passed through a column containing an adsorbent (e.g. Tenax) and should be placed in gas-tight containers.

#### 2.3.5 Sampling procedure

To ensure the integrity of the samples, they should be collected by the inspection team itself. A spoon, spatula, scissors, knife, scalpel, scoop and pipette should be available for sample collection. In addition, personnel carrying out the sampling should wear full protective equipment. The sample containers and sampling equipment should be decontaminated after sampling by washing with 5 % sodium

hydroxide in a mixture of 2-propanol and water (1:1). Fullers' earth may also be used.

#### 2.4 Field analysis

Field analysis can give the first indication of which chemical warfare agents are present in the area. This information may make it easier to select the best method for sample preparation and analysis, and thereby give the most reliable results.

The following techniques may be used for field analyses:

- Thin layer chromatography (TLC).

Samples collected as described above are extracted with a small volume of dichloromethane, 20  $\mu$ l of which are applied to silica TLC plates.

Use the following mobile phases:

cyclohexane:ethylacetate:acetone = 5:3:3 for sarin, soman and tabun,

methanol:acetone = 4:1 for VX,

n-hexane:methanol:dichloromethane = 7:1:2 for lewisite, clark and adamsite, and toluene for mustard gas.

The nerve agents sarin, soman, tabun and VX are detected by an enzymatic reaction. Spray with cholinesterase (250 IU in 100 ml phosphate buffer pH=7.4), warm gently (30°C-40°C for 5 min) and spray with a mixture of 1-naphtylacetate (250 mg) and fast blue salt (400 mg) in ethanol (100.ml). White spots on a red background indicate the presence of nerve agents. Note that this reaction is very sensitive. If the concentrations of nerve agents in the samples are too high the spots become large and difficult to define.

Lewisite, clark and adamsite are detected by oxidation with potassium permanganate. Spray with potassium permanganate (40 mg in 100 ml water). White to yellow spots indicate the presence of these compounds.

Mustard gas is detected by spraying with 4(4'-nitrobenzyl)-pyridine (5g in 100 ml ethanol), heating to high temperature (150°C) and spraying with sodium hydroxide (4 g in 100 ml water:methanol=1:1). Blue spots which disappear quite rapidly indicate the presence of mustard gas.

The retention factors using the mobil phases described above are:  
tabun: 0.43, sarin: 0.34, soman: 0.48, VX: 0.62, lewisite I: 0.27, clark I: 0.52, clark II: 0.51, adamsite: 0.15 and mustard gas: 0.71.

- Information obtained by CAM should be used as an indication of the presence of nerve agents or mustard gas.

- Detection paper should be used on droplets or damp spots to give a indication of the presence of nerve agents or mustard gas.

- Other instruments should be considered as soon as miniaturization has made them available as mobile field equipment.

## 2.5 Sample handling

### 2.5.1 Sample sealing

The samples should be sealed and secured immediately after collection to prevent loss or tampering before analysis. The plastic bags and glass bottles used for sampling should be sealed with a lead seal to prevent tampering during transport and storage. It is also important that the containers used for sampling are airtight to prevent any loss of sample.

### 2.5.2 Sample coding and documentation

Each sample should receive a unique identification code, and all information should be recorded in a sample documentation form with corresponding coding. A three-page form has been drawn up for use by the sampling team and is shown as annex 1 to this report. The following information should be recorded in the form:

- On the first page, information on the sampling procedure is entered, including the reason for sampling, an indication of the priority or importance of the samples, description of samples and sampling site, sampling methods and results of field analyses.
- On the second page, a sketch of the sampling site should be drawn, indicating topography, any bomb craters observed and wind direction. The positions of the sampling sites should also be indicated on this sketch.
- The third page should be filled in if information on the attack is available. Reports from eyewitnesses, casualties, effects on vegetation and meteorological data such as temperature, wind and precipitation since the attack should be entered here. If there are casualties, reports from medical inspections should also be entered.

Two copies of the form should be made, one of which should accompany the samples to the Technical Secretariat, while the other should be kept by the sampling team.

### 2.5.3 Sample preservation

All samples should be treated as soon as possible after collection, to ensure that the chemical warfare agents are still present on arrival at the laboratory. The appropriate treatment varies according to the origin of the samples. To ensure the integrity of the samples, in some situations, no treatment is desirable. Sample preservation

should be performed outside the contaminated area in order to prevent cross-contamination of the samples and contamination of the equipment.

As an easy means of field preservation, aqueous samples may be passed through a cartridge filled with a polymer C<sub>18</sub> adsorbent (Analytichem International Inc.) which retains chemical warfare agents. The cartridge may then be transported to the laboratory for subsequent elution and analysis. Solid samples may be extracted with water and the extract passed through the C<sub>18</sub> cartridge in the same way.

#### Procedure:

Wash the solid sample with 50 ml water and pass the sample through a 200 mg C<sub>18</sub> cartridge which has been pre-wetted with 0.5 ml methanol and 5 ml water. In order to prevent clogging of the cartridge, samples containing large amounts of particulate matter should be filtered through a 20  $\mu$ m pore-size frit filter or through a Whatman microfibre filter grade GF/A.

Phosphonic acids, which are decomposition products from nerve agents, are preserved by sorption onto an aminopropyl weak anion exchanger (NH<sub>2</sub>). Cartridges filled with 100 mg NH<sub>2</sub> material (Analytichem International Inc.) are attached after the C<sub>18</sub> cartridges and the sample solution is passed through the combined cartridges. The chemical warfare agents are retained on the C<sub>18</sub> cartridge (top) and the phosphonic acids on the NH<sub>2</sub> cartridge (bottom).

Organs or tissues from humans or animals should be placed in ethanol for preservation during transport to the laboratory.

## 2.6 Sample transport

All samples should be properly secured to avoid injury to personnel handling the samples. This means that all samples should be transported surrounded by activated charcoal in a solid shock-resistant container. In addition, the samples should be treated in accordance with the following guidelines:

- To prevent degradation of chemical warfare agents during transport and storage, both the untreated samples and the C<sub>18</sub> cartridges should be kept cold, preferably in a box filled with dry ice (-78.5°C). A freezing mixture, for example sodium chloride:ice = 1:3 (-21.3°C) or calcium chloride:ice (min. -55°C) could also be used.
- Liquid samples should not be frozen but should be transported cold in an insulated box with cooling elements.
- Each container should be properly packed and labelled according to the "Technical Instructions for the Safe Transport of Dangerous Goods by Air" (ICAO Doc 9284-AN/905). The shipping names: poisonous solid n.o.s (not otherwise specified) or poisonous liquid n.o.s in class 6.1 (UN no. 2811 and UN no. 2810, respectively) may be used for environmental samples containing only traces of chemical warfare agents. These compounds may be transported by passenger aircraft, except for those with an inhalation toxicity of Packing Group I (Great danger). It should be noted, however, that only boxes which are type approved for transport of dangerous goods may be used. A completed copy of the Shipper's Declaration for Dangerous Goods is shown in annex 2 to this report.
- A transport log should follow each parcel and be filled in by personnel in charge of each stage of the transport from the sampling site to the destination in order to maintain an unbroken chain of custody. The maximum permissible temperature during transport should be filled in by

the sampling team as information for personnel in charge of transport. A transport log has been drawn up and is shown as annex 3 to this report.

## **2.7 Sample handling in the laboratory**

When the samples arrive at the laboratory, they should be treated in such a way that all information contained in the samples remains intact until the final analysis. This means that the following instructions should be followed:

- Upon arrival at the laboratory, the samples should be stored in a safe and tamper-proof place. Solid samples should be stored in a freezer at  $-20^{\circ}\text{C}$  or lower and liquid samples preferably at  $+4^{\circ}\text{C}$  in a refrigerator. Biological samples (including body liquids) should also be stored in a freezer, but serum or plasma should be separated from the blood samples before storage. The analyses should be carried out as soon as possible. If re-coding is necessary, all information given on the sample documentation form and in the transport log should be linked with the new coding.
- Before the main sample is split into sub-samples, it should be properly homogenized. Dry particulate samples such as sand or dry soil should be homogenized by shaking for three minutes in a shaking machine, while a mortar should be used for wet particulate samples. Other solid samples like concrete may, if necessary, be crushed into small pieces with a mortar. Since chemical warfare agents do not penetrate far into the material, the outer part of the sample is of most importance. Clothing, leather and polymers should be divided into sub-samples with a knife or scissors, and liquid samples well mixed before splitting.
- The extraction of the samples should be carried out in accordance with the recommended operating procedures for each sample material.

The C<sub>18</sub> cartridges brought back from the field should be eluted with 500 $\mu$ l of an organic solvent suitable for the final analysis. Acetone and dichloromethane have satisfactory eluting properties for chemical warfare agents and may be used for analysis by gas chromatography or mass spectrometry. For NMR or liquid chromatography, methanol may be used.

The phosphonic acids are eluted from the NH<sub>2</sub> cartridges with 300  $\mu$ l methanol. The eluates may be analyzed directly by HPLC or by GC after derivatization of the acids.

The controls should be processed and analyzed in the same way as the samples in order to be sure that there has been no cross-contamination. The controls should also be spiked with any chemical warfare agent found to establish the recovery rate for the analytical method used.

The recommended operating procedures for quality control for each instrument should be followed.

### **3 CHEMICAL PRODUCTION FACILITIES**

#### **3.1 Verification of location**

Upon arrival at a chemical facility which is to be inspected, the position (coordinates) should be checked against the information given by the requesting state party to ensure that the correct area is examined. This should be done by comparing the terrain with a map, or by using navigational aids such as the global positioning system (GPS).

### 3.2 Where to take samples

The samples should be collected at the points specified in any facility agreement, or in the case of challenge inspection, at sites recommended by a process engineer in the inspection team. Samples most likely to contain information of interest are from feed stocks, process streams, reactors, storage tanks and waste. Samples from equipment not currently in use, but suspected to have been used for activities prohibited by the convention, may be collected by wiping with Whatman 41 filter paper.

### 3.3 Sampling

#### 3.3.1 Recommended sample materials

The sample materials which are most likely to contain information of interest are:

- feed chemicals
- process liquids
- reaction mixtures
- products
- volatile and non-volatile waste (drainage ditches)
- wipe samples from equipment suspected to be contaminated with scheduled chemicals
- filter canisters used by personnel exposed to, or believed to be exposed to scheduled chemicals
- gasket materials

### 3.3.2 Numbers and sizes of samples

At least two samples should be collected from each sampling site in separate containers. The amount needed depends on the type of sample. For samples of the process steams and feed chemicals storage areas only a few grams are needed, but larger amounts (about 50 g) are needed for samples of waste. If the samples need to be split before analysis, larger samples should be collected to get the above-mentioned sizes of each sub-sample.

Controls should be collected to ensure that chemicals normally present in industrial samples do not interfere with the analysis of chemical warfare agents.

### 3.3.3 Sample containers

The most satisfactory sample containers are glass bottles with leakproof caps, but mylar bags or metallized plastic bags may also be used. The containers should fulfil the following requirements:

- The containers should not release any chemicals which cause contamination of the samples.
- It should not be possible for volatile compounds to escape from the containers.
- The containers should not consist of materials which strongly adsorb chemical warfare agents
- The containers should not accelerate the breakdown rate of chemical warfare agents.
- Gas samples should be passed through a column containing an adsorbent (e.g. Tenax) and should be placed in gas-tight containers.

### 3.3.4 Sampling procedure

To ensure the integrity of the samples, they should be collected by personnel from the chemical facility supervised by the inspection team. A spoon, spatula, scissors, knife, scoop and pipette should be available for sample collection. In addition, personnel carrying out the sampling should wear appropriate protective equipment. After sampling, the sample containers and sampling equipment should, if necessary, be decontaminated by washing with 5 % sodium hydroxide in a mixture of 2-propanol and water (1:1).

## 3.4 On-site analysis

The samples collected at the facility should, if possible, be analyzed on-site using in-house equipment or instrumentation brought by the inspection team. Simple equipment and methods such as CAM, detection paper and thin layer chromatography (see Chapter 2.4) may be used to screen for known chemical warfare agents. Electrical equipment has to be approved for use in the production facility.

## 3.5 Sample handling

### 3.5.1 Sample sealing

The samples should be sealed and secured immediately after collection to prevent loss or tampering before analysis. The plastic bags and glass bottles used for sampling should be sealed with a lead seal to prevent tampering during transport and storage. It is also important that the containers used for sampling are air tight to prevent any loss of sample.

### 3.5.2 Sample coding and documentation

Each sample should receive a unique identification code, and all information should be recorded in a sample documentation form with corresponding coding. The first two pages of the three-page form described in Chapter 2.5.2 may be used and completed with the following information:

- On the first page, information on the sampling procedure is entered, including the reason for sampling, an indication of the priority or importance of the samples, description of samples and sampling site, sampling methods and results of on-site analyses.
- On the second page, a sketch of the relevant part of the chemical production facility should be drawn, indicating pipelines, reactors and the positions of the sampling sites.

Three copies of the form should be made, one of which should accompany the samples to the Technical Secretariat, one should be left with the state party inspected and one should be kept by the sampling team.

### 3.5.3 Sample preservation

All samples should be treated as soon as possible after collection, to ensure that the chemical warfare agents are still present on arrival at the laboratory. The appropriate treatment varies according to the origin of the samples. To ensure the integrity of the samples, in some situation, no treatment is desirable.

- Aqueous samples (e.g. waste water) should be preserved by passing the sample through a cartridge filled with a polymer C<sub>18</sub> adsorbent which retains most of the scheduled chemicals. The cartridge may then be transported to the laboratory for subsequent elution and analysis.

**Procedure:**

Pass 50 ml of the aqueous sample through a 200 mg C<sub>18</sub> cartridge which has been pre-wetted with 0.5 ml methanol and 5 ml water. In order to prevent clogging of the cartridge, samples containing large amounts of particulate matter should be filtered through a 20 µm pore-size frit filter or through a Whatman microfibre filter grade GF/A.

Phosphonic acids, which are decomposition products from nerve agents, are preserved by sorption to an aminopropyl weak anion exchanger (NH<sub>2</sub>). Cartridges filled with 100 mg NH<sub>2</sub> material (Analytichem International Inc.) are attached after the C<sub>18</sub> cartridges and the sample solution is passed through the combined cartridges. The chemical warfare agents are retained on the C<sub>18</sub> cartridge (top) and the phosphonic acids on the NH<sub>2</sub> cartridge (bottom).

### 3.6 Sample transport

All samples should be properly secured to avoid injury to personnel handling the samples. This means that all samples should be transported surrounded by activated charcoal in a solid shock-resistant container. In addition, the samples should be treated in accordance with the following guidelines:

To prevent degradation of chemical warfare agents during transport and storage, both the untreated samples and the C<sub>18</sub> cartridges should be kept cold, preferably in a box filled with dry ice (-78.5°C). A freezing mixture, for example sodium chloride:ice = 1:3 (-21.3°C) or calcium chloride:ice (min. -55°C) could also be used.

Liquid samples should not be frozen but should be transported cold in an insulated box with cooling elements.

- Each container should be properly packed and labelled according to the "Technical Instructions for the Safe Transport of Dangerous Goods by Air" (ICAO Doc 9284-AN/905). The shipping names: poisonous solid n.o.s or poisonous liquid n.o.s in class 6.1 (UN no. 2811 and UN no. 2810 respectively), may be used for samples containing only traces of chemical warfare agents. These compounds can be transported by passenger aircraft, except for those with an inhalation toxicity of Packing Group I (Great danger). It should be noted, however, that only boxes which are type approved for transport of dangerous goods may be used. A completed copy of the Shipper's Declaration for Dangerous Goods is shown in annex 2 to this report.

- A transport log should follow each parcel and be filled in by the personnel in charge of each part of the transport from the sampling site to the destination in order to maintain an unbroken chain of custody. The maximum permissible temperature during transport should be filled in by the sampling team as information for the personnel in charge of transport. A transport log has been drawn up and is shown as annex 3 to this report.

### **3.7 Sample handling in the laboratory**

When the samples arrive at the laboratory, they should be treated in such a way that all information contained in the samples remains intact until the final analysis. This means that the following instructions should be followed:

- Upon arrival at the laboratory, the samples should be stored in a safe and tamper-proof place. Solid samples should be stored at -20°C or -70°C in a freezer and liquid samples preferably at +4°C in a refrigerator. The analysis should be carried out as soon as possible. If re-coding is necessary, all information given on the sample documentation form and in the transport log should be linked with the new coding.

- Before the main sample is split into sub-samples, it should be properly homogenized. Dry particulate samples should be homogenized by shaking for three minutes in a shaking machine, while a mortar should be used for wet particulate samples. Other solid samples may be crushed into small pieces with a mortar, and liquid samples well mixed before splitting.
- The extraction of the samples should be carried out in accordance with the recommended operating procedures for each sample material.
- The C<sub>18</sub> cartridges brought back from the facility should be eluted with 500  $\mu$ l of an organic solvent which is suitable for the final analysis. Acetone and dichloromethane have satisfactory eluting properties for chemical warfare agents and may be used for analysis by gas chromatography or mass spectrometry. For NMR or liquid chromatography methanol may be used.
- The phosphonic acids are eluted from the NH<sub>2</sub> cartridges with 300  $\mu$ l methanol. The eluates may be analyzed directly by HPLC or by GC after derivatization of the acids.
- The controls should be processed and analyzed in the same way as the samples in order to be sure that there has been no cross-contamination. The controls should also be spiked with any chemical warfare agent found to establish the recovery rate for the analytical method used.
- The recommended operating procedures for quality control for each instrument should be followed.

#### 4 LIST OF EQUIPMENT

The equipment needed for sampling, field analysis and sample handling in the field before transport should be packed in suitable (aluminum) boxes for easy transport to the sampling area, each box containing the equipment needed to carry out one part of the sampling and sample preparation procedure. If any part of the procedure is to be omitted, the corresponding equipment may be left behind without repacking.

The suggested composition of the boxes is listed below.

##### Box A: Equipment for sample collection

- 24 glass bottles (250ml) with screw caps
- 25 mylar bags
- 25 labels
- 1 box Whatman 41 filter paper
- 1 measuring cylinder (100 ml)
- 2 spoons
- 1 spatula
- 1 pair of scissors
- 1 scalpel
- 2 funnels
- 1 spray candle paint to mark the contaminated area
- 1 thermometer
- 1 measuring tape
- equipment for sealing the samples
- stationery
- adhesive tape
- 10 sample documentation forms
- 5 transport logs

Box B: Equipment for solid-phase extraction

- 30 C<sub>18</sub> cartridges (200 mg sorbent)
- 30 NH<sub>2</sub> cartridges (100 mg sorbent)
- 4 adapters
- 2 vacuum equipment (model NDRE)
- 1 microlitre pipette with tips (5 ml)
- 1 vacuum pump (12 VDC) with cable
- 1 thermos
- 8 glass bottles (50 ml) with screw caps
- 1 pair of tweezers
- 1 box Whatman filter GF-A
- 250 ml methanol
- 1 measuring cylinder (100 ml)
- stationery

Box C: Equipment for TLC

- 250 ml chloroform
- 2 separating chambers with teflon covers
- 10 blotting papers
- 15 TLC plates
- 50 microcapillary applicators
- 1 spray equipment
- 1 microlitre pipette with tips (5 ml)
- 1 pair of tweezers
- stationery
- mobile phases
- developing reagents

Box D: Protective equipment

Individual items: respirator

protective suit

2 pairs of boots

5 pairs of gloves

atropine/oxime autoinjectors

fullers' earth

1 box latex gloves (100 pieces)

Box E: Additional equipment

1 spraygun

1 spare bottle for spraygun

decontamination liquid (2-propanol/water/NaOH)

chloramine T

1 water can

1 funnel

1 measuring cylinder

1 primus

4 l kerosene

100 ml methylated spirit

1 adhesive tape (2-sided)

1 adhesive tape (1-sided)

1 box kleenex tissue paper

atropine/oxime autoinjectors

pyrido prophylactic

fullers' earth

10 plastic bags (for litter)

stationery

In addition the following equipment should be available:

- (1) map of the area under verification
- GPS receiver (global positioning system)
- chemical agent monitor (CAM)
- detection paper
- water analysis kit

## 5 REFERENCES

- (1) Norwegian Working Paper on Verification of a Chemical Weapons Convention - Sampling and analysis of chemical warfare agents under winter conditions. Document CD/311 of 11 August 1982.

Research Report on Verification of a Chemical Weapons Convention. Sampling and analysis of chemical warfare agents under winter conditions. Annex to Document CD/311 of 11 August 1982.

- (2) Norwegian Working Paper on Verification of a Chemical Weapons Convention - Sampling and analysis of chemical warfare agents under winter conditions. Document CD/396 of 19 July 1983.

Research Report on Verification of a Chemical Weapons Convention. Sampling and analysis of chemical warfare agents under winter conditions. Part II. Annex to Document CD/396 of 19 July 1983.

- (3) Norwegian Working Paper on Verification of a Chemical Weapons Convention - Sampling and analysis of chemical warfare agents under winter conditions. Document CD/508 of 15 June 1984.

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- (6) Norwegian Working Paper on Verification of Alleged Use of Chemical Weapons - Summary of research results 1986/87. Document CD/761 of 24 June 1987.

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1988.

- (8) Norwegian Working Paper on Verification of Alleged Use of Chemical  
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Headspace Gas Chromatography - A new technique in verification of  
alleged use of chemical warfare agents. Part VIII. Presented as Docu-  
ment CD/940 of 31 July 1989.

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Document CD/CW/WP.285 of 10 April 1990.

Norwegian Working Paper on Verification of Alleged Use of Chemical  
Weapons: Use of sorbent extraction in verification of alleged use of  
chemical weapons. Document CD/1008 of 26 June 1990.

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Use of sorbent extraction in verification of alleged use of chemical  
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Application of procedures after a simulated chemical attack on an air  
base. Part X. Presented as Document CD/1084 of 14 June 1991.

ANNEX 1 SAMPLE DOCUMENTATION FORM

1. Sample priority:	First	Second	Third
2. Sample node number:	4-1110-1		
3. Description of sample:			
4. Soil			
5. Sand			
6. Proportion of material from bed			
7. Method of obtaining the sample(s):			
8. Spaced from the surface:			
9. Separation			
10. Location of sample site (map reference with distance and low distance)			
11. Description of sample site (topography, vegetation etc)			
12. Weather conditions:			
13. Wind positive response for GA, GB, GC, GD, GE, GF and GF			
14. Results of field analysis (see table)			
15. Separation			
16. Spaced from the surface:			
17. Method of obtaining the sample(s):			
18. Proportion of material from bed			
19. Sand			
20. Soil			
21. Description of sample:			
22. Sample node number:			
23. Sample priority:			

## SAMPLE DOCUMENTATION. SAMPLING.

Page 1 of 3

Items 1-11 refer to the sampling procedure.

1. Name : John Tørnes Date : 31.10.90 Time : 09:20

Position : Scientist

2. Reason for sampling :  
Suspected attack on airbase with chemical weapons

3. Sample priority : First  Second  Third

4. Sample code number : d - 3110-4

a 3110-1

e

b 3110-2

f

c 3110-3

g

5. Description of sample : d Water

a Soil

e

b Sand

f

c Protective clothing from leg

g

6. Method of obtaining the sample(s) : d Surface water

a Spooned from the surface

e

b Spooned from the surface

f

c Scissors

g

7. Results of field analysis (CAM, TLC) :

CAM positive response in G mode

TLC positive response for GA, GB, L, VX and H

8. Weather conditions :

Partly cloudy, good weather, no precipitation  
Wind 14 kts from SSE, temperature 8°C

9. Description of sample site (topography, vegetation etc) :

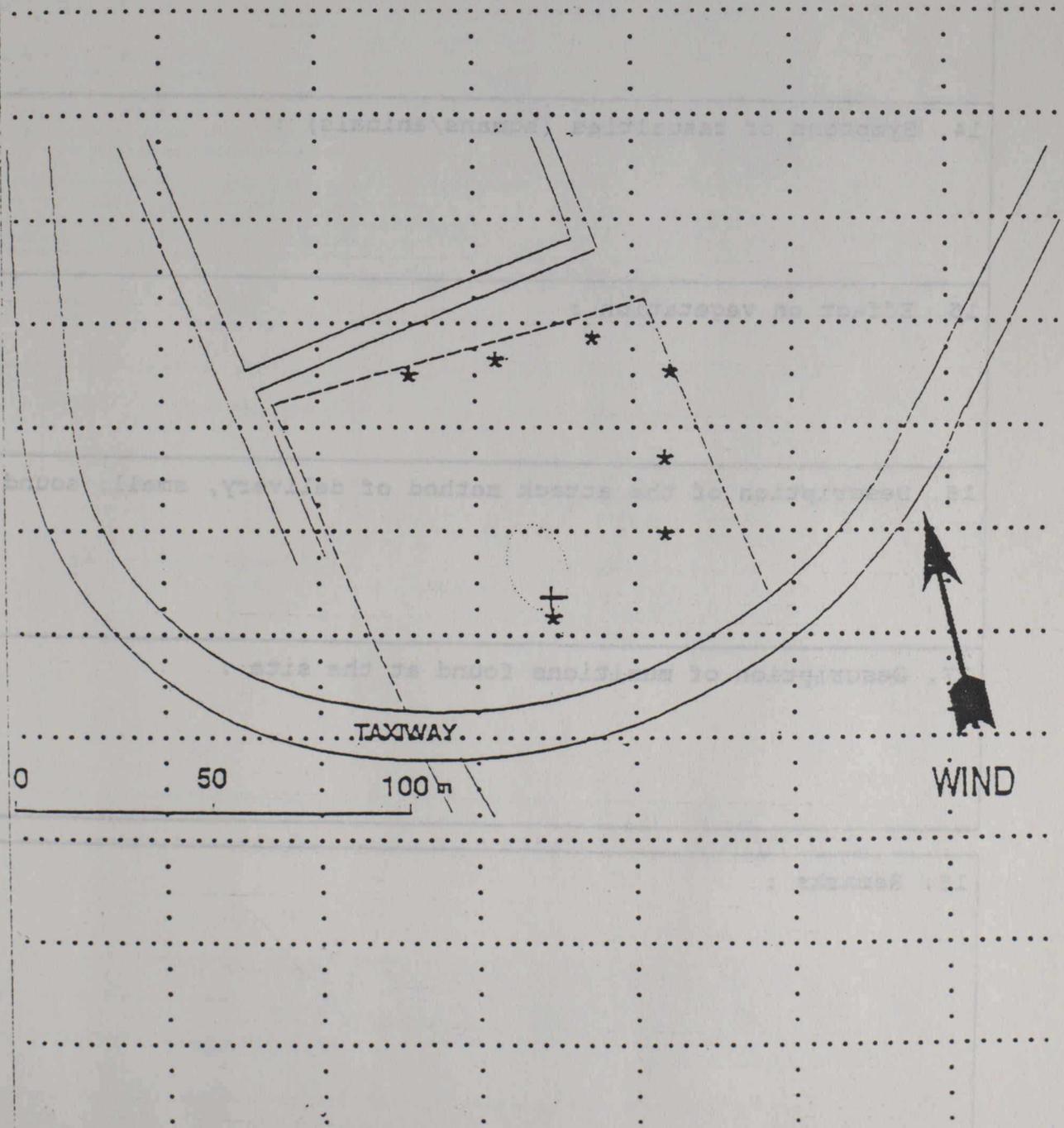
Relatively flat field with black soil covered with long grass  
and low birches

10. Location of sample site (map reference UTM) :

Northing:

Easting:

11. Sketch of site , topography, bomb craters etc.  
Use cross and sample code number to give sample site.  
Please indicate North-South and wind direction.



SAMPLE DOCUMENTATION. ATTACK.

Page 3 of 3

Items 12-17 refer to observations concerning the attack.

12. Date : Time :

13. Weather conditions since the attack :

14. Symptoms of casualties (humans/animals) :

15. Effect on vegetation :

16. Description of the attack method of delivery, smell, sound etc)

17. Description of munitions found at the site :

18. Remarks :

**ANNEX 2 SHIPPER'S DECLARATION**

Dangerous goods  
 Not dangerous goods  
 Not dangerous goods, but subject to special provisions

I hereby declare that the above information is true and correct and that the goods are properly packaged, labeled and marked in accordance with the applicable provisions of the International Maritime Dangerous Goods Code (IMDG Code) and the relevant provisions of the International Convention for the Safety of Life at Sea (SOLAS).

Signature: \_\_\_\_\_  
 Name: \_\_\_\_\_  
 Position: \_\_\_\_\_  
 Date: \_\_\_\_\_

Quantity	Description of goods	IMDG Code	UN No.	Proper shipping name	Classification
1	1. Flammable gas	2.1	2014	Flammable gas	2.1
1	2. Flammable liquid	2.2	2014	Flammable liquid	2.2

I hereby declare that the above information is true and correct and that the goods are properly packaged, labeled and marked in accordance with the applicable provisions of the International Maritime Dangerous Goods Code (IMDG Code) and the relevant provisions of the International Convention for the Safety of Life at Sea (SOLAS).

Signature: \_\_\_\_\_  
 Name: \_\_\_\_\_  
 Position: \_\_\_\_\_  
 Date: \_\_\_\_\_

Shippers Declaration for Dangerous Goods

Shipper NORWEGIAN DEFENCE RESEARCH Establishment P.O. Box 25,  N-2007 KJELLER, NORWAY	Air Waybill No.  Page        of        Pages  Shipper's Reference Number
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Consignee  
 ANDØYA AIRPORT  
 Andenes  
 Norway

Two completed and signed copies of this Declaration must be handed to the operator

WARNING

Failure to comply in all respects with the applicable Dangerous Goods Regulations may be in breach of the applicable law, subject to legal penalties. This Declaration must not, in any circumstances, be completed and/or signed by a consolidator, a forwarder or an IATA cargo agent.

TRANSPORT DETAILS

This shipment is within the limitations prescribed for (delete non-applicable)      Airport of Departure  
 Oslo, Fornebu

PASSENGER AND CARGO AIRCRAFT	<del>CARGO AIRCRAFT ONLY</del>
------------------------------	--------------------------------

Shipment type (delete non-applicable)  
 NON-RADIOACTIVE    ~~HAZARDOUS~~

Airport of Destination:    ANDENES

NATURE AND QUANTITY OF DANGEROUS GOODS (see sub-Section 3.1 of IATA Dangerous Goods Regulations)

Dangerous Goods Identification				Quantity and type of packing	Packing Inst.	Authorization
Proper Shipping Name	Class or Division	UN or ID No.	Subsidiary risk			
Poisonous solids n.o.s.  (Environmental samples containing chemical warfare agents)	6.1	UN2811		1 Plywood box x 2 kg	506 -	
Poisonous liquids n.o.s.  (Water containing chemical warfare agents)	6.1	UN2810		1 Plywood box x 1 l	503 -	

Additional handling information

I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labelled, and are in all respects in the proper condition for transport by air according to the applicable International and National Government Regulations.

Name/Title of Signatory

Date and Place

Signature (see warning above)

ANNEX 3 TRANSPORT LOG

DATE	TIME	LOCATION	DESCRIPTION	STATUS	REMARKS
01/10/20	10:30	...	...	...	...
01/10/20	11:00	...	...	...	...
01/10/20	13:30	...	...	...	...
01/10/20	14:00	...	...	...	...
01/10/20	15:30	...	...	...	...
01/10/20	16:00	...	...	...	...
01/10/20	17:30	...	...	...	...
01/10/20	18:00	...	...	...	...
01/10/20	19:00	...	...	...	...
01/10/20	20:00	...	...	...	...
01/10/20	21:00	...	...	...	...
01/10/20	22:00	...	...	...	...
01/10/20	23:00	...	...	...	...

TRANSPORT LOG.

1. Sampling carried out by : B.A.Johnsen  
 Confirmed by : P.J.Karlsen  
 Date : 31/10-90 Time : 09:20 Parcel number : 1  
 Total number of parcels in shipment : 1  
 Temp should not exceed : 10 °C Description of parcel : Wooden case

2. Transport and storage information.

Date and time received	Place received	Means of transport	Temperature during transport	Name and position
31/10-90 12:30	Airbase terminal	Car	8	Terminal leader
31/10-90 19:00	Oslo airport	Military plane	25	Private M.Plassen
31/10-90 19:30	NDRE Kjeller	Car	10	Scient. J.Tørnes

3. Received by J.Aa.Tørnes (sign)  
 Institution NDRE Date : 31/10-90 Time : 19:30

DOCS  
CA1 EA360 C45 ENG  
1992 vol. 2  
Conference on Disarmament (1987 :  
Geneva, Switzerland)  
Chemical weapons -- working papers  
... session  
43249446

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