CONFERENCE ON DISARMAMENT

CHEMICAL WEAPONS

WORKING PAPERS

1989 SESSION

WP

VOLUME

I

COMPILED AND EDITED BY:

ARMS CONTROL AND DISARMAMENT DIVISION OF

EXTERNAL AFFAIRS AND INTERNATIONAL TRADE CANADA

OTTAWA, CANADA

FEBRUARY 1990

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PREFACE

WP

VOLUME I

This set of two volume covers official documents (working papers) relating to Chemical Weapons submitted in plenary to the Conference on Disarmament during its 1989 session. It is compiled to facilitate discussions and research on this issue.

Volume I includes CD/877 to CD/901; Volume II includes CD/907 to CD/955.

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

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SUBMITTED TO CD 1989
CHRONOLOGICAL INDEX

1989

VOLUME I

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419	CD/877 CD/CW/ WP.218	Italy	Letter dated 12 January 1989, addressed to the Secretary-General of the Conference on Disarmament from the Head of the Permanent Mission of Italy to the Conference on Disarmament, transmitting a document entitled "Proceedings of the International Forum on 'Total ban of chemical weapons: The problems of verification,' Rome, Villa Madama, 19-20 May 1988"	13.1.89
420	CD/878	Czecho-slovakia	Letter dated 17 January 1989, addressed to the Secretary-General of the Conference on Disarmament from the Charge d'Affaires a.i. of the Czechoslovak Socialist Republic transmitting a statement made in Prague on 5 January 1989 by the Government of the Czechoslovak Socialist Republic on issues concerning prohibition and elimination of chemical weapons	18.1.89
421	CD/880	France	Letter dated 27 January 1989 from the representative of France Addressed to the Secretary-General of the Conference on Disarmament, transmitting the text of the Final Act of the Paris Conference of	30.1.89

Serial	Reference	Country	Description	Date
			States Parties to the 1925 Geneva Protocol and Other Interested States, Including the Final Declaration of the Conference, adopted on 11 January 1989	
422	CD/879 [EXTRACT]	UN Secretary General	Letter dated 20 January 1989 from the Secretary-General of the United Nations to the President of the Conference on Disarmament transmitting the resolutions and decisions on disarmament adopted by the General Assembly at its forty-third session.	3.2.89
423	CD/881	AHCCW	Report of the Ad Hoc Committee on Chemical Weapons to the Conference on Disarmament on its work during the period 17 January to 3 February 1989	3.2.89
424	CD/889	CD	Decision on the re-establishment of the Ad Hoc Committee on Chemical Weapons	16.2.89
425	CD/890 and Add.1 CD/CW/ WP.223 and Add.1	Hungary	Report on the first national trial inspection	20.2.89
426	CD/893 CD/CW/ WP.224	Italy	Letter dated 24 February 1989 from the Permanent Representative of Italy addressed to the Secretary-General of the Conference on Disarmament transmitting an interim report on a trial inspection of two Italian chemical facilities	24.2.89

Serial	Reference	Country	Description	Date
427	CD/894 CD/CW/ WP.225	USSR	Letter dated 27 February 1989 from the Representative of the Union of Soviet Socialist Republics addressed to the President of the Conference on Disarmament transmitting a text of the report on the national experiment on trying out procedures of systematic control of the non-production of chemical weapons in industry, held in the USSR	28.2.89
428	CD/897	Australia	Letter dated 7 March 1989 addressed to the Secretary-General of the Conference on Disarmament from the Permanent Representative of Australia transmitting the text of a press release issued by the Australian Minister for Foreign Affairs and Trade, Senator Gareth Evans, on 7 March 1989	8.3.89
429	CD/899 CD/CW/ WP.227	GDR	Letter dated 10 March 1989 addressed to the President of the Conference on Disarmament from the Permanent Representative of the German Democratic Republic transmitting the text of a working paper entitled "Report on the national trial inspection of the GDR undertaken in a facility of the chemical industry"	10.3.89
430	CD/900 CD/CW/ WP.229	Czechoslovakia	Report on the conduct and results of the national trial inspection	15.3.89

Serial	Reference	Country	Description	Date
431	CD/901 CD/CW/ WP.230	France	Chemical weapons convention: Confidentiality	16.3.89
432	CD/895/ Rev.1 CD/CW/ WP.226/ Rev.1	Brazil	National trial inspection: Technical report	21.3.89
			VOLUME II	
433	CD/907	Australia	Letter dated 22 March 1989 addressed to the Secretary-General of the Conference on Disarmament from the Permanent Representative of Australia transmitting a document entitled "Provision of data relevant to the chemical weapons convention"	23.3.89
434	CD/909 CD/CW/ WP.232	UK	Chemical weapons convention: Ad hoc inspections	30.3.89
435	CD/910 CD/CW/ WP.234	Australia	Letter dated 4 April 1989 addressed to the Secretary-General of the Conference on Disarmament from the Permanent Representative of Australia transmitting a document entitled "Report of an Australian national trial inspection"	5.4.89
436	CD/911	Canada	Letter dated 30 March 1989 addressed to the Secretary-General of the Conference on Disarmament from the Deputy Permanent Representative of Canada transmitting compendia on chemical weapons comprising plenary statements and working papers from the 1988 session of the Conference on Disarmament	5.4.89

Serial	Reference	Country	Description	Date
437	CD/912 CD/CW/ WP.235	FRG	Report on a national trial inspection	7.4.89
438	CD/913 CD/CW/ WP.240	France	National trial inspection	11.4.89
439	CD/916 CD/CW/ WP.242	France	The scientific advisory council	17.4.89
440	CD/917 CD/CW/ WP.243	Belgium	National trial inspection	17.4.89
441	CD/919 [EXTRACT]	Bulgaria	Letter dated 7 June 1989 addressed to the President of the Conference on Disarmament from the Charge D'Affaires, Deputy Permanent Representative of the People's Republic of Bulgaria transmitting the text of the declaration of the President of the State Council of the People's Republic of Bulgaria and the Prime Minister of the Republic of Greece signed on 23 April 1989	9.6.89
442	CD/921 CD/CW/ WP.245	UK	Verification of the chemical weapons convention: Practice challenge inspections of military facilities	14.6.89
443	CD/922 CD/CW/ WP.250	USA	Report on a United States national trial inspection exercise	22.6.89
444	CD/926 [EXTRACT]	Netherlands	Letter dated 20 June 1989 addressed to the Secretary-General of the Conference on Disarmament by the Representative of Netherlands, forwarding documents	22.6.89

Serial	Reference	Country	Description	Date
			adopted at the meeting of the North Atlantic Council in Brussels on 29 and 30 May 1989	
445	CD/924 CD/CW/ WP.251	Nether-lands	Report on a national trial inspection	23.6.89
446	CD/925 CD/CW/ WP.252	Nether-lands	An attempt to verify non-production in a chemical plant	23.6.89
447	CD/930 [EXTRACT]	FRG	Letter dated 6 July 1989 addressed to the President of the Conference of Disarmament by the Repre-sentative of the Federal Republic of Germany transmitting the text of the Joint Statement of 13 June 1989 signed in Bonn by the Chancellor of the Federal Republic of Germany and the General Secretary of the Central Committee of the Communist Party of the Soviet Union and Chairman of the Supreme Soviet of the Union of Soviet Socialist Republics together with the text of the Joint Declaration adopted on 14 June 1989 in Bonn by the Minister for Foreign Affairs of the Federal Republic of Germany and the Minister for Foreign Affairs of the Union of Soviet Socialist Republics	12.7.89
448	CD/931 [EXTRACT]	USSR	Letter dated 5 July 1989 from the Representative of the Union of Soviet Socialist Republics addressed to the President of the Conference on Disarmament transmitting the text of the Joint	12.7.89

Serial	Reference	Country	Description	Date
			Statement signed at Bonn on 13 June 1989 by M.S. Gorbachev, General Secretary of the Central Committee of the CPSU and President of the USSR Supreme Soviet, and H. Kohl, Chancellor of Federal Republic of Germany, and the text of the Joint Declaration by the Ministers for Foreign Affairs of the USSR and the Federal Republic of Germany adopted at Bonn on 14 June 1989	
449	CD/932	Finland	Letter dated 11 July 1989 addressed to the Secretary General of the Conference on Disarmament from the Permanent Representative of Finland transmitting a document entitled "Standard operating procedures for the verification of chemical disarmament, D.2, Second proposal for procedures supporting the reference database"	12.7.89
450	CD/934 [EXTRACT]	Romania	Letter dated 13 July 1989 addressed to the Secretary-General of the Conference on Disarmament by the Permanent Representative of the Socialist Republic of Romania transmitting the text of a communique of the Meeting of the Political Consultative Committee of the Warsaw Treaty States together with the text of a document entitled "For a stable and secure Europe free from nuclear and chemical weapons, for a substantial reduction of armed forces, armaments and military spending"	19.7.89

Serial	Reference	Country	Description	Date
451	CD/936	Norway	Verification of alleged use of chemical weapons: A new approach for verification procedures	21.7.89
452	CD/940	Norway	Letter dated 31 July 1989 addressed to the President of the Conference on Disarmament from the Charge d'Affaires a.i. of Norway, transmitting a research report entitled "Verification of a chemical weapons convention: Headspace gas chromatography: A new technique in verification of alleged use of chemical warfare agents. Part VIII"	31.7.89
453	CD/947	Canada	Letter dated 9 August 1989, addressed to the Secretary-General of the Conference on Disarmament by the Permanent Representative of Canada transmitting a report issued as Arms Control Verification Paper No. 3, entitled "International Atomic Energy Safeguards as a model for verification of a chemical weapons convention"	9.8.89
454	CD/948 CD/CW/ WP.260	Austria	Letter dated 10 August 1989 addressed to the Secretary-General of the Conference on Disarmament by the Permanent Representative of Austria transmitting a document entitled "Preliminary report on an Austrian National trial inspection"	14.8.89
455	CD/949 CD/CW/ WP.261	Czechoslovakia	Data relevant to the convention on the complete and general prohibition and destruction of chemical weapons	15.8.89

Serial	Reference	Country	Description	Date
456	CD/950 CD/CW/ WP.263	FRG	Report on a national trial inspection to test the validity of a proposed format for ad hoc on-site verification	17.8.89
457	CD/951	Group of 21	Statement by the Group of 21 on the government-industry conference against chemical weapons	17.8.89
458	CD/952	AHCCW	Report of the Ad Hoc Committee on Chemical Weapons to the Conference on Disarmament	18.8.89
459	CD/955 [EXTRACT]	AHCCPD	Report of the Ad Hoc Committee on the Comprehensive Programme of Disarmament	24.8.89

CONFERENCE ON DISARMAMENT

CD/877
CD/CW/WP.218
13 January 1989

Original: ENGLISH

LETTER DATED 12 JANUARY ADDRESSED TO THE SECRETARY-GENERAL OF THE CONFERENCE ON DISARMAMENT FROM THE HEAD OF THE PERMANENT MISSION OF ITALY TO THE CONFERENCE ON DISARMAMENT TRANSMITTING A DOCUMENT ENTITLED "PROCEEDINGS OF THE INTERNATIONAL FORUM ON 'TOTAL BAN OF CHEMICAL WEAPONS: THE PROBLEMS OF VERIFICATION', ROME, VILLA MADAMA, 19-20 MAY 1988" 1/

I have the honour to transmit herewith a document entitled "Proceedings of the International Forum on 'Total ban of chemical weapons: the problems of verification', Rome, Villa Madama, 19-20 May 1988".

I should be grateful if you would arrange for this document to be issued and circulated as an official document of the Conference and as a working paper of the Ad Hoc Committee on Chemical Weapons.

Aldo Pugliese

Ambassador
Head of the Permanent Mission of Italy
to the Conference on Disarmament

1/ A limited distribution of this document in English only has been made to the members of the Ad Hoc Committee on Chemical Weapons. Additional copies may be obtained from the Mission of Italy to the Conference on Disarmament.

CONFERENCE ON DISARMAMENT

CD/878
18 January 1989

Original: ENGLISH

LETTER DATED 17 JANUARY 1989 ADDRESSED TO THE SECRETARY-GENERAL OF THE CONFERENCE ON DISARMAMENT FROM THE CHARGE D'AFFAIRES A.I. OF THE CZECHOSLOVAK SOCIALIST REPUBLIC TRANSMITTING A STATEMENT MADE IN PRAGUE ON 5 JANUARY 1989 BY THE GOVERNMENT OF THE CZECHOSLOVAK SOCIALIST REPUBLIC ON ISSUES CONCERNING PROHIBITION AND ELIMINATION OF CHEMICAL WEAPONS

I attach a Statement made in Prague on 5 January 1989 by the Government of the Czechoslovak Socialist Republic on issues concerning prohibition and elimination of chemical weapons.

I would be grateful if this Statement could be distributed as a document of the Conference on Disarmament.

(Signed) Pavel Chlumský
chargé d'affaires a.i.

STATEMENT

of the Government of the Czechoslovak Socialist Republic on issues concerning prohibition and elimination of chemical weapons

The Czechoslovak Socialist Republic is convinced that achievement of global prohibition and elimination of chemical weapons is one of the fundamental prerequisites of the disarmament process to which vital interests of all countries and nations of the world are linked. Prohibition and elimination of chemical weapons would strengthen universal security, reduce the risk of a war conflict and facilitate building of relations on realistic foundations of balance of interests. On the contrary, existence and perfection of chemical weapons pose a direct threat to stability and peace both in Europe and world wide.

In this context, it is disquieting that the efforts exerted for many years in the United Nations and at the Conference on Disarmament in Geneva with a view to concluding a Convention on the prohibition of chemical weapons and on their destruction have not yet produced the desired result.

In view of the especially grave danger that would result from accumulation, deployment and use of chemical weapons, including binary weapons, in Europe, the Czechoslovak Socialist Republic is determined to continue to strive for implementation of the proposal for the establishment of a chemical weapons-free zone in Europe which it has, jointly with the Government of the German Democratic Republic, addressed to the Government of the Federal Republic of Germany. In this regard, the Czechoslovak Socialist Republic proceeds on the basis of unity and mutually supportive nature of regional and global approaches to arms limitation and disarmament and also of the fact that progress in disarmament is closely linked with positive developments in all spheres of international relations.

This line guides also the Czechoslovak initiative aimed at establishing a zone of confidence, co-operation and good-neighbourly relations on the dividing line between the member States of the NATO and the Warsaw Treaty Organization put forward in February 1988 by the General-Secretary of the Central Committee of the Communist Party of Czechoslovakia, Milos JAKES.

Responding to the respective Declaration of the Communist Party of Czechoslovakia, the Socialist Unity Party of Germany and the Social Democratic Party of Germany, the Government of Czechoslovak Socialist Republic is ready to start without delay talks on removal of chemical weapons from or their non-deployment in Central Europe, as the case may be, inclusive of application of corresponding verification measures. Holding such talks would mean at the same time giving the needed impetus to acceleration of progress towards global prohibition of chemical weapons.

Conclusion of a convention on the complete and comprehensive prohibition of chemical weapons and the destruction of their stockpiles is considered by us to be one of the tasks of priority in the field of disarmament as were set forth at the latest session of the Political Consultative Committee of the States Parties to the Warsaw Treaty held in Warsaw in July 1988. In this connection, encouragement may be drawn also from certain positive results achieved during the consideration of the issue of prohibition of chemical weapons at the forty-third session of the General Assembly of the United Nations, especially the unanimous expression by United Nations member States of support for the formulation of the respective convention.

Significant step in this field will be the forthcoming Paris Conference of the States Parties to the Protocol for the prohibition of the use in war of asphyxiating, poisonous or other gases and of bacteriological methods of warfare of 1925 and other interested countries. Guided by the desire to create favourable conditions for the conclusion of the Convention on the complete prohibition and the elimination of chemical weapons, the Government of the Czechoslovak Socialist Republic declares the following:

1. The Czechoslovak Socialist Republic does not either possess or manufacture or stockpile on its territory any chemical weapons. No facilities destined for development or manufacture of chemical weapons exist in the Czechoslovak Socialist Republic. Research and laboratory works conducted in the Czechoslovak Socialist Republic serve exclusively purposes of protection against effects of chemical weapons and peaceful objectives.

2. The Czechoslovak Socialist Republic attaches great importance to formulation of appropriate measures for systematic monitoring of chemical industry that would ensure with absolute reliability that no chemical weapons be manufactured and supports the endeavours of the Conference on Disarmament in Geneva at working out a solution to these issues. In this context the Czechoslovak Socialist Republic is ready to take part in experimental testing of agreed verification procedures.

3. In the context of multilateral exchange of data relating to the drafting of the Convention on the prohibition of chemical weapons and their destruction the Czechoslovak Socialist Republic will be willing to provide at the appropriate stage all the necessary information concerning civilian institutions producing substances to be subject to verification under the Convention.

4. Certain legal measures have been formulated in the Czechoslosvak Socialist Republic to limit export of some dangerous dual-purpose chemicals with the view of preventing their misuse for manufacture of chemical weapons.

5. The Czechoslovak Socialist Republic is ready to become a founding State Party to the Convention on the prohibition of chemical weapons and on their destruction as soon as its drafting is completed at the Conference on Disarmament in Geneva.

The Czechoslovak Socialist Republic trusts that all States, for their respective parts, will make constructive efforts to achieve without delay a solution to the urgent problems of prohibition of chemical weapons and their destruction and the verification issues related thereto.

CONFERENCE ON DISARMAMENT

CD/879
3 February 1989

Original: ENGLISH

(EXTRACT)

LETTER DATED 20 JANUARY 1989 FROM THE SECRETARY-GENERAL OF THE UNITED NATIONS TO THE PRESIDENT OF THE CONFERENCE ON DISARMAMENT TRANSMITTING THE RESOLUTIONS AND DECISIONS ON DISARMAMENT ADOPTED BY THE GENERAL ASSEMBLY AT ITS FORTY-THIRD SESSION

I have the honour to transmit herewith the texts of the resolutions adopted by the General Assembly at its forty-third session, which entrust specific responsibilities to the Conference on Disarmament in 1989. The relevant provisions of those resolutions are reproduced in the Annex.

For the information of the Conference, you will also find attached the texts of other resolutions and of two decisions, dealing with or related to disarmament matters, which were adopted by the General Assembly at its forty-third session.

(Signed) Javier Pérez de Cuéllar

ANNEX

I. Resolutions dealing with disarmament matters

(A) Resolutions that entrust specific responsibilities to the Conference on Disarmament

At its forty-third session, the General Assembly adopted the following resolutions entrusting specific responsibilities to the Conference on Disarmament:

. . .

43/74 A "Measures to uphold the authority of the 1925 Geneva Protocol and to support the conclusion of a chemical weapons Convention"

43/74 C "Chemical and bacteriological (biological) weapons"

. . .

(7) In resolution 43/74 A, operative paragraph 3 urges the Conference on Disarmament to pursue as a matter of continuing urgency its negotiations on a convention on the prohibition of the development, production, stockpiling and use of all chemical weapons and on their destruction.

(8) In resolution 43/74 C, operative paragraph 1 takes note with satisfaction of the Conference on Disarmament during its 1988 session regarding the prohibition of chemical weapons, and in particular appreciates the progress in the work of its Ad Hoc Committee on Chemical Weapons on that question and the tangible results recorded in its report; operative paragraph 3 urges again the Conference on Disarmament, as a matter of high priority, to intensify, during its 1989 session, the negotiations on a convention on the complete and effective prohibition of the development, production and stockpiling of all chemical weapons and on their destruction and to reinforce further its efforts by, inter alia, increasing the time during the year that it devotes to such negotiations, taking into account all existing proposals and future initiatives, with a view to the final elaboration of a convention at the earliest possible date, and to re-establish its Ad Hoc Committee on Chemical Weapons for this purpose with the mandate to be agreed upon by the Conference on Disarmament at the beginning of its 1989 session; and operative paragraph 4 requests the Conference on Disarmament to report to the General Assembly at its forty-fourth session on the results of its negotiations.

UNITED NATIONS

A

General Assembly

Distr.
GENERAL

A/RES/43/74
5 January 1989

(Extract)

Forty-third session
Agenda item 63

RESOLUTIONS ADOPTED BY THE GENERAL ASSEMBLY

[on the report of the First Committee (A/43/855)]

43/74. Chemical and bacteriological (biological) weapons

A

Measures to uphold the authority of the 1925 Geneva Protocol and to support the conclusion of a chemical weapons convention

The General Assembly,

Recalling its resolution 42/37 C of 30 November 1987,

Recalling also the rules and principles of international humanitarian law applicable in armed conflict,

Reaffirming its dedication to protecting humanity from chemical and biological warfare,

Expressing deep dismay at the use of chemical weapons in violation of 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, 1/ and of other rules of customary international law, at indications of their emergence in an increasing number of national arsenals and at the growing risk that they may be used again,

Recalling the provisions of the 1925 Geneva Protocol and other relevant rules of customary international law,

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1/ League of Nations, Treaty Series, vol. XCIV (1929), No. 2138.

Recalling also the necessity for adherence by all States to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction, signed in London, Moscow and Washington on 10 April 1972, 2/

Bearing in mind the resolutions of the Security Council on chemical weapons adopted during 1988,

Noting that prompt and impartial investigation of reports of possible use of chemical and bacteriological weapons would further enhance the authority of the Geneva Protocol,

Taking note of the report of the Secretary-General 3/ on the meeting of the group of qualified experts established in pursuance of General Assembly resolution 42/37 C to develop further the technical guidelines and procedures available to the Secretary-General for the timely and efficient investigation of reports of the possible use of chemical and bacteriological (biological) or toxin weapons,

Recalling that, in its resolution 620 (1988) of 26 August 1988, the Security Council decided to consider immediately, taking into account the investigations of the Secretary-General, appropriate and effective measures in accordance with the Charter of the United Nations,

Expressing its appreciation for the work of the Secretary-General, and noting the procedures available to him in support of the principles and objectives of the Geneva Protocol,

1. Renews its call to all States to observe strictly the principles and objectives of the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, and condemns vigorously all actions that violate this obligation;

2. Calls upon all States that have not yet done so to accede to the 1925 Geneva Protocol;

3. Urges the Conference on Disarmament to pursue as a matter of continuing urgency its negotiations on a convention on the prohibition of the development, production, stockpiling and use of all chemical weapons and on their destruction;

4. Calls upon all States to be guided in their national policies by the need to curb the spread of chemical weapons pending the conclusion of such a convention;

5. Requests the Secretary-General to carry out promptly investigations in response to reports that may be brought to his attention by any Member State concerning the possible use of chemical and bacteriological (biological) or toxin

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2/ Resolution 2826 (XXVI), annex.

3/ A/43/690.

weapons that may constitute a violation of the Geneva Protocol or other rules of customary international law in order to ascertain the facts of the matter, and to report promptly the results of any such investigation to all Member States, in accordance with the procedures established by the General Assembly in its resolution 42/37 C;

6. Also requests the Secretary-General, pursuant to resolution 42/37 C, with the assistance of the group of qualified experts provided by interested Member States, to continue his efforts to develop further technical guidelines and procedures available to him for the timely and efficient investigation of such reports of the possible use of chemical and bacteriological (biological) or toxin weapons, and to report to Member States as soon as possible;

7. Requests Member States and the relevant international organizations to co-operate fully with the Secretary-General in the above-mentioned work;

8. Decides to include in the provisional agenda of its forty-fourth session the item entitled "Chemical and bacteriological (biological) weapons".

73rd plenary meeting
7 December 1988

. . .

C

Chemical and bacteriological (biological) weapons

The General Assembly,

Recalling its previous resolutions relating to the complete and effective prohibition of the development, production and stockpiling of all chemical weapons and to their destruction,

Reaffirming the urgent necessity, particularly following recent United Nations reports, of strict observance by all States of the principles and objectives of 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, 1/ and taking note with satisfaction of the proposal to convene a conference to that effect,

Reaffirming also the urgent necessity of the adherence by all States to the Convention of the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction, 2/ signed in London, Moscow and Washington on 10 April 1972,

Taking note of the Final Document of the Second Review Conference of the Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction, adopted by consensus on 26 September 1986, 6/ and, in particular, of article IX of the Final Declaration of the Conference, 4/

Having considered the report of the Conference on Disarmament, 7/ which incorporates, inter alia, the report of its Ad Hoc Committee on Chemical Weapons, 8/ and noting that following the precedents set over the past four years, consultations are continuing during the inter-sessional period, thus increasing the time devoted to negotiations,

Convinced of the necessity that all efforts be exerted for the continuation and successful conclusion of negotiations on the prohibition of the development, production, stockpiling and use of all chemical weapons and on their destruction,

Expressing the hope that the conference referred to above will also give a strong impetus to that end,

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6/ BWC/CONF.II/13.

7/ Official Records of the General Assembly, Forty-third Session, Supplement No. 27 (A/43/27).

8/ Ibid., para. 77.

Conscious of the need to share data relevant to the negotiations on a future convention banning all chemical weapons on a global basis and of the fact that the provision of such data would be an important confidence-building measure,

Noting the bilateral and other discussions, including the ongoing exchange of views between the Union of the Soviet Socialist Republics and the United States of America in the framework of the multilateral negotiations, on issues related to the prohibition of chemical weapons,

Noting also with appreciation the efforts made at all levels by States to facilitate the earliest conclusion of a convention and, in particular, the concrete steps designed to promote confidence and to contribute directly to that goal,

1. Takes note with satisfaction of the work of the Conference on Disarmament during its 1988 session regarding the prohibition of chemical weapons, and in particular appreciates the progress in the work of its Ad Hoc Committee on Chemical Weapons on that question and the tangible results recorded in its report;

2. Expresses again none the less its regret and concern that, notwithstanding the progress made in 1988, a convention on the complete and effective prohibition of the development, production, stockpiling and use of all chemical weapons and on their destruction has not yet been elaborated;

3. Urges again the Conference on Disarmament, as a matter of high priority, to intensify, during its 1989 session, the negotiations on such a convention and to reinforce further its efforts by, inter alia, increasing the time during the year that it devotes to such negotiations, taking into account all existing proposals and future initiatives, with a view to the final elaboration of a convention at the earliest possible date, and to re-establish its Ad Hoc Committee on Chemical Weapons for this purpose with the mandate to be agreed upon by the Conference at the beginning of its 1989 session;

4. Requests the Conference on Disarmament to report to the General Assembly at its forty-fourth session on the results of its negotiations;

5. Encourages Member States to take further initiatives to promote confidence and openness in the negotiations and to provide further information to facilitate prompt resolution of outstanding issues, thus contributing to an early agreement on, and universal adherence to, a convention on the prohibition of the development, production, stockpiling and use of all chemical weapons and on their destruction;

6. Recognizes the importance of declarations made by States on whether or not they possess chemical weapons and of further international exchanges of data in connection with the negotiations on a multilateral convention on the complete and effective prohibition of the development, production, stockpiling and use of chemical weapons and on their destruction;

7. Welcomes the offer by the French Government to convene in Paris from 7 to 11 January 1989 a conference of the States parties to the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous and Other Gases, and of Bacteriological Methods of Warfare, and of other interested States;

8. Expresses the hope that all States will contribute actively to the objectives of the conference.

73rd plenary meeting
7 December 1988

CONFERENCE ON DISARMAMENT

CD/880
30 January 1989

ENGLISH
Original: FRENCH

LETTER DATED 27 JANUARY 1989 FROM THE REPRESENTATIVE OF FRANCE ADDRESSED TO THE SECRETARY-GENERAL OF THE CONFERENCE ON DISARMAMENT, TRANSMITTING THE TEXT OF THE FINAL ACT OF THE PARIS CONFERENCE OF STATES PARTIES TO THE 1925 GENEVA PROTOCOL AND OTHER INTERESTED STATES, INCLUDING THE FINAL DECLARATION OF THE CONFERENCE, ADOPTED ON 11 JANUARY 1989

I have the honour to enclose the text of the Final Act of the Paris Conference of States Parties to the 1925 Geneva Protocol and Other Interested States, including the Final Declaration of the Conference, adopted on 11 January 1989.

I would be grateful if you would have these texts distributed as official documents of the Conference on Disarmament.

(Signed) Pierre MOREL

FINAL ACT OF THE PARIS CONFERENCE OF STATES PARTIES TO THE 1925 GENEVA PROTOCOL AND OTHER INTERESTED STATES

1. The Conference of States Parties to the 1925 Geneva Protocol and Other Interested States on the Prohibition of Chemical Weapons was held, on the invitation of the Government of the French Republic, in Paris from 7 to 11 January 1989.

The Governments of the following 149 States were represented at the Conference:

Afghanistan; Albania; Algeria; Angola; Argentina; Australia; Austria; Bahrain; Bangladesh; Belgium; Belize; Benin; Bolivia: Brazil; Brunei; Bulgaria; Burkina Faso; Burma; Burundi; Cameroon; Canada; Cape Verde; Central African Republic; Chad; Chile; China; Colombia; Comoros; Congo; Cook Islands; Costa Rica; Côte d'Ivoire; Cuba; Cyprus; Czechoslovakia; Democratic Kampuchea; Democratic People's Republic of Korea; Democratic Yemen; Denmark; Djibouti; Dominica; Dominican Republic; Ecuador; Egypt; El Salvador; Equatorial Guinea; Ethiopia; Finland; France; Gabon; Gambia; German Democratic Republic; Germany, Federal Republic of; Ghana; Greece; Grenada; Guatemala; Guinea; Guinea-Bissau; Haiti; Holy See; Hungary; Iceland; India; Indonesia; Iran, Islamic Republic of; Iraq; Ireland; Israel; Italy; Jamaica; Japan; Jordan; Kenya; Kuwait; Lao People's Democratic Republic; Lebanon; Lesotho; Liberia; Libyan Arab Jamahiriya; Luxembourg; Madagascar; Malawi; Malaysia; Mali; Malta; Mauritania; Mauritius; Mexico; Monaco; Mongolia; Morocco; Mozambique; Nepal; Netherlands; New Zealand; Nicaragua; Niger; Nigeria; Norway; Oman; Pakistan; Panama; Papua New Guinea; Paraguay; Peru; Philippines; Poland; Portugal; Qatar; Republic of Korea; Romania; Rwanda; Samoa; San Marino; Sao Tome and Principe; Saudi Arabia; Senegal; Seychelles; Sierra Leone; Somalia; South Africa; Spain; Sri Lanka; Sudan; Suriname; Swaziland; Sweden; Switzerland; Syrian Arab Republic; Thailand; Togo; Trinidad and Tobago; Tunisia; Turkey; Uganda; Union of Soviet Socialist Republics; United Arab Emirates; United Kingdom of Great Britain and Northern Ireland; United Republic of Tanzania; United States of America; Uruguay; Venezuela; Viet Nam; Yemen; Yugoslavia; Zaire; Zambia; Zimbabwe.

The Secretary-General of the United Nations, the Under-Secretary-General for Disarmament Affairs of the United Nations and the Secretary-General of the Conference on Disarmament also attended.

2. At the opening session, held on 7 January 1989, the President of the French Republic, Mr. François MITTERAND, declared the Conference open. The Director-General of UNESCO, Mr. Federico MAYOR, welcomed the participants to the Headquarters of his Organization, where the proceedings of the Conference were held. The Secretary-General of the United Nations, Mr. Javier PEREZ DE CUELLAR, delivered a speech. The President of the French Republic, Mr. François MITTERAND, addressed the Conference.

3. The Conference elected as President Mr. Roland DUMAS, Minister of State, Minister of Foreign Affairs of the French Republic.

The Conference elected as Vice-Presidents the heads of delegation of the following States: Bangladesh; Brazil; Cameroon; Japan; Mexico; Morocco; Poland; Sweden; Union of Soviet Socialist Republics and United States of America.

The Conference elected Mr. Kalevi SORSA, Minister of Foreign Affairs of the Republic of Finland, as President of the Committee of the Whole.

The Conference elected Dr. Peter VARKONYI, Minister of Foreign Affairs of the Hungarian People's Republic, as President of the Credentials Committee.

4. The Secretary-General of the Conference was Mr. Claude ARNAUD, Ambassador of France. He was assisted by Mr. Jean de PONTON d'AMECOURT, Executive Secretary-General, Mr. Jean-Marc ROCHEREAU de la SABLIERE, Deputy Secretary-General (for the Conference in plenary session), and Mr. Philippe GUELLUY, Deputy Secretary-General (for the Committee of the Whole).

5. The Conference held nine plenary sessions, during which 109 delegations spoke in the general debate.

6. The Committee of the Whole held six sessions, during which it examined and finalized the draft Final Declaration of the Conference. The President of the Committee of the Whole reported to the Conference.

7. The Credentials Committee comprised, in addition to its President, delegates of the following States: Argentina; Australia; Austria; Czechoslovakia; Indonesia; Nigeria; Peru; Philippines and Senegal.

The Credentials Committee held two meetings, at which it examined the credentials of representatives.

The Conference adopted the report of the Credentials Committee, the text of which is annexed to this Final Act.

8. The Conference adopted this Final Act together with the Final Declaration set out below:

In witness whereof the undersigned have appended their signatures to the original copy deposited in the archives of the Ministry of Foreign Affairs of the French Republic.

The President of the Conference

Roland DUMAS

The Secretary-General of the Conference

Claude ARNAUD

Done at Paris, on 11 January 1989

FINAL DECLARATION

The representatives of States participating in the Conference on the Prohibition of Chemical Weapons, bringing together States Parties to the Geneva Protocol of 1925 and other interested States in Paris from 7 to 11 January 1989, solemnly declare the following:

1. The participating States are determined to promote international peace and security throughout the world in accordance with the Charter of the United Nations and to pursue effective disarmament measures. In this context, they are determined to prevent any recourse to chemical weapons by completely eliminating them. They solemnly affirm their commitments not to use chemical weapons and condemn such use. They recall their serious concern at recent violations as established and condemned by the competent organs of the United Nations. They support the humanitarian assistance given to the victims affected by chemical weapons.

2. The participating States recognize the importance and continuing validity of the Protocol for the prohibition of the use in war of asphyxiating, poisonous or other gases and bacteriological methods of warfare, signed on 17 June 1925 in Geneva. The States Parties to the Protocol solemnly reaffirm the prohibition as established in it. They call upon all States which have not yet done so to accede to the Protocol.

3. The participating States stress the necessity of concluding, at an early date, a Convention on the prohibition of the development, production, stockpiling and use of all chemical weapons, and on their destruction. This Convention shall be global and comprehensive and effectively verifiable. It should be of unlimited duration. To this end, they call on the Conference on Disarmament in Geneva to redouble its efforts, as a matter of urgency, to resolve expeditiously the remaining issues and to conclude the Convention at the earliest date. All States are requested to make, in an appropriate way, a significant contribution to the negotiations in Geneva by undertaking efforts in the relevant fields. The participating States therefore believe that any State wishing to contribute to these negotiations should be able to do so. In addition, in order to achieve as soon as possible the indispensable universal character of the Convention, they call upon all States to become parties thereto as soon as it is concluded.

4. The participating States are gravely concerned by the growing danger posed to international peace and security by the risk of the use of chemical weapons as long as such weapons remain and are spread. In this context, they stress the need for the early conclusion and entry into force of the Convention, which will be established on a non-discriminatory basis. They deem it necessary, in the meantime, for each State to exercise restraint and to act responsibly in accordance with the purpose of the present declaration.

5. The participating States confirm their full support for the United Nations in the discharge of its indispensable role, in conformity with its Charter. They affirm that the United Nations provides a framework and an instrument enabling the international community to exercise vigilance with respect to the prohibition of the use of chemical weapons. They confirm their support for appropriate and effective steps

taken by the United Nations in this respect in conformity with its Charter. They further reaffirm their full support for the Secretary-General in carrying out his responsibilities for investigations in the event of alleged violations of the Geneva Protocol. They express their wish for early completion of the work undertaken to strengthen the efficiency of existing procedures and call for the co-operation of all States, in order to facilitate the action of the Secretary-General.

6. The participating States, recalling the Final Document of the first Special Session of the United Nations General Assembly devoted to Disarmament in 1978, underline the need to pursue with determination their efforts to secure general and complete disarmament under effective international control, so as to ensure the right of all States to peace and security.

CONFERENCE ON DISARMAMENT

CD/881
3 February 1989

Original: ENGLISH

Report of the Ad Hoc Committee on Chemical Weapons to the Conference on Disarmament on its work during the period 17 January to 3 February 1989

I. INTRODUCTION

1. In accordance with the decision taken by the Conference on Disarmament at its 483rd plenary meeting held on 20 September 1988, the Ad Hoc Committee on Chemical Weapons resumed its work on 17 January 1989 under the Chairmanship of Ambassador Bogumil Sujka (Poland). Mr. Abdelkader Bensmail, Senior Political Affairs Office of the Department for Disarmament Affairs, continued to serve as Secretary of the Committee.

2. The Ad Hoc Committee held 4 meetings from 17 January to 3 February 1989. In accordance with the recommendations of the Ad Hoc Committee, as contained in its Report to the Conference on Disarmament (CD/874), open-ended consultations of the Ad Hoc Committee were held between 29 November and 15 December 1988 in preparation for the resumed session.

3. The representatives of the following States not members of the Conference participated in the work of the Ad Hoc Committee: Austria, Denmark, Greece, Finland, Ireland, New Zealand, Norway, Portugal, Spain, Switzerland, Turkey and Zimbabwe.

II. SUBSTANTIVE WORK DURING THE RESUMED SESSION

4. In accordance with its mandate, the Ad Hoc Committee continued its work on the Convention. In particular, it considered the following issues in the framework of the three Working Groups established in 1988:

(a) Group A (Chairman: Mr. Andrej Cima of Czechoslovakia)

- Confidentiality with regard to verification of non-production of chemical weapons in the chemical industry.

- Issues pertaining to Schedule [1] chemicals outside the single small-scale production facility.

(b) Group B (Chairman: Mr. Pablo Macedo of Mexico)

- Undiminished security during the period of destruction of chemical weapons.

- Article X on "Assistance".

(c) Group C (Chairman: Mr. Sadaaki Numata of Japan)

- Guidelines on the international inspectorate in the context of challenge inspection.

- Designation of the highest organ of the Organization under the Convention.

- References to the "Technical Secretariat" in certain parts of the "Rolling Text".

In so doing, it utilized Appendices I, II and III of the Report on its work in 1988 (CD/874), proposals made by the Chairmen of the three Working Groups as well as by delegations.

III. CONCLUSIONS AND RECOMMENDATIONS

5. The results of the work undertaken during the resumed session are reflected in the updated versions of the Appendices to CD/874, attached hereto. Appendix I to this Report represents the present stage of elaboration of the provisions of the draft Convention. Appendix II contains papers reflecting the results of work undertaken so far on issues in the Convention. They are enclosed as a basis for future work.

6. The Ad Hoc Committee recommends to the Conference on Disarmament:

(a) That Appendix I to this Report be used for further negotiation and drafting of the Convention.

(b) That other documents reflecting the state of work of the Ad Hoc Committee, as contained in Appendix II to this Report, together with other relevant present and future documents of the Conference, also be utilized in the further negotiation and elaboration of the Convention.

(c) That Ambassador Pierre Morel of France be appointed as its Chairman for the 1989 session.

(d) That the results of the Paris Conference on the prohibition of Chemical Weapons be taken into account in the future work on the Convention.

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APPENDIX I

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APPENDIX II

This Appendix contains papers reflecting results of work undertaken on issues under the Convention. They are enclosed to serve as a basis for future work.

APPENDIX I

Preliminary structure of a Convention on chemical weapons

Preamble

I. General provisions on scope

II. Definitions and criteria

III. Declarations

IV. Chemical weapons

V. Chemical weapons production facilities

VI. Activities not prohibited by the Convention

VII. National implementation measures

VIII. The Organization

IX. Consultations, co-operation and fact finding

X. Assistance and protection against chemical weapons

XI. Economic and technological development

XII. Relation to other international agreements

XIII. Amendments

XIV. Duration, withdrawal

XV. Signature, ratification, entry into force

XVI. Languages

Annexes and other documents

Preamble 1/

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,

Recognizing that the Convention reaffirms principles and objectives of and obligations assumed under the Geneva Protocol of 17 June 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 mankind, 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 June 1925,

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

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

Have agreed as follows:

1/ Some delegations consider that the texts contained in the Preamble require further consideration.

I. GENERAL PROVISIONS ON SCOPE 1/ 2/

1. Each State Party undertakes not to:

- develop, produce, otherwise acquire, stockpile or retain chemical weapons, or transfer, directly or indirectly, chemical weapons to anyone.

2. Each State Party undertakes not to:

- assist, encourage or induce, in any way, anyone to engage in activities prohibited to Parties under this Convention.

1/ One delegation pointed out, the preoccupying effects, in its view, on the security of States deriving from the very large disproportion, during the transitional period, between existing chemical weapons capabilities.

2/ Other delegations believed that the problem of disproportion between chemical weapons capabilities can be solved through their levelling out by a certain time after the entry into force of the Convention.

3. Each State Party undertakes not to use chemical weapons. 1/ 2/

4. [Each State Party undertakes not to [conduct other activities in preparation for use of chemical weapons] [engage in any military preparations for use of chemical weapons].]

5. Each State Party undertakes to destroy chemical weapons which are in its possession or under its [jurisdiction or] control. 3/

6. Each State Party undertakes to destroy chemical weapons production facilities which are in its possession or under its [jurisdiction or] control.

1/ It is understood that this provision is closely linked to the definition of chemical weapons in another part of the Convention, the final formulation of which is yet to be agreed upon. It is also understood that this provision does not apply to the use of toxic chemicals and their precursors for permitted purposes still to be defined and to be provided for in the Convention. This provision is also closely linked to a provision in the Convention to be agreed upon relating to reservations.

2/ The question of herbicides is subject to ongoing consultations. The 1986 Chairman of these open-ended consultations has suggested the following formulation for a provision on herbicides: "Each State Party undertakes not to use herbicides as a method of warfare; such a prohibition should not preclude any other use of herbicides".

3/ The view was expressed that the application of this provision to the destruction of discovered old chemical weapons needs to be further discussed. Another view was expressed that the application of this provision does not allow for any exceptions.

II. DEFINITIONS AND CRITERIA

For the purposes of this Convention:

1.1/ The term "chemical weapons" shall apply to the following, together or separately: 2/

(i) toxic chemicals, including super-toxic lethal chemicals, other lethal chemicals, other harmful chemicals and their precursors, including key precursors [and key components of binary and/or multicomponent chemical systems for chemical weapons], 3/ except such chemicals intended for purposes not prohibited by the Convention as long as the types and quantities involved are consistent with such purposes;

(ii) 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;

1/ The definitions of chemical weapons are presented on the understanding that problems related to irritants used for law enforcement and riot control, and also to chemicals intended to enhance the effect of the use of chemical weapons if their inclusion in the Convention is agreed could be handled outside the definitions of chemical weapons if this will result in a more clear and understandable definition. Preliminary suggestions to solve these problems are given below and consultations on them will be continued.

2/ One delegation expressed its reservation on the present formulation of the definition of chemical weapons and on the terminology used in (i) that failed to reflect the general purpose criterion.

3/ Some delegations consider that further deliberation is required in order to clarify at a later stage of the negotiations the implications of this definition for other parts of the Convention. This applies to other relevant parts of the Appendix. Other delegations consider that key component of binary and/or multicomponent chemical system for chemical weapons means: a component which poses a special risk to the objectives of the Convention as it can be an integral part in a chemical weapons munition or device and can form toxic chemicals at the moment of their employment and possesses the following characteristics: (a) reacts (interacts) rapidly with other component(s) of binary and/or multicomponent chemical system during the munition's flight to the target and gives a high yield of final toxic chemical; (b) plays an important role in determining the toxic properties of the final product; (c) may not be used, or be used only in minimal quantities, for permitted purposes; (d) possesses the stability necessary for long-term storage.

(iii) any equipment specifically designed for use directly in connection with the employment of such munitions or devices.

- [The term "chemical weapons" shall not apply to those chemicals which are not super-toxic lethal, or other lethal chemicals and which are approved by the Conference of the States Parties for use by a Party for domestic law enforcement and domestic riot control purposes.]
- [States Parties agree not to [develop, produce, stockpile or] utilize for chemical weapons chemicals intended to enhance the effect of the use of such weapons.]

[2. "Toxic chemicals" means:

chemicals [however or wherever they are produced], [whether produced in plants, munitions or elsewhere] [regardless of the method and pattern of production] whose toxic properties can be utilized to cause death or temporary or permanent harm, to man or animals involving:]

[2. "Toxic chemicals" means:

any chemical, regardless of its origin or method of production which through its chemical action on life processes can cause death, temporary incapacitation, or permanent harm to man or animals

Toxic chemicals are divided into the following categories:]

(a) "super-toxic lethal chemicals", which have a median lethal dose which is less than or equal to 0.5 mg/kg (subcutaneous administration) or 2,000 mg-min/m^3 (by inhalation) when measured by an agreed method 1/ set forth in ... 2/

(b) "other lethal chemicals", which have a median lethal dose which is greater than 0.5 mg/kg (subcutaneous administration) or 2,000 mg-min/m^3 (by inhalation) and less than or equal to 10 mg/kg (subcutaneous administration) or 20,000 mg-min/m^3 (by inhalation) when measured by an agreed method set forth in ... 2/

[(c) "other harmful chemicals", being any [toxic] chemicals not covered by (a) or (b) above, [including toxic chemicals which normally cause temporary incapacitation rather than death] [at similar doses to those at which super-toxic lethal chemicals cause death].]

[and "other harmful chemicals" has a median lethal dose which is greater than 10 mg/kg (subcutaneous administration) or 20,000 mg-min/m^3 (by inhalation).]

1/ It was noted that after such measurements had actually been performed, the figures mentioned in this and the following section might be subject to slight changes in order to cover sulphur mustard gas under the first category.

2/ Recommended procedures for toxicity determinations are contained in pages 93-97 of this document.

3. "Purposes not prohibited by the Convention" means:

(a) industrial, agricultural, research, medical or other peaceful purposes, domestic law enforcement purposes; and military purposes not connected with the use of chemical weapons.

(b) protective purposes, namely those purposes directly related to protection against chemical weapons; 1/

4. "Precursor" means:

a chemical reagent which takes part in the production of a toxic chemical.

(a) "Key Precursor" means:

a precursor which poses a significant risk to the objectives of the Convention by virtue of its importance in the production of a toxic chemical.

It may possess [possesses] the following characteristics:

(i) It may play [plays] an important role in determining the toxic properties of a [toxic chemicals prohibited by the Convention] [super-toxic lethal chemical].

(ii) It may be used in one of the chemical reactions at the final stage of formation of the [toxic chemicals prohibited by the Convention] [super-toxic lethal chemical].

[(iii) it may [is] not be used, or [is] used only in minimal quantities, for permitted purposes.] 2/

Key precursors are listed in ...

For the purpose of the relevant provisions in a Chemical Weapons Convention key precursors should be listed and subject to revisions according to [characteristics] [guidelines].

Chemicals which are not key precursors but are deemed to pose a [threat] [particular risk] with regard to a Chemical Weapons Convention should be included in a list.

1/ The suggestion that such permitted protective purposes should relate only to "an adversary's use of" chemical weapons was removed pending a decision on whether in the Convention the question of prohibiting other military preparations for use of chemical weapons than those mentioned under scope should be dealt with.

2/ The position of this paragraph should be decided in relation to how some chemicals, for instance, isopropylalcohol, are dealt with in the Convention.

[(b) Key component of binary and/or multicomponent chemical systems for chemical weapons means:]

[a key precursor which forms a toxic chemical in the binary or multicomponent weapons munition or device and which has the following additional characteristics (to be elaborated):]

5. The term "chemical weapons production facility": 1/

(a) means any equipment, as well as any building housing such equipment, that was designed, constructed or used 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, any Schedule [1] chemical, or any other chemical that has no use for permitted purposes above ... kilograms per year but can be used for chemical weapons purposes; 2/ or

(ii) for filling chemical weapons. 3/

(b) does not include any facility with an annual capacity for synthesis of chemicals specified in subparagraph (a) (i) above that is less than [1,000-2,000] kilograms. 4/ 5/

(c) does not include the single small-scale production facility provided under the Annex to Article VI [1] of the Convention.

1/ A view was expressed that this definition may need to be reviewed to take into account further elaboration of Article VI.

2/ Any such chemical should be included in a relevant schedule of chemicals in the convention.

3/ The filling of chemical weapons includes, inter alia:

- the filling of Schedule 1 chemicals into munitions, devices, or bulk storage containers;
- the filling of chemicals into containers which form part of assembled binary munitions and devices and into chemical submunitions which form part of assembled unitary munitions and devices;
- the loading of the containers and chemical submunitions into the respective munitions and devices.

4/ The disposition of such facilities should be decided in the context of Articles III and VI of the Convention.

5/ This threshold should be decided once an agreed definition for the term "capacity" has been developed. Further work is needed on it, taking into account, inter alia, the report on how to define production capacity reproduced in Appendix II.

III. DECLARATIONS 1/

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) Chemical Weapons

(i) whether it has any chemical weapons under its jurisdiction or control 2/ anywhere;

(ii) whether it has on its territory any chemical weapons under the jurisdiction or control of others, including a State not Party to the Convention;

(iii) whether it has transferred or received any chemical weapons and whether it has transferred to or received from anyone the control over such weapons since [1 January 1946] [26 March 1975].

(b) Chemical Weapons Production Facilities

(i) whether it has any chemical weapons production facilities under its jurisdiction or control anywhere or has had such facilities at any time since [1.1.1946];

(ii) whether it has any chemical weapons production facilities on its territory under the jurisdiction or control of others, including a State not Party to this Convention, or has had such facilities at any time since [1.1.1946];

(iii) whether it has transferred or received any equipment for the production of chemical weapons [and documentation relevant to the production of chemical weapons] since [1.1.1946], and whether it has transferred to, or received from, anyone the control of such equipment [and documentation].

1/ The view was expressed that the Annex to this Article needs to be reviewed.

2/ It is agreed that the concept of "jurisdiction or control" requires additional discussion and elaboration. To facilitate work on the issue an informal discussion-paper dated 20 March 1987 was prepared, on the request of the Chairman of the Committee, by Dr. Bolewski (Federal Republic of Germany), Dr. Szénási (Hungary) and Mr. Effendi (Indonesia).

(c) Other declarations

The precise location, nature and general scope of activities of any facility and establishment 1/ on its territory or under its jurisdiction or under its control anywhere 2/ designed, constructed or used since [1.1.46] for development of chemical weapons, inter alia, laboratories and test and evaluation sites.

2. Each State Party making affirmative statements in regard to any of the provisions under subparagraphs 1a and 1b of this Article shall carry out all relevant measures envisaged in any or all of Articles IV and V.

1/ The scope of the phrase "any facility and establishment" is to be clarified and an appropriate formulation found.

2/ It is agreed that the concept of "on its territory or under its jurisdiction or under its control anywhere" requires additional discussion and elaboration.

IV. CHEMICAL WEAPONS

1. The provisions of this article and its Annex shall apply to any and all chemical weapons under the jurisdiction or control of a State Party, regardless of location, including those on the territory of another State.

2. Each State Party, within 30 days after the Convention enters into force for it, shall submit a declaration which:

(a) specifies the [precise location,] 1/ aggregate quantity and detailed inventory of any chemical weapons under its jurisdiction or control;

(b) reports any chemical weapons on its territory under the jurisdiction or control of others, including a State not Party to this Convention;

(c) specifies any transfer or receipt by the State Party of any chemical weapons since [1 January 1946] [26 March 1975] or any transfer of control by that State Party of such weapons; and

(d) provides its general plan for destruction of its chemical weapons.

3. [Each State Party shall, immediately after the declaration under paragraph 2 of this Article has been submitted, provide access to its chemical weapons 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 its chemical weapons 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 destruction facility.] 1/

4. Each State Party shall submit detailed plans for the destruction of chemical weapons not later than six months before each destruction period begins. The detailed plans shall encompass all stocks to be destroyed during the next coming period, and shall include the precise location and the detailed composition of the chemical weapons which are subject to destruction during that period.

5. Each State Party shall:

(a) destroy all chemical weapons pursuant to the Order specified in the Annex to Article IV, beginning not later than 12 months and finishing not later than 10 years after the Convention enters into force for it;

(b) provide information annually regarding the implementation of its plans for destruction of chemical weapons; and

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1/ One delegation reserved its position on this question.

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

6. Each State Party shall provide access to any chemical weapons destruction facilities and the facilities' storage for the purpose of systematic international on-site verification of destruction through the continuous presence of inspectors and continuous monitoring with on-site instruments, in accordance with the Annex to Article IV.

7. Any chemical weapons discovered by a State Party after the initial declaration of chemical weapons shall be reported, secured and destroyed, as provided in the Annex to Article IV. 1/ 2/

8. All locations where chemical weapons are [stored or] 3/ destroyed shall be subject to systematic international on-site verification, through on-site inspection and monitoring with on-site instruments in accordance with the Annex to Article IV.

9. In conducting the verification activities described in this Article the Technical Secretariat shall request only the information and data necessary to fulfil its responsibilities under the Convention. It shall take every precaution to protect the confidentiality of such information.

10. Any State Party which has on its territory chemical weapons which are under the control of a State that is not a Party to this Convention shall ensure that such weapons are removed from its territory not later than [30 days] after the date on which the Convention entered into force for it.

11. The declaration, plans and information submitted by each State Party under this article shall be made in accordance with the Annex to Article III and the Annex to Article IV.

[12. Reminder: undiminished security during the destruction period.] 4/

1/ Consultations were carried out on this issue. The results are reflected in CD/CW/WP.177/Rev.1. Different views were expressed, inter alia on the question of the responsibility for the destruction of these weapons. Further work is needed.

2/ For some delegations, the question of the applicability of this Annex to obsolete chemical weapons (ordnances) retrieved from the combat zones of World War I will have to be resolved later.

3/ One delegation reserved its position on this question.

4/ The question of the proper place in the text of the Convention for provisions concerning undiminished security during the destruction period is to be further discussed.

V. CHEMICAL WEAPONS PRODUCTION FACILITIES

1. The provisions of this article shall apply to any and all chemical weapons production facilities under the jurisdiction or control of a State Party, regardless of location. 1/

2. Each State Party with any chemical weapons production facility shall cease immediately all activity at each chemical weapons production facility except that required for closure.

3. No State Party shall construct any new facility or modify any existing facility for the purpose of chemical weapons production or for any other purpose prohibited by the Convention.

4. Each State Party, within 30 days after the Convention enters into force for it, shall submit a declaration which:

(a) specifies any chemical weapons production facilities under its jurisdiction or control, or on its territory under the control of others, including a State not party to this Convention, at any time since [1 January 1946] [at the time of entry into force of the Convention];

(b) specifies any transfer or any receipt by the State Party of any equipment for the production of chemical weapons [and documentation relevant to the production of chemical weapons] since [1.1.1946] or any transfer of control by that Party of such equipment [and documentation];

(c) specifies actions to be taken for closure of each chemical weapons production facility;

(d) outlines its general plan for destruction for each chemical weapons production facility, and

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

5. Each State Party shall, immediately after the declaration, under paragraph 4, has been submitted, provide access to each chemical weapons production facility for the purpose of [systematic] international on-site verification of the declaration through on-site inspection.

1/ It is understood that the above provisions also apply to any facility on the territory of another State [regardless of ownership and form of contract, on the basis of which they have been set up and functioned for the purposes of production of chemical weapons].

6. Each State Party shall:

(a) close within three months after the Convention enters into force for it, each chemical weapons production facility in a manner that will render each facility inoperable; and

(b) provide access to each chemical weapons production facility, subsequent to closure, for the purpose of systematic international on-site verification through periodic on-site inspection and continuous monitoring with on-site instruments in order to ensure that the facility remains closed and is subsequently destroyed.

7. Each State Party shall submit detailed plans for destruction of each facility not later than [3] [6] months before the destruction of the facility begins.

8. Each State Party shall:

(a) destroy all chemical weapons production facilities, and related facilities and equipment specified in Section II-C-3 of the Annex to Article V, in accordance with the provisions of that Annex, beginning not later than 12 months, and finishing not later than 10 years, after the Convention enters into force;

(b) provide information annually regarding the implementation of its plans for the destruction of its chemical weapons production facilities, and

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

9. A chemical weapons production facility may be temporarily converted for destruction of chemical weapons. Such a converted facility must be destroyed as soon as it is no longer in use for destruction of chemical weapons and, in any case, not later than 10 years after the Convention enters into force.

10. Each State Party shall submit all chemical weapons production facilities to systematic international on-site verification through on-site inspection and monitoring with on-site instruments in accordance with the Annex to Article V.

11. In conducting the verification activities described in this Article the Technical Secretariat shall request only the information and data necessary to fulfil its responsibilities under the Convention. It shall take every precaution to protect the confidentiality of such information.

12. The declaration, plans and information submitted by each State Party under this article shall be made in accordance with the Annex to Article V.

[13. Reminder: undiminished security during the destruction period.] 1/

1/ The question of the proper place in the text of the Convention for provisions concerning undiminished security during the destruction period is to be further discussed.

VI. ACTIVITIES NOT PROHIBITED BY THE CONVENTION 1/ 2/

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 by the Convention.

(b) shall ensure that toxic chemicals and their precursors are not developed, produced, otherwise acquired, retained, transferred, or used within its territory or anywhere under its jurisdiction or control for purposes prohibited by the Convention.

2. Toxic Chemicals and their Precursors:

(a) Toxic chemicals and their precursors considered in the Annexes to Article VI [1], [2], [3] and [...], 3/ which could be used for purposes prohibited by the Convention, as well as facilities which produce, process or consume these toxic chemicals or precursors, shall be subject to international monitoring as provided in those annexes:

Annex to Article VI [1] Schedule [1]:	Super-Toxic Lethal Chemicals and [especially dangerous key precursors] [key components of chemicals weapons systems].
Annex to Article VI [2] Schedule [2]:	Key Precursors.
Annex to Article VI [3] Schedule [3]:	Chemicals produced in large commercial quantities and which could be used for chemical weapons purposes.
Annex to Article VI [...]:	Production of super-toxic lethal chemicals not listed in Schedules [1].

1/ One delegation considers that the terminology used in this article and its annexes should be consistent with the final definition of chemical weapons to be agreed upon.

2/ One delegation expressed the view that the question of collection and forwarding of data and other information to verify non-production requires further consideration. This delegation made reference to the Working Paper CD/CW/WP.159 of 19 March 1987, which includes draft elements for inclusion in the rolling text.

3/ Some delegations consider that these chemicals should be dealt with in the Annex to Article VI [2] Schedule [2]. Other delegations consider that a separate Annex [4] is required. Until this issue is resolved, the designation Annex to Article VI [...] is used.

(b) The schedules of chemicals contained in the annexes may be revised. Modalities for revision are contained in the Annex to Article [VI] [O.]. 1/

3. Within 30 days of the entry into force of it, each State Party shall declare data on relevant chemicals and the facilities which produce them, in accordance with the Annex to Article VI [1], [2], [3] and [...].

4. Each State Party shall make an annual declaration regarding the relevant chemicals in accordance with the Annex to Article VI [1], [2], [3] and [...].

5. Each State Party undertakes to subject the chemicals and [facility] [facilities] under the Annex to Article VI [1] to the measures contained in that Annex.

6. Each State Party undertakes to subject the chemicals and facilities under the Annex to Article VI [2] and [...] to monitoring by data reporting and routine systematic international on-site verification, through on-site inspection and use of on-site instruments as long as production and processing are not impaired.

7. Each State Party undertakes to subject the chemicals and facilities under the Annex to Article VI [3] to monitoring by data reporting.

8. The provisions of this article shall be implemented in a manner designed in so far as possible to avoid hampering the economic or technological development of parties to the Convention and international co-operation in the field of peaceful chemical activities including the international exchange of scientific and technical information and chemicals and equipment for the production, processing or use of chemicals for peaceful purposes in accordance with the provisions of the Convention. 2/ 3/

9. In conducting verification activities, the Technical Secretariat shall:

(a) avoid undue intrusion into the State Party's peaceful chemical activities;

(b) take every precaution to protect confidential information coming to its knowledge in the implementation of the Convention; 2/ and

(c) require only the minimum amount of information and data necessary for the carrying out of its responsibilities under the Convention.

10. For the purpose of on-site verification, each State Party shall grant to the International Inspectors access to facilities as required in the Annex to Article VI [1], [2], [3] and [...].

1/ Furthermore, work was carried out on guidelines for considering inclusion of chemicals in Schedule [1]. The result of this work is enclosed in Appendix II to serve as a basis for future work.

2/ It was agreed that provisions to ensure the confidentiality of the information provided should be elaborated.

3/ The inclusion of this paragraph in this Article is to be considered further.

VII. NATIONAL IMPLEMENTATION MEASURES

1. Each State Party to this Convention shall adopt any measures it considers necessary in accordance with its constitutional processes to implement this Convention and, in particular, to prohibit and prevent anywhere under its jurisdiction or control any activity that a State Party to this Convention is prohibited from conducting by this Convention.

2. In order to implement these obligations, each State Party shall, according to its needs and specific conditions, designate or establish a national authority. 1/

3. Each State Party undertakes to inform the Organization concerning the national authority and other legislative and administrative measures taken to implement the Convention.

4. Each State Party undertakes to co-operate with the Organization in the exercise of all its functions and in particular to provide assistance to the Technical Secretariat including data reporting, assistance for international on-site inspections, provided for in this Convention, and a response to all its requests for the provision of expertise, information and laboratory support.

5. States Parties shall treat confidential information they receive from the Organization exclusively in connection with their rights and obligations under the Convention.

National Technical Means 2/

1/ It was suggested that guidelines for the functioning of the national authority for the implementation of the Convention be elaborated.

2/ It was suggested that no reference to National Technical Means is needed in a future Convention.

VIII. THE ORGANIZATION 1/

A. General Provisions

1. The States Parties to the Convention hereby establish the Organization for the Prohibition of Chemical Weapons, to achieve the objectives of the 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 co-operation among States Parties. 2/

2. All States Parties to the Convention shall be members of the Organization.

3. The seat of the headquarters of the Organization shall be ...

4. There are hereby established as the organs of the Organization the Conference of the States Parties 3/, the Executive Council and the Technical Secretariat.

B. Conference of the States Parties

(a) Composition, procedure and decision-making

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

2. The first session of the Conference of the States Parties shall be convened by the Depository at (venue) not later than 30 days after the entry into force of the Convention.

3. The Conference of the States Parties shall meet in regular sessions which should be held annually unless it decides otherwise. It shall meet in special sessions, as the Conference of the States Parties may decide, at the request of the Executive Council or at the request of any State Party supported by [8-10] 4/ [one third of] the States Parties. When necessary a special session shall be convened at short notice.

1/ One delegation has expressed reservations with regard to the approach being given to the concept of an Organization for the Prohibition of Chemical Weapons, or any other similar solution for this purpose, and has expressed the view that before proceeding further in the examination of this question, there is a need to define the principles that will govern the financing of such an Organization.

2/ A view was expressed that the achievement of these objectives should be sought in close co-operation with the United Nations.

3/ A view was expressed that the designation of this highest organ, to which many references are made throughout the text, should be determined only after further consideration of other provisions of the Convention and that, in this connection, the possibility of using the designation "the General Conference" may also be considered.

4/ A view was expressed that a smaller number of States Parties supporting such a request could also be sufficient.

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

5. The Conference of the States Parties shall adopt its rules of procedure. At the beginning of each regular session, it shall elect its Chairman and such other officers as may be required. They shall hold office until a new Chairman and other officers are elected at the next regular session.

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

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

8. Decisions on questions of procedure, including decisions to convene special sessions of the Conference of the States Parties, shall be taken by a simple majority of the members present and voting. Decisions on questions of substance shall be taken by a two-thirds majority of the members present and voting unless otherwise specifically provided for in the Convention. When the issue arises as to whether a question is one of substance or not, that question shall be treated as one of substance unless otherwise decided by the Conference of the States Parties by the majority required for decisions on questions of substance. 1/ 2/

(b) Powers and functions

1. The Conference of the States Parties shall be the [principal] [supreme] organ of the Organization. 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 Technical Secretariat. It may make recommendations and take decisions 2/ on any questions, matters or issues related to the Convention raised by a State Party or brought to its attention by the Executive Council.

2. The Conference of the States Parties shall oversee the implementation of the Convention, and promote and [assess] review compliance with it. It shall also oversee the activities of the Executive Council and the Technical Secretariat and may issue guidelines in accordance with the Convention to either of them in the exercise of their functions.

1/ It has also been proposed that decisions should be taken by consensus, except as specified elsewhere and, if a consensus were not possible within 24 hours, by a simple majority of the members present and voting. It has also been pointed out that there should be no differentiation between decisions on questions of procedure and those of substance.

2/ A view was expressed that the report of a fact-finding inquiry should not be put to a vote, nor should any decision be taken as to whether a Party is complying with the provisions of the Convention.

3. In addition, the powers and functions of the Conference of the States Parties shall be:

(i) To consider and adopt at its regular sessions the report of the Organization, consider other reports 1/ and consider and adopt the programme and budget of the Organization, submitted by the Executive Council;

(ii) to [encourage] [promote] international co-operation for peaceful purposes in the chemical field;

(iii) to review scientific and technological developments which could affect the operation of the Convention;

(iv) to decide on the scale of financial contributions to be paid by States Parties; 2/

(v) to elect the members of the Executive Council;

(vi) to appoint the Director-General of the Technical Secretariat; 3/

(vii) to approve the rules of procedure of the Executive Council submitted by the latter;

(viii) to establish such subsidiary organs as it finds necessary for the exercise of its functions in accordance with this Convention. 4/ 5/

(ix) ... 6/

1/ It has been proposed that reports should be sent to the United Nations.

2/ The entire problem of the costs of the Organization needs to be considered.

3/ The option of candidates being proposed by the Executive Council and by States Parties for appointment should be discussed.

4/ It has been proposed that a Scientific Advisory Council be established as a subsidiary body.

5/ It has been proposed that a Fact-finding Panel be established as a subsidiary body.

6/ The question of functions relating to the implementation of Articles X and XI will be considered at a later stage. Other functions, e.g. the action to be taken in the event of non-compliance by a State Party, could be included as well.

4. The Conference of the States Parties shall, after the expiry of 5 and 10 years from the date of entry into force of this Convention and at such other times within that time period as may be agreed on, meet in special sessions to undertake reviews of the operation of this Convention. Such reviews shall take into account any relevant scientific and technological developments. At intervals of five years thereafter, unless otherwise agreed upon by a majority of the States Parties, further sessions of the Conference of the States Parties shall be convened with the same objective. 1/

[5. The Chairman of the Conference of the States Parties shall serve as non-voting Chairman of the Executive Council.]

C. The Executive Council

(a) Composition, procedure and decision-making

(To be elaborated)

(b) Powers and functions

1. The Executive Council shall be the executive organ of the Conference of the States Parties, to which it shall be responsible. It shall carry out the powers and functions entrusted to it under the Convention and its Annexes, 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 assure their continuous and proper implementation.

2. In particular, the Executive Council shall:

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

(b) supervise the activities of the Technical Secretariat;

(c) co-operate with the appropriate national authorities of States Parties and facilitate consultations and co-operation among States Parties at their request;

1/ The placement and wording of this provision as well as the possible need for separate review conferences require further consideration.

(d) consider any issue or matter within its competence, affecting the Convention and its implementation, including concerns regarding compliance,and cases of non-compliance, 1/ and, as appropriate, inform States Parties and bring the issue or matter to the attention of the Conference of the States Parties;

(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 Technical Secretariat with States Parties;

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

[(ii) elect its Chairman;]

(iii) elaborate and submit its rules of procedure to the Conference of the States Parties for approval;

(iv) make arrangements for the sessions of the Conference of the States Parties including the preparation of a draft agenda.

3. The Executive Council may request the convening of a special session of the Conference of the States Parties. 2/

1/ A view was expressed that the report of a fact-finding inquiry should not be put to a vote, nor should any decision be taken as to whether a Party is complying with the provisions of the Convention.

2/ It has been proposed that the Executive Council should request the convening of a special session of the Conference of the States Parties whenever obligations set forth in Article I of the Convention are violated.

D. Technical Secretariat

1. A Technical Secretariat shall be established to assist the Conference of the States Parties and the Executive Council in the performance of their functions. The Technical Secretariat shall carry out the functions entrusted to it under the Convention and its Annexes, as well as such functions assigned to it by the Conference of the States Parties and the Executive Council.

2. In particular, the Technical 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 subsidiary agreements with States Parties relating to systematic international on-site verification for approval by the Executive Council;

(c) execute international verification measure provided for in the Convention; 1/

(d) inform the Executive Council of any problems which have arisen with regard to the execution of its functions, and of [doubts, ambiguities or uncertainties about compliance with the Convention] which have come to its notice in the performance of its verification activities and/or which it has been unable to resolve or clarify through its consultations with the State Party concerned;

(e) provide technical assistance and technical evaluation to States Parties [in accordance with] [in the implementation of the provisions of] the Convention; 2/

(f) prepare and submit to the Executive Council the draft programme and budget of the Organization;

(g) 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;

(h) provide administrative and technical support 2/ to the Conference of the States Parties, the Executive Council and other subsidiary bodies.

1/ It has been suggested that the International Inspectorate may request inspections for some insufficiently clear situations in the context of their systematic verification activities.

2/ The phrasing of this paragraph needs to be considered further in the light of the elaboration of the relevant provision of the Convention. It has been suggested that the technical assistance or evaluation may relate, inter alia, to developing technical procedures, improving the effectiveness of verification methods, and revising lists of chemicals.

3. The International Inspectorate shall be a unit of the Technical Secretariat and shall act under the supervision of the Director-General of the Technical Secretariat. Guidelines on the International Inspectorate are specified in ... 1/

4. The Technical Secretariat shall comprise a Director-General, who shall be its head and chief administrative officer, and inspectors and such scientific, technical and other personnel as may be required.

5. The Director-General of the Technical Secretariat shall be appointed by the Conference of the States Parties [upon the recommendation of the Executive Council] 2/ for [4] [5] 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 Technical 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. 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 paragraph 6 of this Article. Only citizens of States Parties shall serve as international 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.

6. In the performance of their duties, the Director-General of the Technical 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. In particular, subject to such responsibilities, they shall not disclose to any unauthorized persons any confidential information coming to their knowledge in the performance of their official duties. The Director-General shall establish a régime governing the handling and protection of confidential data by the Technical Secretariat.

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

1/ Because of considerations under way in some capitals, the question of how to approach these guidelines will be decided later. For the convenience of delegations Attachment (A) of the Report of the Co-ordinator for Cluster IV (CD/CW/WP.175) for the 1987 session, complemented by the work in Group C during the 1988 session, is included as Addendum to Appendix I.

2/ It has been proposed that the Director-General of the Technical Secretariat be appointed by the Conference of the States Parties upon the recommendation of the Secretary-General of the United Nations.

IX. CONSULTATIONS, CO-OPERATION AND FACT-FINDING 1/

1. States Parties shall consult and co-operate, 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 to the Convention 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, within ... days of 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 this Convention 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 the situation which can dispel such doubts, whilst [taking every precaution in] protecting commercial and industrial secrets and other confidential information coming to its knowledge in the implementation of the Convention.

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 within [24 hours] of its receipt.

(b) The requested State Party shall provide the clarification to the Executive Council within [seven days] of the receipt of the request.

1/ Some delegations expressed the view that the issue of verification of alleged use of chemical weapons and procedures for conducting such inspections had not yet been considered in-depth and should be discussed at a later stage on the basis of the proposed Annex to Article IX (documents CD/766 and CD/CW/WP.173).

(c) The Executive Council shall forward the clarification to the requesting State Party within [24 hours] of its receipt.

(d) In the event that the requesting State Party deems the clarification to be inadequate, it may request the Executive Council to obtain from the requested State Party further clarification.

(e) For the purpose of obtaining further clarification requested under paragraph 2 (d), the Executive Council may set up 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) Should the requesting State Party consider the clarification obtained under paragraphs 2 (d) and 2 (e) to be unsatisfactory, it may request a special meeting of the Executive Council in which States Parties involved not members of the Executive Council shall be entitled to take part in accordance with provisions in Article ... 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 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 to this Convention 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 within [two months] after the submission of the request for clarification to the Executive Council, or it believes its doubts warrant urgent consideration, without necessarily exercising its right to the challenge procedure, it may request a special session of the Conference of the States Parties in accordance with Article ... In such a special session, the Conference of the State Parties shall consider the matter and may recommend any measure it deems appropriate to cope with the situation.]

Procedure for requesting a fact-finding mission

The further contents of Article IX remain to be elaborated. 1/ 2/

1/ Consultations on this issue were carried out by the Chairman of the Ad Hoc Committee for the 1987 session and the Chairman of Group C for the 1988 session. The state of affairs, as seen by them is presented in Appendix II with the aim of facilitating further consideration of the issue.

2/ Article IX, when elaborated, should contain the following provision: in conducting the verification activities described in this Article, the Technical Secretariat shall request only the information and data necessary to fulfil its responsibilities under the Convention. It shall take every precaution to protect the confidentiality of such information.

X. ASSISTANCE AND PROTECTION AGAINST CHEMICAL WEAPONS 1/

XI. ECONOMIC AND TECHNOLOGICAL DEVELOPMENT 1/

XII. RELATION TO OTHER INTERNATIONAL AGREEMENTS 2/

Nothing in this Convention will be interpreted as in any way impairing the obligations assumed 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 in 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.

XIII. AMENDMENTS 2/

XIV. DURATION, WITHDRAWAL 2/

...

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 any relevant rules of international law, particularly the Geneva Protocol of 17 June 1925.

XV. SIGNATURE, RATIFICATION, ENTRY INTO FORCE 2/

XVI. LANGUAGES 2/

1/ Work on this Article continued. With the aim of facilitating further consideration of the issues involved, the text reflecting the current stage of discussion is included in Appendix II.

2/ During the 1988 session, work on this Article was undertaken. With the aim of facilitating further consideration of the issues involved, the text reflecting the current stage of discussion is included in Appendix II.

ANNEX TO ARTICLE III

I. DECLARATIONS OF CHEMICAL WEAPONS

A. Possession or non-possession

1. Possession of chemical weapons on own territory

Yes .....

No .....

2. Possession, jurisdiction or control over chemical weapons elsewhere

Yes .....

No .....

B. Existence on the territory of any chemical weapons under the jurisdiction or control of anyone else

Yes .....

No .....

C. Past transfers

Yes .....

No .....

II. DECLARATIONS OF CHEMICAL WEAPONS PRODUCTION FACILITIES

A. Possession or non-possession

1. Possession of chemical weapons production facilities on own territory

Yes .....

No .....

2. Possession, jurisdiction or control over chemical weapons production facilities elsewhere

Yes .....

No .....

B. Existence on the territory of any chemical weapons production facilities under the jurisdiction or control of anyone else

Yes .....

No .....

C. Past transfers of equipment [or technical documentation] 1/

Yes .....

No .....

[III. OTHER DECLARATIONS]

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1/ The view was expressed that technical documentation should not be included.

ANNEX TO ARTICLE IV

I. DECLARATIONS OF CHEMICAL WEAPONS

A. The declaration by a State Party of the aggregate quantity [,location], 1/ and detailed composition of chemical weapons under its jurisdiction or control shall include the following:

1. The aggregate quantity of each chemical declared.

[2. The precise location of each declared storage site of chemical weapons, expressed by:

- name;

- geographical co-ordinates.] 1/

3. Detailed inventory for each storage facility:

(1) Chemicals defined as chemical weapons in accordance with Article II:

(a) Chemicals shall be declared within the schedules specified in the Annex to Article VI. 2/

(b) For a chemical not listed in the Schedules in the Annex to Article VI, 2/ 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, all such components shall be identified and the percentage of each component shall be provided, and the mixture shall be declared under the category of the most toxic chemical.

(e) In cases involving multi-component munitions, devices, bulk containers, and other containers, the quantity of each chemical component shall be provided, as well as the projected quantity of the final principal reaction product obtained. Such items shall be declared under the category of the [key precursor] [key component].

1/ One delegation reserved its position on this question.

2/ A view was expressed that in the context of Article IV, consideration should be given to the development of schedules applicable to chemical weapons declared under the Article.

(f) 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:

- type
- size or calibre
- number of items
- weight of chemical fill per item.

In addition, for chemicals stored in bulk the percentage purity shall be declared.

(g) For each chemical the total weight present at the storage site shall be declared.

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

(a) the number of items

(b) the 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 points (1) and (2).

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

B. Detailed information on any chemical weapons on the territory of a State Party which are under the jurisdiction or control of others, including a State not Party to the convention (to be developed).

C. Past transfers and receipts.

A State Party that has transferred or received chemical weapons shall declare this (these) transfer(s) or receipt(s), [provided the amount transferred or received exceeded one metric tonne [of chemicals] [per chemical] per year in bulk and/or munition form]. This declaration shall be made according to the inventory format in paragraph 3 above. This declaration shall also indicate the supplier and recipient countries and, as precisely as possible, timing and current location of the transferred items.

II. INTERNATIONAL VERIFICATION OF DECLARATIONS OF CHEMICAL WEAPONS, INTERNATIONAL SYSTEMATIC MONITORING OF STORAGE FACILITIES, INTERNATIONAL VERIFICATION OF REMOVAL OF CHEMICAL WEAPONS FOR DESTRUCTION 1/

1. Storage facility description

(a) Each site or location where, pending their destruction chemical weapons, declared in accordance with Article IV, are stored on the territory of a State Party or under its jurisdiction or control elsewhere, shall hereafter be designated as "storage facility".

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

- boundary map;
- location of bunkers/storage areas, within the facility;
- the detailed inventory of the contents of each bunker/storage area;
- relevant details of the construction of bunkers/storage areas;
- recommendations for the emplacement by the Technical Secretariat of seals and monitoring instruments.

2. Measures to secure the storage facility and storage facility preparation

(a) 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, except their removal for destruction.

(b) In order to prepare its storage facility(ies) for international verification, a State Party shall ensure that its chemical weapons at its storage facility(ies) are so configured that seals and monitoring devices may be effectively applied, and that such configuration allows ready access for such verification.

(c) While the storage facility remains closed for any movement of chemical weapons other than their removal for destruction activities necessary for maintenance and safety monitoring by national authorities may continue at the facility.

1/ One delegation expressed reservations on this whole section in view of its position on the issue of declaration of location of chemical weapons stocks in Article IV.

3. Agreements on subsidiary arrangements 1/

(a) Within [6] months after entry into force of the convention, States Parties shall conclude with the Organization agreements on subsidiary arrangements for verification of their storage facilities. Such agreements shall be based on a Model Agreement and shall specify for each storage facility the number, intensity, duration of inspections, detailed inspection procedures and the installation, operation and maintenance of the seals and monitoring devices by the Technical Secretariat. The Model Agreement shall include provisions to take into account future technological developments.

(b) States Parties shall ensure that the verification of declarations of chemical weapons and the initiation of the systematic monitoring of storage facilities can be accomplished by the Technical Secretariat at all storage facilities within the agreed time frames after the convention enters into force. 2/

4. International verification of declarations of chemical weapons

(a) International verification by on-site inspections

(i) 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 IV. 3/

(ii) The International 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.

(iii) 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.

(iv) As the inventory progresses, International Inspectors shall install such agreed seals as may be necessary to clearly indicate if any stocks are removed, and to ensure the securing of the storage facility.

1/ The coverage of the subsidiary arrangements is to be discussed.

2/ Procedures to ensure the implementation of the verification scheme within designated time frames are to be developed.

3/ The applicability of Article IV, paragraph 2(b) is to be discussed.

(b) Co-ordination for international systematic monitoring of storage facilities

In conjunction with the on-site inspections of verification of declarations of chemical weapons, the International Inspectors shall undertake necessary co-ordination for measures of systematic monitoring of storage facilities.

5. International systematic monitoring of storage facilities

(a) The purpose of the international systematic monitoring of storage facilities shall be to ensure that no undetected removal of chemical weapons takes place.

(b) 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 continuous monitoring with on-site instruments and systematic verification by international on-site inspections or, where the continuous monitoring with on-site instruments is not feasible, by the presence of International Inspectors.

(c) If the relevant agreement on subsidiary arrangements for the systematic monitoring of a chemical weapons storage facility is concluded, International Inspectors shall install for the purpose of this systematic monitoring a monitoring system as referred to below under (e). If no such agreement has been concluded, the International Inspectors will initiate the systematic monitoring by their continuous presence on-site until the agreement is concluded, and the monitoring system installed and activated.

(d) In the period before the activation of the continuous monitoring with on-site instruments and at other times when this continuous monitoring is not feasible, seals installed by International Inspectors may only be opened in the presence of an International Inspector. If an extraordinary event requires the opening of a seal when an inspector is not present, a State Party shall immediately inform the Technical Secretariat and International Inspectors will return as soon as possible to validate the inventory and re-establish the seals.

(e) Monitoring with instruments.

(i) For the purpose of the systematic monitoring of a chemical weapons storage facility, International Inspectors will install, in the presence of host country personnel and in conformity with the relevant agreement on subsidiary arrangements, a monitoring system consisting of, inter alia, sensors, ancillary equipment and transmission systems. The agreed types of these instruments shall be specified in the Model Agreement. They shall incorporate, inter alia, seals and other tamper-indicating and tamper-resistant devices as well as data protection and data authentication features.

(ii) The monitoring system shall have such abilities and be installed, adjusted or directed in such a way as to correspond strictly and efficiently to the sole purpose of detecting prohibited or unauthorized activities within the chemical weapons storage facility as referred to above under (a). The coverage of the monitoring system shall be limited accordingly. The monitoring system will signal the Technical Secretariat if any tampering with its components or interference with its functioning occurs. Redundancy shall be built into the monitoring system to ensure that failure of an individual component will not jeopardise the monitoring capability of the system.

(iii) When the monitoring system is activated, International Inspectors will verify the accuracy of the inventory of chemical weapons, as required.

(iv) Data will be transmitted from each storage facility to the Technical Secretariat by means (to be determined). The transmission system will incorporate frequent transmissions from the storage facility and a query and response system between the storage facility and the Technical Secretariat. International Inspectors shall periodically check the proper functioning of the monitoring system.

(v) In the event that the monitoring system indicated any irregularity, the International Inspectors would immediately determine whether this resulted from equipment malfunction or activities at the storage facility. If, after this examination the problem remained unresolved, the Technical Secretariat would immediately ascertain the actual situation, including through immediate on-site inspection or visit of the storage facility if necessary. The Technical Secretariat shall report any such problem immediately after its detection to the State Party who should assist in its resolution.

(vi) The State Party shall immediately notify the Technical Secretariat if an event at the storage facility occurs, or may occur, which may have an impact on the monitoring system. The State Party shall co-ordinate subsequent actions with the Technical Secretariat with a view to restoring the operation of the monitoring system, and establishing interim measures, if necessary, as soon as possible.

(f) Systematic on-site inspections and visits.

(i) Visits to service the monitoring system may be required in addition to systematic on-site inspections to perform any necessary maintenance, replacement of equipment or to adjust the coverage of the monitoring system, if required.

(ii) (The guidelines for determining the frequency of systematic on-site inspections are to be elaborated.) The particular storage facility to be inspected shall be chosen by the Technical Secretariat in such a way as to preclude the prediction of precisely when the facility is to be inspected. During each inspection, the International Inspectors will verify that the monitoring system is functioning correctly and verify the inventory in agreed percentage of bunkers and storage areas.

(g) When all chemical weapons have been removed from the storage facility, the Technical Secretariat shall certify the declaration of the National Authority to that effect. After this certification, the Technical Secretariat shall terminate the international systematic monitoring of the storage facility and will promptly remove all devices and monitoring equipment installed by the International Inspectors.

6. International verification of the removal of chemical weapons for destruction

(a) The State Party shall notify the Technical Secretariat [14] days in advance of the exact timing of removal of chemical weapons from the storage facility and of the planned arrival at the facility where they will be destroyed.

(b) The State Party shall provide the Inspectors with the detailed inventory of the chemical weapons to be moved. The International Inspectors shall be present when chemical weapons are removed from the storage facility and shall verify that the chemical weapons on the inventory are loaded on to the transport vehicles. Upon completion of the loading operations, the International Inspectors shall seal the cargo and/or means of transport, as appropriate.

(c) If only a portion of the chemical weapons is removed, the International Inspectors will verify the accuracy of the inventory of the remaining chemical weapons and make any appropriate adjustments in the monitoring system in accordance with the agreement on subsidiary arrangements.

(d) The International Inspectors shall verify the arrival of the chemical weapons at the destruction facility by checking the seals on the cargo and/or the means of transport and shall verify the accuracy of the inventory of the chemical weapons transported.

7. Inspections and visits

(a) The (Director-General of the) Technical 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 (Director-General of the) Technical Secretariat shall specify the purpose(s) of the inspection or visit.

(b) 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.

(c) International Inspectors shall, in accordance with agreements on subsidiary arrangements:

- 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;

- bring with them and use such agreed instruments as may be necessary for the completion of their tasks;

- receive samples taken at their request from any devices and bulk containers and other containers at the facility. Such samples will be taken by representatives of the State Party in the presence of the Inspectors;

- perform on-site analysis of samples;

- transfer, if necessary, samples for analysis off-site at a laboratory designated by the organizaton, 1/ in accordance with agreed procedures;

- afford the opportunity to the Host State Party to be present when samples are analysed;

- ensure, in accordance with agreed procedures that samples transported, stored and processed are not tampered with;

- communicate freely with the Technical Secretariat.

(d) The State Party receiving the inspection shall, in accordance with agreed procedures:

- have the right to accompany the International Inspectors at all times during the inspection and observe all their verification activities at the storage facility;

- have the right to retain duplicates of all samples taken and be present when samples are analysed;

- have the right to inspect any instrument used or installed by the International Inspectors and to have it tested in the presence of its personnel;

1/ The designation of the organ of the Organization that will be entrusted with this task will be considered further and specified in the text.

- provide assistance to the International Inspectors, upon their request, for the installation of the monitoring system and the analysis of samples on-site;

- receive copies of the reports on inspections of its storage facility(ies);

- receive copies, at its request, of the information and data gathered about its storage facility(ies) by the Technical Secretariat.

(e) The International Inspectors may request clarification of any ambiguities arising from the inspection. In the event that any ambiguities arise which cannot be resolved in the course of the inspection, the Inspectors shall inform the (Director-General of the) Technical Secretariat.

(f) After each inspection or visit to the storage facility, International Inspectors shall submit a report with their findings to the (Director-General of the) Technical Secretariat which will transmit a copy of this report to the State Party having received the inspection or visit. Information (to be designated) received during the inspection shall be treated as confidential (procedures to be developed).

III. PRINCIPLES, METHODS AND ORGANIZATION OF THE 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.

IV. PRINCIPLES AND ORDER OF DESTRUCTION 1/

1. The elaboration of the Order of Destruction shall build on the undiminished security for all States during the entire destruction stage; confidence-building in the early part of the destruction stage; gradual acquisition of experience in the course of destroying chemical weapons stocks and applicability irrespective of the actual composition of the stockpiles and the methods chosen for the destruction of the chemical weapons.

1/ The further development of this entire section has been subject to consultations by the Chairman of Group B, the result of which is included in Appendix II.

2. The destruction of chemical weapons stocks shall start for all States Parties possessing chemical weapons simultaneously. The whole destruction stage shall be divided into nine annual periods.

3. Each State Party shall destroy not less than one ninth of its stockpile [in measure of stockpile equivalent and/or equivalent mustard weight] during each destruction period. 1/ 2/ However, a State Party is not precluded from destroying its stocks at a faster pace. Each State Party shall determine its detailed plans for each destruction period, as specified in part III of this Annex and shall report annually on the implementation of each destruction period. 3/

4. Order of Destruction (to be elaborated). 4/ 5/

1/ It is considered necessary to elaborate a method for comparing different categories of chemical weapons stocks. The comparison of lethal and harmful chemicals remains unresolved and is subject to further consideration.

2/ Some delegations expressed the view that the question of the regulation of the destruction of stockpiles needs further and full discussion.

3/ It has been recognized that the destruction of chemical weapons stocks and the elimination of relevant production facilities should be considered together.

4/ Some delegations feel that it would be appropriate to introduce the idea of security stockpile levels to meet the security concerns of countries with small stockpiles of chemical weapons.

5/ Some delegations drew attention to the proposal contained in CD/822 of 29 March 1988. This proposal is aimed at ensuring the undiminished security of all States during the destruction stage. To this end, it proceeds from the basic undertaking that all CW production shall cease immediately upon entry into force of the Convention and that all chemical weapons storage sites as well as production facilities will be subject from the outset to systematic international on-site verification.

Taking account of existing discrepancies in CW stocks it suggests a specific phased approach, according to which State parties with large CW stocks are to proceed with the destruction of their stockpile until an agreed level is reached in the first phase. In their view, it is only after the end of this first phase, which would result at the end of the fifth year in the levelling out of the large CW stockpiles, that State parties with smaller stockpiles would be required to start with the destruction of their stocks. The whole two phased destruction period would be subject to close monitoring.

V. INTERNATIONAL VERIFICATION OF THE DESTRUCTION OF CHEMICAL WEAPONS

1. The purpose of verification of destruction of chemical weapons shall be:

- to confirm the identity and quantity of the chemical weapons stocks to be destroyed, and
- to confirm that these stocks for all practical purposes have been destroyed.

2. General plans for destruction of chemical weapons

The general plan for destruction of chemical weapons, submitted pursuant to Article IV shall specify:

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

(b) the number of chemical weapons destruction facilities existing or planned, to be operated over the 10 years destruction period;

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

- name and address;
- location;
- chemical weapons intended to be destroyed;
- method of destruction;
- capacity;
- expected period of operation;
- products of the destruction process.

3. Detailed plans for destruction of chemical weapons

The detailed plans submitted pursuant to article IV, six months before each destruction period, shall specify:

(a) the aggregate quantity of each individual type of chemical weapons planned to be destroyed at each facility;

(b) the number of chemical weapons destruction facilities and a detailed schedule for the destruction of chemical weapons at each of these facilities;

(c) data about each destruction facility,

- name, postal address, geographical location;
- method of destruction;
- end-products;

- layout plan of the facility;

- technological scheme;

- operation manuals;

- the system of verification;

- safety measures in force at the facility;

- living and working conditions for the international inspectors.

(d) data about any storage facility at the destruction facility planned to provide chemical weapons directly to it during the destruction period,

- layout plan of the facility;

- method and volume of storage estimated by types and quantities of chemical weapons;

- types and quantities of chemical weapons to be stored at the facility during the destruction period;

- safety measures in force at the facility.

(e) After the submission of the first detailed plans, subsequent annual plans should contain only changes and additions to required data elements submitted in the first detailed plans.

4. Review of detailed plans for the destruction of chemical weapons

(a) On the basis of the detailed plan for destruction and proposed measures for verification submitted by the State Party, and as the case may be, on experience from previous inspections and on the relevant agreement(s) on subsidiary arrangements, the Technical Secretariat shall prepare before each destruction period, a plan for verifying the destruction of chemical weapons, consulting closely with the State Party. Any differences between the Technical Secretariat and the State Party 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.

(b) The agreed combined detailed plans for destruction and verification plans, with an appropriate recommendation by the Technical Secretariat, will 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. This review is designed to determine that the destruction of chemical weapons, as planned, is consistent with the obligations under the Convention and the objective of destroying the chemical weapons. It should also confirm that verification schemes for destruction are consistent with verification objectives, and are efficient and workable. This review should be completed 60 days before the destruction period.

(c) Each member of the Executive Council may consult with the Technical 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.

(d) 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.

(e) After a review of the detailed plans of destruction of chemical weapons, the Technical Secretariat, if the need arises, will enter into consultation with the State Party concerned in order to ensure its chemical weapons destruction facility(ies) is (are) designed to assure 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.

(f) Destruction and verification should proceed according to the agreed plan as referred to above. Such verification should not interfere with the destruction process.

5. Agreements on subsidiary arrangements

For each destruction facility, States Parties should conclude with the Organization detailed agreements on subsidiary arrangements for the systematic verification of destruction of chemical weapons. Such agreements shall be based on a Model Agreement and shall specify, for each destruction facility, the detailed on-site inspection procedures and arrangements for the removal of chemical weapons from the storage facility at the destruction facility, transport from this stroage facility to their destruction and the monitoring by on-site instruments, taking into account the specific characteristics of the destruction facility and its mode of operation. The Model Agreement shall include provisions to take into account the need for maintenance and modifications.

6. International Inspectors will be granted access to each chemical weapons destruction facility [30 days] prior to commencement of active destruction phases for the purpose of carrying out an engineering review of the facility, including the facility's construction and layout, the equipment and instruments for measuring and controlling the destruction process, and the checking and testing of the accuracy of the verification equipment.

7. Systematic international on-site verification of destruction of chemical weapons

(a) 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. They will conduct their activities in the presence and with the co-operation of representatives of the facility's management and the National Authority if they wish to be present.

(b) The inspectors may monitor by either physical observation or devices:

(i) the chemical weapons storage facility at the destruction facility and the chemical weapons present;

(ii) the movement of chemical weapons from the storage facility to the destruction facility;

(iii) the process of destruction (assuring that no chemical weapons are diverted);

(iv) the material balance; and

(v) the accuracy and calibration of the instruments.

(c) To the extent consistent with verification needs, verification procedures should make use of information from routine facility operations.

(d) After the completion of each period of destruction, the Technical Secretariat shall certify the declaration of the National Authority, reporting the completion of destruction of the designated quantity of chemical weapons.

(e) International Inspectors shall, in accordance with agreements on subsidiary arrangements:

- have unimpeded access to all parts of the destruction facilities, and the storage facilities thereat, any munitions, devices, bulk containers, or other containers, therein. While conducting their activity, Inspectors shall comply with the safety regulations at these facilities. 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;

- bring with them and use such agreed instruments as may be necessary for the completion of their tasks;

- monitor the systematic on-site analysis of samples during the destruction process;

- 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. Such samples will be taken and analysed by representatives of the State Party in the presence of the Inspectors;

- communicate freely with the Technical Secretariat;

- if necessary, transfer samples for analysis off-site at a laboratory designated by the organization, 1/ in accordance with agreed procedures;

1/ The designation of the organ of the Organization that will be entrusted with this task will be considered further and specified in the text.

- ensure, in accordance with agreed procedures, that samples transported, stored and processed are not tampered with;

- afford the opportunity to the host State Party to be present when samples are analysed.

(f) The State Party receiving the inspection shall, in accordance with agreed procedures:

- have the right to accompany the International Inspectors at all times during the inspection and observe all their verification activities at the destruction facility, and the storage facility thereat;

- have the right to retain duplicates of all samples taken at the Inspectors' request and be present when samples are analysed;

- have the right to inspect any agreed standard instrument used or installed by the International Inspectors and to have it tested in the presence of its personnel;

- provide assistance to the International Inspectors, upon their request, for the installation of seals or monitoring devices and the analysis of samples on-site as appropriate to the monitoring of the destruction process;

- receive copies of the reports on inspections of its destruction facility(ies);

- receive copies, at its request, of the information and data gathered about its destruction facility(ies) by the Technical Secretariat.

(g) If Inspectors detect irregularities which may give rise to doubts they will report the irregularities to the representatives of the facility and the National Authority and request that the situation be resolved. Uncorrected irregularities will be reported to the Executive Council.

(h) After each inspection to the destruction facility, International Inspectors shall submit a report with their findings to the (Director-General of the) Technical Secretariat which will transmit a copy of this report to the State Party having received the inspection. Information (to be designated) received during the inspection shall be treated as confidential (procedures to be developed).

8. Chemical weapons storage facilities at chemical weapons destruction facilities

(a) International Inspectors shall verify any arrival of chemical weapons at a chemical weapons storage facility at a chemical weapons destruction facility, as referred to in paragraph 6 (d) of section II of this Annex, 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. They shall install such agreed seals as may be necessary to verify that stocks are removed only for destruction.

(b) 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 5 of section II of the present Annex, in conformity with the relevant agreements on subsidiary arrangements or, if no such agreement has been concluded, with the agreed combined plan for destruction and verification.

(c) The International Inspectors will make any appropriate adjustments in the monitoring system in accordance with the relevant agreement on subsidiary arrangements whenever inventory changes occur.

(d) At the end of an active destruction phase, International 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 (a). They shall install such agreed seals as may be necessary to ensure the securing of the storage facility.

(e) The international systematic monitoring of a chemical weapons storage facility at a chemical weapons destruction facility may be discontinued when the active destruction phase is completed, if no chemical weapons remain. If, in addition, no chemical weapons are planned to be stored at this facility, the international systematic monitoring shall be terminated in accordance with section II, paragraph 5 (g) of this Annex.

ANNEX TO ARTICLE V

I. DECLARATIONS AND REPORTS ON CHEMICAL WEAPONS PRODUCTION FACILITIES

A. Declarations of chemical weapons production facilities

The declaration should contain for each facility:

1. Name and exact location.

2. Ownership, operation, control, who ordered and procured the facility.

3. Designation of each facility:

(a) Facility for producing chemicals defined as chemical weapons.

(b) Facility for filling chemical weapons.

4. Products of each facility and dates that they were produced:

(a) Chemicals produced.

(b) Munitions or devices filled, identity of chemical fill.

5. Capacity of the facility, expressed in terms of:

(a) The quantity of end-product that the facility can produce in (period), assuming the facility operates (schedule).

(b) The quantity of chemical that the facility can fill into each type of munition or device in (period), assuming that the facility operates (schedule).

6. Detailed facility description:

(a) Layout of the facility.

(b) Process flow diagram.

(c) Detailed inventory of equipment, buildings and any spare or replacement parts on site.

(d) Quantities of any chemicals or munitions on site.

B. Declarations of former chemical weapons production facilities 1/

The declaration should contain for each facility:

1. All information as in paragraph A, above, that pertains to the operation of the facility as a chemical weapons facility.

1/ All provisions dealing with "former" chemical weapons production facilities need to be reviewed once the definition of chemical weapons production facilities is agreed. In this connection, how to deal with chemical weapons production facilities that have previously been destroyed should also be discussed.

2. Date chemical weapons production ceased.

3. Current status of special equipment that was used for chemical weapons production.

4. Dates of conversion from CW use, date of beginning of non-CW use.

5. Current ownership, operation and control.

6. Current production, stating types and quantities of product(s).

7. Current capacity of the facility, expressed in terms of the quantity of end-product that can be produced in (period), assuming the facility operates (schedule).

8. Current detailed facility description:

(a) Layout of the facility.

(b) Process flow diagram.

(c) Location of any CW-specific equipment remaining on-site.

(d) Quantities of any chemical weapons remaining on-site.

C. Declarations of chemical weapons production facilities under the control of others on the territory of the State Party

- Responsibility for declarations (to be discussed).

- All elements contained in part IA of this Annex should be declared.

D. Declarations of former chemical weapons production facilities under the control of others on the territory of the State Party 1/

- Responsibility for declarations (to be discussed).

- All elements contained in part IB of this Annex should be declared.

E. Declarations of transfers

1. Chemical weapons production equipment means (to be developed).

2. The declaration should specify:

(a) who received/transferred chemical weapons production equipment [and technical documentation];

1/ All provisions dealing with "former" chemical weapons production facilities need to be reviewed once the definition of chemical weapons production facilities is agreed. In this connection, how to deal with chemical weapons production facilities that have been previously destroyed should also be discussed.

(b) the identity of the equipment;

(c) date of transfer;

(d) whether the chemical weapons production equipment [and documentation] were eliminated, if known;

(e) current disposition, if known.

F. Declarations of measures to ensure closure of:

1. Facilities under the jurisdiction or control of the State Party (to be developed).

2. Facilities on the State Party's territory under the control of others (to be developed).

G. Annual Reports (to be developed)

H. Final Certification of Destruction (to be developed)

II. PRINCIPLES AND METHODS OF DESTRUCTION OF CHEMICAL WEAPONS PRODUCTION FACILITIES

A. General

Each State Party shall decide on methods to be applied for the destruction 1/ of its chemical weapons production facilities, according to the principles laid down in Article V and in this Annex. 2/

B. Closure and methods for closing the facility

1. The purpose of the closure of a chemical weapons production facility is to render it inoperable as such.

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: 3/

- prohibition of occupation of buildings except for agreed activities;
- disconnection of equipment directly related to the production of chemical weapons to include, inter alia, process control equipment and utilities;

1/ Further discussion is needed of possible methods of destruction and of related definitions.

2/ The responsibility for carrying out measures when more than one State is involved needs to be discussed.

3/ The activities and items in these measures will need further elaboration and discussion in light of methods of destruction and characteristics of specific facilities.

- disabling of protective installations and equipment used exclusively for the safety of operations of the chemical weapons production facility;

- interruption of rail and other roads 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 activities at the facility.

C. Activities related to destruction

1. Destruction of equipment covered by the definition of a "chemical weapons production facility"

- All specialized and standard equipment shall be physically destroyed.

- "Specialized equipment" is:

  . 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 permitted purposes above ... kilograms per year but can be used for chemical weapons purposes, or would be if the facility were operated.

  . any chemical weapon filling machines.

  . 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" includes:

  . production equipment which is generally used in the chemical industry and is not included in the types of "specialized equipment";

  . 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.

2. Destruction of buildings covered by the definition of a "chemical weapons production facility"

- The word "building" shall include underground structures.
- All specialized and standard buildings shall be physically destroyed.
- "Specialized building" is:
  - . any building containing specialized equipment in a production or filling configuration;
  - . any building which has distinctive features which distinguish it from buildings normally used for chemical production or filling activities not banned by the convention.
- "Standard buildings" means buildings constructed to prevailing industry standards for facilities not producing super-toxic lethal or corrosive chemicals.

3. Facilities for producing unfilled chemical munitions and specialized equipment for chemical weapons employment

- Facilities used exclusively for production of: (a) non-chemical parts for chemical munitions or (b) specialized equipment for chemical weapons employment, shall be declared and eliminated. The elimination process and its verification should be conducted according to the provisions of Article V that govern destruction of chemical weapons production facilities.
- 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. International inspectors shall be present during the destruction process.
- All buildings and standard equipment used for such production activities shall be converted to permitted purposes, with confirmation as necessary through consultations or challenge inspection.
- Permitted activities may continue while destruction or conversion proceeds.

D. Activities related to temporary conversion to destruction facility (to be developed)

E. Activities related to former chemical weapons production facilities 1/

1/ All provisions dealing with "former" chemical weapons production facilities need to be reviewed once the definition of chemical weapons production facilities is agreed. In this connection, how to deal with chemical weapons production facilities that have previously been destroyed should also be discussed.

III. ORDER OF DESTRUCTION (to be developed)

IV. PLANS

A. General Plans

1. For each facility the following information should be supplied:

(a) envisaged time-frame for measures to be taken;

(b) methods of destruction.

2. In relation to temporary conversion into chemical weapons destruction facility:

(i) envisaged time-frame for conversion into a destruction facility;

(ii) envisaged time for utilizing the facility as a destruction facility;

(iii) description of the new facility;

(iv) method of destruction of special equipment;

(v) time-frame for destruction of the converted facility after it has been utilized to destroy chemical weapons;

(vi) method of destruction of the converted facility.

3. In relation to former chemical weapons production facilities (to be elaborated). 1/

B. Detailed plans

1. The detailed plans for destruction of each facility should contain:

(a) detailed time schedule of 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;

1/ All provisions dealing with "former" chemical weapons production facilities need to be reviewed once the definition of chemical weapons production facilities is agreed. In this connection, how to deal with chemical weapons production facilities that have previously been destroyed should also be discussed.

(g) security/safety measures to be observed during the destruction of the facility;

(h) working and living conditions to be provided for international inspectors.

2. In relation to the temporary conversion into a chemical weapons destruction facility.

In addition to the information contained in part IV.B.1 of this Annex the following information should be provided:

(i) method of conversion into a destruction facility;

(ii) data on the destruction facility, in accordance with the Annex to Article IV, part V.3.(c) and (d).

3. In relation to destruction of a facility that was temporarily converted for destruction of chemical weapons, information should be provided in accordance with part IV.B.1 of this Annex.

4. In relation to former chemical weapons production facilities. 1/

V. INTERNATIONAL VERIFICATION OF DECLARATIONS OF CHEMICAL WEAPONS PRODUCTION FACILITIES AND THEIR CLOSURE, INTERNATIONAL SYSTEMATIC MONITORING, INTERNATIONAL SYSTEMATIC VERIFICATION OF DESTRUCTION OF CHEMICAL WEAPONS PRODUCTION FACILITIES 2/

1. International verification of declarations of chemical weapons production facilities and of cessation of their activities

(a) International verification by initial on-site inspections

(i) The purpose of the international verification of declarations of chemical weapons production facilities shall be:

- to confirm that all activity has ceased except that required for closure;

- to confirm through on-site inspections the accuracy of the declarations made in accordance with Article V.

1/ All provisions dealing with "former" chemical weapons production facilities need to be reviewed once the definition of chemical weapons production facilities is agreed. In this connection, how to deal with chemical weapons production facilities that have previously been destroyed should also be discussed.

2/ This Section of this Annex will require further discussion and elaboration upon resolution of the definitions of chemical weapons, chemical weapons production facilities, and methods of destruction.

(ii) The International Inspectors shall conduct this initial verification promptly, and in any event not later than [60] days after a declaration is submitted.

(iii) They shall employ, as appropriate, agreed seals, markers or other inventory control procedures to faciliate an accurate inventory of the declared items at each chemical weapons production facility.

(iv) International 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. International Inspectors may return to maintain and verify the integrity of the devices.

(b) Co-ordination for international systematic monitoring of chemical weapons production facilities

In conjunction with the initial on-site inspections to verify declarations of chemical weapons production facilities, the International Inspectors shall undertake necessary co-ordination for measures of systematic monitoring of these facilities as provided for in paragraph 4, below.

2. Agreements on subsidiary arrangements 1/

(a) Within [6] months after entry into force of the Convention, States Parties shall conclude with the Organization detailed agreements on subsidiary arrangements for the systematic monitoring of their chemical weapons production facilities. Such agreements shall be based on a Model Agreement and shall specify for each production facility the detailed inspection procedures and arrangements for the installation, operation and maintenance of the seals and monitoring devices by the Technical Secretariat, taking into account the specific characteristics of each facility. The Model Agreement shall include provisions to take into account future technological developments.

(b) States Parties shall ensure that the verification of declarations of chemical weapons production facilities and the initiation of systematic monitoring can be accomplished by the Technical Secretariat at all such facilities within the agreed time frames after the Convention enters into force. 2/

1/ The coverage of the subsidiary arrangements is to be discussed.

2/ Procedures to ensure the implementation of the verification scheme within designated time frames are to be developed.

3. International verification of closure of chemical weapons production facilities

Subsequent to the on-site verification of declarations as referred to in paragraph 1, the International Inspectors shall conduct on-site inspections at each chemical weapons production facility for the purpose of verifying that measures referred to under 3 (b) have been accomplished.

4. International systematic monitoring of chemical weapons production facilities

(a) 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.

(b) The international systematic monitoring shall be initiated as soon as possible after the closure of the chemical weapons production facility and shall continue until this facility is destroyed. Systematic monitoring shall be ensured, in accordance with the agreements on subsidiary arrangements, through a combination of continuous monitoring with on-site instruments and systematic verification by international on-site inspections or, where the continuous monitoring with on-site instruments is not feasible, by the presence of International Inspectors.

(c) In conjunction with the on-site verification of the closure of chemical weapons production facilities referred to in paragraph 4 above and, if the relevant agreement on subsidiary arrangements for the systematic monitoring of a chemical weapons production facility has been concluded, International Inspectors shall install for the purpose of this systematic monitoring a monitoring system as referred to under (e) below. If no such agreement has been concluded, the International Inspectors will initiate the systematic monitoring by their continuous presence on-site until the agreement is concluded, and the monitoring system installed and activated.

(d) In the period before the activation of the monitoring system and at other times when the continuous monitoring with on-site instruments is not feasible, devices installed by International Inspectors, in accordance with paragraph 1 above, may only be removed in the presence of an International Inspector. If an extraordinary event results in, or requires, the removal of a device when an inspector is not present, a State Party shall immediately inform the Technical Secretariat and International Inspectors will return as soon as possible to validate the inventory and re-establish the devices.

(e) Monitoring with instruments

(i) For the purpose of the systematic monitoring of a chemical weapons production facility, International Inspectors will install, in the presence of host country personnel and in conformity with the relevant agreement on subsidiary arrangements, a monitoring system consisting of, inter alia, sensors, ancillary equipment and transmission systems. The agreed types of these instruments shall be specified in the Model Agreement. They shall incorporate, inter alia, seals and other tamper-indicating and tamper-resistant devices as well as data protection and data authentication features.

(ii) The monitoring system shall have such abilities and be installed, adjusted or directed in such a way as to correspond strictly and efficiently to the sole purpose of detecting prohibited or unauthorized activities within the chemical weapons production facility as referred to above under (a). The coverage of the monitoring system shall be limited accordingly. The monitoring system will signal the Technical Secretariat if any tampering with its components or interference with its functioning occurs. Redundancy shall be built into the monitoring system to ensure that failure of an individual component will not jeopardize the monitoring capability of the system.

(iii) When the monitoring system is activated, International Inspectors will verify the accuracy of the inventory of declared items at each chemical weapons production facility as required.

(iv) Data will be transmitted from each production facility to the Technical Secretariat by (means to be determined). The transmission system will incorporate frequent transmissions from the production facility and a query and response system between the production facility and the Technical Secretariat. International Inspectors shall periodically check the proper functioning of the monitoring system.

(v) In the event that the monitoring system indicates any irregularity, the International Inspectors would immediately determine whether this resulted from equipment malfunction or activities at the production facility. If, after this examination the problem remained unresolved, the Technical Secretariat would immediately ascertain the actual situation, including through immediate on-site inspection or visit of the production facility if necessary. The Technical Secretariat shall report any such problem immediately after its detection to the State Party who should assist in its resolution.

(vi) The State Party shall immediately notify the Technical Secretariat if an event at the production facility occurs, or may occur, which may have an impact on the monitoring system. The State Party shall co-ordinate subsequent actions with the Technical Secretariat with a view to restoring the operation of the monitoring system and establishing interim measures, if necessary, as soon as possible.

(f) Systematic on-site inspections and visits

(i) During each inspection, the International Inspectors will verify that the monitoring system is functioning correctly and verify the declared inventory as required. In addition, visits to service the monitoring system will be required to perform any necessary maintenance or replacement of equipment, or to adjust the coverage of the monitoring system as required.

(ii) (The guidelines for determining the frequency of systematic on-site inspections are to be elaborated). The particular production facility to be inspected shall be chosen by the Technical Secretariat in such a way as to preclude the prediction of precisely when the facility is to be inspected.

5. International verification of destruction of chemical weapons production facilities

(a) The purpose of international verification of destruction of chemical weapons production facilities shall be to confirm that the facility is destroyed as such 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.

(b) [3-6] months before destruction of a chemical weapons production facility, a State Party shall provide to the Technical Secretariat the detailed plans for destruction to include proposed measures for verification of destruction referred to in Section IV.B.1 (f) of the present Annex, with respect to, e.g.:

- timing of the presence of the inspectors at the facility to be destroyed;

- procedures for verification of measures to be applied to each item on the declared inventory;

- measures for phasing out systematic monitoring or for adjustment of the coverage of the monitoring system.

(c) 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 Technical Secretariat shall prepare a plan for verifying the destruction of the facility, consulting closely with the State Party. Any differences between the Technical Secretariat and the State Party concerning appropriate measures should be resolved through consultations. Any unresolved matters shall be forwarded to the Executive Council 1/ for appropriate action with a view to facilitating the full implementation of the Convention.

(d) 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.

(e) Each member of the Executive Council may consult with the Technical 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.

(f) 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.

1/ The role of the Executive Council in the review process will need to be reviewed in the light of its composition and decision-making process.

(g) 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.

(h) 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. 1/

(i) If required verification or destruction actions are not taken as planned, all States Parties should be so informed. (Procedures to be developed.)

(j) For those items that may be diverted for permitted purposes. 2/

(k) When all items on the declared inventory have been destroyed, the Technical Secretariat shall certify, in writing, the declaration of the State Party to that effect. After this certification, the Technical 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 International Inspectors.

(l) After this certification, the State Party will make the declaration that the facility has been destroyed.

6. International verification of temporary conversion of a chemical weapons production facility into a chemical weapons destruction facility

(to be elaborated)

7. Inspections and visits

(a) The (Director-General of the) Technical 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) Technical Secretariat shall specify the purpose(s) of the inspection or visit.

(b) 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 chemical weapons production facility. The agreement on subsidiary arrangements will specify administrative arrangements for Inspectors.

1/ This verification measure may not necessarily be the only one and others, as appropriate, may need to be further elaborated.

2/ Specification of the items, permitted purposes and methods of verification of disposition will need to be elaborated.

(c) International Inspectors shall, in accordance with agreements on subsidiary arrangements:

- have unimpeded access to all parts of the chemical weapons production facilities. While conducting their activity, Inspectors shall comply with the safety regulations at the facility. The items on the declared inventory to be inspected will be chosen by the Inspectors;

- bring with them and use such agreed instruments as may be necessary for the completion of their tasks;

- communicate freely with the Technical Secretariat.

(d) The State Party receiving the inspection shall, in accordance with agreed procedures:

- have the right to accompany the International Inspectors at all times during the inspection and observe all their verification activities at the chemical weapons production facility;

- have the right to inspect any instrument used or installed by the International Inspectors and to have it tested in the presence of State Party personnel;

- provide assistance to the International Inspectors upon their request for the installation of the monitoring system;

- receive copies of the reports on inspections of its chemical weapons production facility(ies);

- receive copies, at its request, of the information and data gathered about its chemical weapons production facility(ies) by the Technical Secretariat.

(e) The International Inspectors 1/ may request clarification of any ambiguities arising from the inspection. In the event that any ambiguities arise which cannot be resolved in the course of the inspections, the inspectors shall inform the (Director-General of the) Technical Secretariat immediately.

(f) After each inspection or visit to the chemical weapons production facility, International Inspectors shall submit a report with their findings to the (Director-General of the) Technical Secretariat which will transmit a copy of this report to the State Party having received the inspection or visit. Information (to be designated) received during the inspection shall be treated as confidential (procedures to be developed).

1/ The question of whether or not an individual Inspector shall have the rights set out in this and the following paragraph remains open.

ANNEX TO ARTICLE VI [O.]

MODALITIES FOR REVISION OF LISTS

1. The revisions envisaged would consist of additions to, deletions from, or shifts between the lists.

2. A revision could be proposed by a State Party. [If the Technical Secretariat has information which in its opinion may require a revision of the lists of chemicals, it should provide that information to the [Executive Council] which should communicate it to all States Parties.] A State Party may request the assistance of the Technical Secretariat in the substantiation of its proposal.

3. A proposal for revision should be submitted to [the Technical Secretariat] [the Executive Council] [the Depositary of the Convention].

4. [The Technical Secretariat] [The Executive Council] [The Depositary of the Convention], upon receipt of a proposal for revision, will be responsible for informing States Parties about it.

5. The proponent should substantiate its proposal with the necessary information. Any State Party and, as requested, the Technical Secretariat, could also provide relevant information for the evaluation of the proposal.

6. Technical evaluations of a proposal may be made by the Organization, 1/ [the Executive Council], any State Party [and the Technical Secretariat].

7. The decision on a proposal should be taken by the Organization 1/ [Conference of the States Parties] by [a majority vote] [consensus] [tacit approval of all States Parties 60 days after they have been informed of the proposal by the Technical Secretariat. If there is no tacit approval, the matter should be reviewed by the [Conference of the States Parties] at its next meeting.] [If urgent consideration is requested by five or more Parties, a special meeting of the Conference of the States Parties should be promptly convened.]

8. The revision procedure should be concluded within [60 days] after the receipt of the proposal. Once a decision is taken, it should enter into force after a period of [30 days].

9. The Technical Secretariat should provide assistance to any State Party, when requested, in evaluating an unlisted chemical. This assistance should be confidential [unless it is established in the evaluation that the chemical has chemical weapon properties].

1/ The question of which organ(s) of the Organization should be entrusted with this task should be considered further.

ANNEX TO ARTICLE VI [1]

GENERAL PROVISIONS

1. A State Party shall not produce, acquire, retain, transfer or use chemicals in Schedule [1] unless:

(i) the chemicals are applied to research, medical or protective purposes, 1/ and

(ii) the types and quantities of chemicals are strictly limited to those which can be justified for research, medical or protective purpose, and

(iii) the aggregate amount of such chemicals at any given time for [permitted] [protective] purposes is equal to or less than one metric tonne, and

(iv) the aggregate amount for [permitted] [protective] 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.

TRANSFERS

2. A State Party may transfer chemicals in Schedule [1] outside its territory only to another State Party and only for research, medical or protective purposes in accordance with paragraph 1.

3. Chemicals transferred shall not be retransferred to a third State.

4. Thirty days prior to any transfer to another State Party both States Parties shall notify the Technical Secretariat.

5. Each State Party shall make a detailed annual declaration regarding transfers during the previous calendar year. The declaration shall be submitted within ... months after the end of that year and shall for each chemical in Schedule [1] include the following information:

(i) the chemical name, structural formula and Chemical Abstracts Service Registry Number (if assigned);

(ii) the quantity acquired from other States or transferred to other States Parties. For each transfer the quantity, recipient and purpose should be included.

1/ A view was expressed that for consistency in this Annex, "permitted purposes" should be used instead of "research, medical or protective purposes". The view was also expressed that use of the term "permitted" would broaden considerably the sphere of use of super-toxic lethal chemicals which could be used as chemical weapons and that this was very undesirable. A view was expressed that pharmaceutical purposes should also be identified here.

SINGLE SMALL-SCALE PRODUCTION FACILITY

Each State Party which produces chemicals in Schedule [1] for [permitted] [protective] purposes shall carry out the production at a single small-scale facility, the capacity of which shall not exceed [one] metric tonne per year, as measured by the method established in [ ]. 1/

I. Declarations

A. Initial declarations

Each State Party which plans to operate such a facility shall provide the Technical 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 six months before operations are to begin.

B. Advance notifications

Each State Party shall give advance notification to the Technical Secretariat of planned changes related to the initial declaration. The notification shall be submitted not later than ... months before the changes are to take place.

C. Annual declarations

(a) 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 ... months after the end of that year and shall include:

1. Identification of the facility

2. For each chemical in 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 in Schedules [1], [2] or [3] used for production of chemicals in Schedule [1];

(iv) the quantity consumed at the facility and the purpose(s) of the consumption;

1/ The view was expressed that the single small-scale production facility should be State-owned.

(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.

3. 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.

(b) 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 ... months before the beginning of that year and shall include:

1. Identification of the facility

2. For each chemical in 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.

3. 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.

II. 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 production 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. The guidelines to be used shall include: (to be developed)

4. Each facility shall receive an initial visit from international inspectors promptly after the facility is declared. The purpose of the initial visit shall be to verify information provided concerning the facility,

including verification that the capacity will not permit the production, on an annual basis, of quantities [significantly] above one metric tonne, and to obtain any additional information needed for planning future verification activities at the facility, including inspection visits and use of on-site instruments.

5. Each State Party possessing or planning to possess a facility shall execute an agreement, based on a model agreement, with the Organization, before the facility begins operation or is used, covering detailed inspection procedures for the facility. Each agreement shall include: (to be developed) 1/

OTHER FACILITIES 2/

1/ The view was expressed that pending conclusion of the agreement between a State Party and the Organization there would be a need for provisional inspection procedures to be formulated.

2/ Additional work on the production of Schedule [1] chemicals outside the single small-scale production facility was undertaken and substantial progress has been achieved. The relevant material, for further inclusion into Appendix I, is contained in Appendix II.

ANNEX TO ARTICLE VI [1]
SCHEDULE [1]

PROVISIONAL LIST 1/

1. O-Alkyl alkylphosphonofluoridates

e.g. Sarin:	O-isopropyl methylphosphonofluoridate	(107-44-8)
Soman:	O-pinacolyl methylphosphonofluoridate	(96-64-0)

2. O-Alkyl N,N-dialkylphosphoramidocyanidates

e.g. Tabun:	O-ethyl N,N-dimethylphosphoramidocyanidate	(77-81-6)

3. O-Alkyl S-2-dialkylaminoethylalkylphosphonothiolates

e.g. VX:	O-ethyl S-2-diisopropylaminoethylmethyl-phosphonothiolate	(50782-69-9)

4. Sulphur mustards:

e.g. Mustard gas (H):	bis(2-chloroethyl)sulphide	(505-60-2)
Sesquimustard (Q):	1,2-bis(2-chloroethylthio)ethane	(3563-36-8)
O-Mustard (T):	bis(2-chloroethylthioethyl)ether	(63918-89-8)

5. Lewisites

Lewisite 1:	2-chlorovinyldichloroarsine	(541-25-3)
Lewisite 2:	bis(2-chlorovinyl)chloroarsine	(40334-69-8)
Lewisite 3:	tris(2-chlorovinyl)arsine	(40334-70-1)

6. Nitrogen mustards

HN1:	bis(2-chloroethyl)ethylamine	(538-07-8)
HN2:	bis(2-chloroethyl)methylamine	(51-75-2)
HN3:	tris(2-chloroethyl)amine	(555-77-1)

7. 3-Quinuclidinyl benzilate (BZ) (6581-06-2)

8. Alkylphosphonyldifluorides

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

9. Ethyl O-2-diisopropylaminoethyl alkylphosphonites

e.g. QL (57856-11-8)

1/ Some of the chemicals on the Schedules exist in more than one stereoisomeric form. It is proposed that, where assigned, the Chemical Abstracts Service Registry Numbers be stated for each of them.

To be discussed further

1. Saxitoxin

2. 3,3-Dimethylbutan-2-ol (pinacolyl alcohol)

3. CS

4. CR

5. Chloro Soman and Chloro Sarin

6. Sulphur Mustards: to include compounds listed below.

   2-chloroethylchloromethylsulphide

   bis(2-chloroethyl)sulphone

   bis(2-chloroethylthio)methane

   1,3-bis(2-chloroethylthio)-n-propane

   1,4-bis(2-chloroethylthio)-n-butane

ANNEX TO ARTICLE VI [2]

KEY PRECURSOR CHEMICALS

DECLARATIONS

The Initial and Annual Declarations to be provided by a State Party under paragraphs 3 and 4 of Article VI shall include:

1. Aggregate national data on the production, processing and consumption of each chemical listed in Schedule [2], and on the export and import of the chemicals in the previous calendar year with an indication of the countries involved.

2. The following information for each facility which, during the previous calendar year, produced, processed or consumed more than [ ] tonnes per annum of the chemicals listed in Schedule [2] or which produced 1/ at any time since ... a chemical in Schedule [2] for chemical weapons purposes: 2/

Key Precursor 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 total amount produced, consumed, imported and exported in the previous calendar year. 3/

(iii) The purpose(s) for which the key precursor chemical(s) are produced, consumed or processed:

(a) conversion on-site (specify product type)

(b) sale or transfer to other domestic industry (specify final product type)

(c) export of a key precursor (specify which country)

(d) other.

1/ A view was expressed that the question of a quantitative threshold would need to be discussed in this context.

2/ The placement in the Convention of the obligation to declare facilities which produced a chemical in Schedule [2] for chemical weapons purposes needs further consideration. A view was expressed that this obligation should be included in the Annex to Article V.

3/ Whether the total amount is to be expressed as an exact figure or within a range is to be discussed.

Facility 1/ 2/

(i) The name of the facility and of the owner, company, or enterprise operating the facility.

(ii) The exact location of the facility (including the address, location of the complex, location of the facility within the complex including the specific building and structure number, if any).

(iii) Whether the facility is dedicated to producing or processing the listed key precursor or is multi-purpose.

(iv) The main orientation (purpose) of the facility.

(v) Whether the facility can readily be used to produce a Schedule [1] chemical or another Schedule [2] chemical. Relevant information should be provided, when applicable.

(vi) The production capacity 3/ for the declared Schedule [2] chemical(s).

(vii) Which of the following activities are performed with regard to the key precursor chemicals:

(a) production

(b) processing with conversion into another chemical

(c) processing without chemical conversion

(d) other - specify.

(viii) Whether at any time during the previous calendar year declared key precursors were stored on-site in quantities greater than [ ] [tonnes].

1/ One delegation suggested that, in the case of a multi-purpose facility currently producing key precursor chemicals, the following should be specified:

- general description of the products;
- detailed technological plan of the facility;
- list of special equipment included in the technological plan;
- type of waste treatment equipment;
- description of each final product (chemical name, chemical structure and register number);
- unit capacity for each product;
- use of each product.

2/ The view was expressed that a definition of a chemical production facility was needed and thus should be elaborated.

3/ How to define production capacity remains to be agreed upon. Some consultations with technical experts have taken place on this issue. A report on these consultations is enclosed in Appendix II to facilitate further work by delegations.

Advance notifications

3. (a) Each State Party shall annually notify the Technical Secretariat of facilities which intend, during the coming calendar year, to produce, process or consume more than ... of any chemical listed in Schedule [2]. The notification shall be submitted not later than ... months before the beginning of that year and shall for each facility include the following information:

(i) The information specified under paragraph 2 above, except for quantitative information relating to the previous calendar year;

(ii) For each chemical listed in Schedule [2] intended to be produced or processed, the total quantity intended to be produced or processed during the coming calendar year and the time period(s) when the production or processing is anticipated to take place.

(b) Each State Party shall notify the Technical Secretariat of any production, processing or consumption planned after the submission of the annual notification under paragraph 3 (a), not later than one month before the production or processing is anticipated to begin. The notification shall for each facility include the information specified under paragraph 3 (a).

Verification 1/

Aim

4. The aim of the measures stipulated in Article VI, paragraph 6 shall be to verify that:

(i) Facilities declared under this Annex are not used to produce any chemical listed in Schedule [1]. 2/

(ii) The quantities of chemicals listed in Schedule [2] produced, processed or consumed are consistent with needs for purposes not prohibited by the Chemical Weapons Convention. 3/

(iii) The chemicals listed in Schedule [2] are not diverted or used for purposes prohibited by the Chemical Weapons Convention.

1/ Some of the provisions contained in this section have general application throughout the Convention. It is understood that the retention of these will be reviewed at a later stage in the negotiations.

2/ It was suggested that "or for any other purposes prohibited by the Convention" should be added.

3/ Opinions were expressed on the need to consider the question of the existence in a facility of excessive capacity for the production of chemicals in Schedule [2].

Obligation and Frequency

5. (i) Each facility notified to the Technical Secretariat under this Annex shall be subject to systematic international on-site verification on a routine basis.

(ii) The number, intensity, duration, timing and mode of inspections and monitoring with on-site instruments for a particular facility shall be based on the risk to the objectives of the Convention posed by the relevant chemical, the characteristics of the facility and the nature of the activities carried out there. 1/ 2/ The guidelines to be used shall include: (to be developed). 3/

Selection

6. The particular facility to be inspected shall be chosen by the Technical Secretariat in such a way to preclude the prediction of precisely when the facility is to be inspected.

Notification

7. A State Party shall be notified by the (Director-General of the) Technical Secretariat of the decision to inspect a facility referred to in paragraphs 2 and 3 .... hours prior to the arrival of the inspection team.

Host State Party

8. The host State Party shall have the right to designate personnel to accompany an international inspection team. The exercise of this right shall not affect the right of inspectors to obtain access to the facility, as provided by the Convention, nor shall it delay or otherwise impede the carrying out of the inspection.

1/ One delegation suggested that the number of such inspections could be from one to five per year.

2/ A number of possible factors that could influence the number, intensity, duration, timing and mode of inspections have been identified and discussed. The result of this work is enclosed in Appendix II to serve as a basis for future work.

3/ It was noted that a "weighted approach" might be taken in determining the inspection régime for specific chemicals. The importance of establishing a threshold(s) in this context was also noted. It was mentioned that a threshold(s) should relate to "militarily significant quantities" of the relevant chemical(s).

Initial Visit

9. Each facility notified to the Technical Secretariat under this Annex shall be liable to receive an initial visit from international inspectors, promptly after the State becomes a Party to the Convention.

10. The purpose of the initial visit shall be to verify information provided concerning the facility to be inspected and to obtain any additional information needed for planning future verification activities at the facility, including inspection visits and use of on-site instruments.

Agreement on Inspection Procedures

11. Each State Party shall execute an agreement, based on a model agreement, with the Organization, within [6] months after the Convention enters into force for the State, governing the conduct of the inspections of the facilities declared by the State Party. The agreement shall provide for the detailed subsidiary arrangements which shall govern inspections at each facility. 1/

12. Such agreements shall be based on a Model Agreement and shall specify for each facility the number, intensity, duration of inspections, detailed inspection procedures and the installation, operation and maintenance of on-site instruments by the Technical Secretariat. The Model Agreement shall include provisions to take into account future technological developments.

States Parties shall ensure that the systematic international on-site verification can be accomplished by the Technical Secretariat at all facilities within the agreed time frames after the convention enters into force. 2/

Verification Inspections

13. The areas of a facility to be inspected under subsidiary arrangements may, inter alia, include: 3/

1/ Several delegations considered that the model agreement should be elaborated as part of the negotiations on the Convention. A draft for such a model agreement is contained in Appendix II.

2/ Procedures to ensure the implementation of the verification scheme within designated time frames are to be developed.

3/ Opinions were expressed on the need to consider the question of the existence in a facility of excessive capacity for the production of chemicals on Schedule [2].

(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.

14. (a) The (Director-General of the) Technical Secretariat shall notify the State Party of its decision to inspect or visit the facility [48] [12] 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) Technical Secretariat shall specify the purpose(s) of the inspection or visit.

(b) 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 facility. The agreement on subsidiary arrangements will specify administrative arrangements for Inspectors.

(c) International Inspectors shall, in accordance with agreements on subsidiary arrangements:

- have unimpeded access to all areas that have been agreed for inspection. 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;

- bring with them and use such agreed instruments as may be necessary for the completion of their tasks;

- receive samples taken at their request at the facility. Such samples will be taken by representatives of the State Party in the presence of the Inspectors;

- perform on-site analysis of samples;

- transfer, if necessary, samples for analysis off-site at a laboratory designated by the Organization 1/ in accordance with agreed procedures; 2/
- afford the opportunity to the Host State Party to be present when samples are analysed; 2/
- ensure, in accordance with procedures (to be developed), that samples transported, stored and processed are not tampered with; 2/
- communicate freely with the Technical Secretariat.

(d) The State Party receiving the inspection shall, in accordance with agreed procedures:

- have the right to accompany the International Inspectors at all times during the inspection and observe all their verification activities at the facility;
- have the right to retain duplicates of all samples taken and be present when samples are analysed;
- have the right to inspect any instrument used or installed by the International Inspectors and to have it tested in the presence of its personnel;
- provide assistance to the International Inspectors, upon their request, for the installation of the monitoring system and the analysis of samples on-site;
- receive copies of the reports on inspections of its facility(ies);
- receive copies, at its request, of the information and data gathered about its facility(ies) by the Technical Secretariat.

15. The Technical 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 inspection.

Submission of Inspectors' Report

16. After each inspection or visit to the facility, International Inspectors shall submit a report with their findings to the (Director-General of the) Technical Secretariat which will transmit a copy of this report to the State Party having received the inspection or visit. Information received during the inspection shall be treated as confidential (procedures to be developed).

17. The International Inspectors may request clarification of any ambiguities arising from the inspection. In the event that any ambiguities arise which cannot be resolved in the course of the inspection, the Inspectors shall inform the (Director-General of the) Technical Secretariat immediately.

1/ The designation of the organ of the Organization that will be entrusted with this task will be considered further and specified in the text.

2/ The view was expressed that all questions related to analysis off-site required further discussion.

ANNEX TO ARTICLE VI [2]
SCHEDULE [2]

PROVISIONAL LIST

1. Chemicals containing one P-methyl, P-ethyl, or P-propyl (normal or iso) bond

2. N,N-Dialkylphosphoramidic dihalides

3. Dialkyl N,N-dialkylphosphoramidates

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-Diisopropylaminoethyl-2-chloride (96-79-7)

8. N,N-Diisopropylaminoethan-2-ol (96-80-0)

9. N,N-Diisopropylaminoethane-2-thiol (5842-07-9)

TO BE DISCUSSED FURTHER

(1) The following compounds:

Bis(2-hydroxyethyl)sulphide (thiodiglycol)

3,3-Dimethylbutan-2-ol (pinacolyl alcohol)

(2) Expanded groups for compounds 5, 6, 7, 8 and 9, as follows:

(No. 5): 2-phenyl-2-(phenyl, cyclohexyl, cyclopentyl or cyclobutyl)-2-hydroxyacetic acids and their methyl, ethyl, n-propyl and iso-propyl esters

(No. 6): 3- or 4-hydroxypiperidine and their [derivatives] and [analogs]

(Nos. 7,8,9): N,N-Disubstituted aminoethyl-2-halides
N,N-Disubstituted aminoethan-2-ols
N,N-Disubstituted aminoethane-2-thiols

ANNEX TO ARTICLE VI [3]

Chemicals which are produced in large commercial quantities and which could be used for chemical weapons purposes

DECLARATIONS

1. The Initial and Annual Declarations to be provided by a State Party under paragraph 4 of Article VI shall include the following information for each of the chemicals listed in Schedule [3]:

(i) The chemicals name, common or trade name used by the facility, structural formula and Chemical Abstracts Service Registry Number.

(ii) The total amount produced, consumed, imported and exported in the previous calendar year. 1/

(iii) The final product or end use of the chemical in accordance with the following categories (to be developed).

(iv) For each facility which during the previous calendar year produced, processed, consumed or transferred more than [30] tonnes of a chemical listed in Schedule [3] or which produced 2/ at any time since ... a chemical in Schedule [3] for chemical weapons purposes: 3/ 4/

(a) The name of the facility and of the owner, company, or enterprise operating the facility.

(b) The location of the facility.

1/ Whether the total amount is to be expressed as an exact figure or within a range is to be discussed.

2/ A view was expressed that the question of a quantitative threshold would need to be discussed in this context.

3/ The placement in the Convention of the obligation to declare facilities which produced a chemical in Schedule [3] for chemical weapons purposes needs further consideration. A view was expressed that this obligation should be included in the Annex to Article V.

4/ It was proposed that a threshold for the dual purpose agents (Phosgene, Cyanogen chloride, Hydrogen cyanide, Chloropicrin) could be established at [50 tonnes/year] [500 tonnes/year] and for precursors at [5 tonnes/year] [50 tonnes/year]. The proposal was presented in an informal discussion paper dated 30 March 1987, prepared on the request of the Chairman of the Committee, by Dr. Peroni (Brazil), Lt. Col. Bretfeld (German Democratic Republic) and Dr. Ooms (Netherlands).

(c) The capacity (to be defined) 1/ of the facility.

(d) The approximate amount of production and consumption of the chemical in the previous year (ranges to be specified).

2. A State Party shall notify the Technical Secretariat of the name and location of any facility which intends, in the year following submission of the Annual Declaration, to produce, process or consume any of the chemicals listed in Schedule [3] (on an industrial scale - to be defined).

VERIFICATION

The verification régime for chemicals listed in Schedule [3] will comprise both the provision of data by a State Party to the Technical Secretariat and the monitoring of that data by the Technical Secretariat. 2/

1/ Some consultations with technical experts have taken place on this issue. A report on these consultations is enclosed in Appendix II to facilitate further work by delegations.

2/ Some delegations consider that provision should be made for resort to an on-site "spot-check" inspection, if required, to verify information supplied by a State Party. Other delegations believe that the provisions of Articles VII, VIII and IX of the Convention are sufficient in this respect.

ANNEX TO ARTICLE VI [3]
SCHEDULE [3]

Phosgene	(75-44-5)
Cyanogen chloride	(506-77-4)
Hydrogen cyanide	(74-90-8)
Trichloronitromethane (chloropicrin)	(76-06-2)
Phosphorus oxychloride	(10025-87-3)
Phosphorus trichloride	(7719-12-2)
Di- and Trimethyl/Ethyl Esters of Phosphorus [P III] Acid:	
Trimethyl phosphite	(121-45-9)
Triethyl phosphite	(122-52-1)
Dimethyl phosphite	(868-85-9)
Diethyl phosphite	(762-04-9)
Sulphur monochloride	(19925-67-9)
Sulphur dichloride	(19545-99-0)

ANNEX TO ARTICLE VI [...] 1/

Production of super-toxic lethal chemicals not listed in Schedule [1]

The provisions of this Annex cover:

- chemicals with an LD_{50} equal to or less than 0.5 mg per kg bodyweight 2/ or an LCt_{50} equal to or less than 2,000 mg-min/m^3;

- facilities which:

  (a) produce or process more than [10] [100] [1,000] kg 3/ per annum 4/ of any such chemical; 5/

  [(b) have a production capacity 6/ for any such chemical exceeding 1,000 kg 7/ per annum 8/].

1/ Some delegations consider that the chemicals in this Annex should be dealt with in the Annex to Article VI [2] Schedule [2]. Other delegations consider that a separate Annex [4] is required.

2/ It is understood that further discussion is needed with regard to chemicals with a somewhat lower toxicity. In this context various ideas were put forward, i.a.:

- that chemicals falling within a deviation-range of 10-20 per cent could be considered;
- that chemicals with an LD_{50} close to 0.5 mg/kg bodyweight could be included as exceptions;
- that the modalities for revisions of lists could be made use of to take care of possible concerns in this regard.

3/ Some delegations felt that the thresholds for production and production capacity should correspond to militarily significant quantities.

4/ The question of production or processing not occurring annually requires further discussion.

5/ Some delegations expressed the view that additional criteria of suitability for chemical weapons purposes should be added.

6/ How to define production capacity remains to be agreed upon. In this context reference was made to the proposal contained in CD/CW/WP.171, as well as the report contained in Appendix II to this document.

7/ It is understood that the quantitative value of the threshold for production capacity remains to be discussed.

8/ One delegation expressed the view that the question of production capacities should be considered in accordance with the relevant provisions in the Annex to Article VI, Schedules [2] and [3] (cf. CD/CW/WP.167, pp. 62, 68).

DECLARATIONS 1/

The Initial and Annual Declarations to be provided by a State Party under Article VI shall include:

1. Aggregate national data on the production or processing of each chemical [listed in] [covered by] this Annex, 2/ and on the export and import of the chemicals in the previous calendar year with an indication of the countries involved.

2. The following information for each facility which, during the previous calendar year, produced or processed more than [10] [100] [1,000] kg 3/ of any chemical [listed in] [covered by] this Annex.

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 total amount produced, processed, imported and exported in the previous calendar year; 4/ 5/

(iii) The purpose(s) for which the chemical(s) are produced or processed:

(a) conversion on-site (specify product type);

(b) sale or transfer to other domestic industry (specify final product type);

(c) export of a chemical (specify which country).

Facility

(i) The name of the facility and of the owner, company, or enterprise operating the facility;

1/ The information to be reported on chemicals will depend largely on what aims are eventually agreed for verification under paragraph 4 of this Annex.

2/ A proposal for a list of chemicals, to be included in the Convention under this category, is contained in CD/792.

3/ Some delegations felt that the thresholds for production and production capacity should correspond to militarily significant quantities.

4/ Whether the total amount is to be expressed as an exact figure or within a range is to be discussed.

5/ One delegation expressed the view that aggregate national data on the production of any such chemical should also be provided.

(ii) The exact location of the facility (including the address, location of the complex, location of the facility within the complex including the specific building and structure number, if any);

(iii) Whether the facility is dedicated to producing or processing the declared chemical or is multi-purpose;

(iv) The main orientation (purpose) of the facility;

[(v) Whether the facility can readily be used to produce a Schedule [1] chemical. Relevant information should be provided, when applicable.];

(vi) The production capacity for the declared chemical(s); 1/

(vii) Which of the following activities are performed with regard to chemicals;

(a) production;

(b) processing with conversion into another chemical;

(c) processing without chemical conversion;

(d) other - specify;

(viii) Whether at any time during the previous calendar year declared chemicals were stored on-site in quantities greater than [ ] [tonnes].

Advance notifications

3. (a) Each State Party shall annually notify the Technical Secretariat of facilities which anticipate, during the coming calendar year, to produce or process more than ... of any chemical [listed in] [covered by] this Annex. The notification shall be submitted not later than ... months before the beginning of that year and shall for each facility include the following information:

(i) The information specified under paragraph 2 above, except for quantitative information relating to the previous calendar year;

(ii) For each chemical, the total quantity anticipated to be produced or processed during the coming calendar year and the time period(s) when the production or processing is anticipated to take place.

(b) Each State Party shall notify the Technical Secretariat of any production, processing planned after the submission of the annual notification under paragraph 3 (a), not later than one month before the production or processing is anticipated to begin. The notification shall for each facility include the information specified under paragraph 3 (a).

1/ How to define production capacity remains to be agreed upon.

VERIFICATION 1/

Aim 2/

4. The aim of the measures stipulated in Article VI, paragraph 6, shall be to verify that:

(i) Facilities declared under this Annex are not used to produce any chemical listed in Schedule [1];

(ii) The quantities of declared chemicals produced or processed are consistent with needs for purposes not prohibited by the Chemical Weapons Convention;

(iii) The declared chemicals are not diverted or used for purposes prohibited by the Chemical Weapons Convention.

Obligation and frequency

5. (i) Each facility notified to the Technical Secretariat shall be liable to receive an initial visit from International Inspectors, promptly after the State becomes a Party to the Convention.

(ii) The purpose of the initial visit shall be to verify information provided concerning the facility to be inspected and to obtain any additional information, [including on the capacity of the facility, needed for planning] [to determine whether systematic on-site verification on a routine basis is necessary, and, if so, to plan] future verification activities at the facility, including inspection visits and use of on-site instruments.

(iii) Each facility notified to the Technical Secretariat under this Annex shall be subject to systematic international on-site verification on a routine basis.

(iv) The number, intensity, duration, timing and mode of inspections and monitoring with on-site instruments for a particular facility shall be based on the risk to the objectives of the Convention posed by the relevant chemical, the characteristics of the facility including its capacity and the nature of the activities carried out there. 3/ The guidelines to be used shall include: (to be developed).

1/ Some of the provisions contained in this section have general application throughout the Convention. It is understood that the retention of these will be reviewed at a later stage in the negotiations.

2/ This aim requires further consideration. Some delegations have raised in this context the issue of suitability for chemical weapons purposes.

3/ One delegation suggested that the number of such inspections might be one to three per year.

Selection

6. The particular facility to be inspected shall be chosen by the Technical Secretariat in such a way to preclude the prediction of precisely when the facility is to be inspected.

Host State Party

7. The Host State Party shall have the right to designate personnel to accompany an international inspection team. The exercise of this right shall not affect the right of Inspectors to obtain access to the facility, as provided by the Convention, nor shall it delay or otherwise impede the carrying out of the inspection.

Agreement on Inspection Procedures

8. Each State Party shall execute an agreement, based on a model agreement, with the Organization within [6] months after the Convention enters into force for the State, governing the conduct of the inspections of [the facilities declared by the State Party] [those facilities which are determined by the Technical Secretariat on the basis of the initial visit of International Inspectors to warrant systematic international on-site verification on a routine basis]. The agreement shall provide for the detailed subsidiary arrangements which shall govern inspections at each facility.

9. Such agreements shall be based on a Model Agreement and shall specify for each facility the number, intensity, duration of inspections, detailed inspection procedures and the installation, operation and maintenance of on-site instruments by the Technical Secretariat. The Model Agreement shall include provisions to take into account future technological developments.

States Parties shall ensure that the systematic international on-site verification can be accomplished by the Technical Secretariat at all facilities within the agreeed time frames after the Convention enters into force.

Verification Inspections

10. 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;

(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.

11. (a) The (Director-General of the) Technical Secretariat shall notify the State Party of its decision to inspect or visit the facility [48] [12] hours prior to the planned arrival of the inspection team at the facility for systematic inspections or visits.

(b) 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 facility. The agreement on subsidiary arrangements will specify administrative arrangements for Inspectors.

(c) International Inspectors shall, in accordance with agreements on subsidiary arrangement:

- have unimpeded access to all areas that have been agreed for inspection. 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;

- bring with them and use such agreed instruments as may be necessary for the completion of their tasks;

- receive samples taken at their request at the facility. Such samples will be taken by representatives of the State Party in the presence of the Inspectors;

- perform on-site analysis of samples;

- transfer, if necessary, samples for analysis off-site at a laboratory designated by the Organization 1/ in accordance with agreed procedures;

- afford the opportunity to the Host State Party to be present when samples are analysed;

- ensure, in accordance with procedures (to be developed), that samples transported, stored and processed are not tampered with;

- communicate freely with the Technical Secretariat.

(d) The State Party receiving the inspection shall, in accordance with agreed procedures:

1/ The designation of the organ of the Organization that will be entrusted with this task will be considered further and specified in the text.

- have the right to accompany the International Inspectors at all times during the inspection and observe all their verification activities at facility;

- have the right to retain duplicates of all samples taken and be present when samples are analysed;

- have the right to inspect any instrument used or installed by the International Inspectors and to have it tested in the presence of its personnel;

- provide assistance to the International Inspectors, upon their request, for the installation of the monitoring system and the analysis of samples on-site;

- receive copies of the reports on inspections of its facility(ies);

- receive copies, at its request, of the information and data gathered about its facility(ies) by the Technical Secretariat.

12. The Technical 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 inspection.

Submission of Inspectors' Report

13. After each inspection or visit to the facility, International Inspectors shall submit a report with their findings to the (Director-General of the) Technical Secretariat which will transmit a copy of this report to the State Party having received the inspection or visit. Information received during the inspection shall be treated as confidential (procedures to be developed).

14. The International Inspectors may request clarification of any ambiguities arising from the inspection. In the event that any ambiguities arise which cannot be resolved in the course of the inspection, the Inspectors shall inform the (Director-General of the) Technical Secretariat immediately.

OTHER DOCUMENTS

I.

Preparatory Commission 1/

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 1st meeting of the Conference of the States Parties, the Depository of the Convention shall convene a Preparatory Commission not later than [30] days after the Convention has been signed by (to be determined) States.

2. The Commission shall consist of the representatives designated by the States which have signed the Convention.

3. The Commission shall be convened at [...] and remain in existence until the Convention comes into force and thereafter until the Conference of the States Parties has convened.

4. The expenses of the Commission 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].

5. All decisions of the Commission shall be made by [consensus] [a two-thirds majority].

6. The Commission shall

(a) elect its own officers, adopt its own rules of procedures, meet as often as necessary and establish such committees as it deems useful;

(b) appoint an executive secretary and establish a provisional technical secretariat with units in charge of preparatory work concerning the main activities to be carried out by the Technical Secretariat created under the Convention: declarations and data; inspectorate; evaluation of accounts and reports; agreements and negotiations; personnel, qualifications and training; development of procedures and instruments; technical support; finance and administration;

(c) make arrangements for the first session of the Conference of the States Parties, including the preparation of an agenda and draft rules of procedure;

1/ Provisions on the Commission could be contained in a resolution of the United Nations General Assembly commending the Convention or in an appropriate document associated with the Convention.

(d) make studies, reports and recommendations for the first session of the Conference of the States Parties and the 1st meeting of the Executive Council on subjects requiring immediate attention after the entry into force of the Convention, including the programme of work and the budget for the first year of activities of the Organization, the location of the permanent offices of the Organization, technical problems relevant to activities connected with the implementation of the Convention, establishment of the Technical Secretariat and of its staff and financial regulations.

7. The Commission shall report on its activities to the 1st meeting of the Conference of the States Parties.

II.

PROCEDURES FOR TOXICITY DETERMINATIONS 1/

In March 1982 consultations were held, involving 32 experts from 25 countries, i.a. on toxicity determination.

As a result of the discussions, the participants in the consultations unanimously agreed to recommend standardized operating procedures for acute subcutaneous toxicity determinations and for acute inhalation toxicity determinations. These unanimously agreed recommendations were submitted as Annexes III and IV to document CD/CW/WP.30.

It is understood that further work may be needed to take into account technical developments since 1982. In order to facilitate this work Annexes III and IV to CD/CW/WP.30 are reproduced below.

Recommended standardized operating procedures for acute subcutaneous toxicity determinations

1. Introduction

Three categories of agents were defined on the basis of their toxicity:

(i) super-toxic lethal chemicals;

(ii) other lethal chemicals;

(iii) other harmful chemicals.

Lethality limits in terms of LD_{50} for subcutaneous administration were established to separate three toxic categories at 0.5 mg/kg and 10 mg/kg.

2. Principles of the test method

The test substance is administered to a group of animals in doses corresponding exactly to the category limits (0.5 or 10 mg/kg respectively). If in an actual test the death rate was greater than 50 per cent, then the material would fall into the higher toxicity category; if it was lower than 50 per cent the material would fall into the lower toxicity category.

3. Description of the test procedure

3.1 Experimental animal Healthy young adult male albino rats of Wistar strain weighing 200 ± 20 g should be used. The animals should be acclimatized to the laboratory conditions for at least five days prior to the test. The

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1/ It was understood that these recommended standardized operating procedures for toxicity determinations might be supplemented or modified and/or, if necessary, reviewed.

temperature of the animal room before and during the test should be 22 ± 3°C and the relative humidity should be 50-70 per cent. With artificial lighting, the sequence should be 12 hours light, 12 hours dark. Conventional laboratory diets may be used for feeding with an unlimited supply of drinking water. The animals should be group-caged but the number of animals per cage should not interfere with proper observation of each animal. Prior to the test, the animals are randomized and divided into groups; 20 animals in each group.

3.2 Test substance Each test substance should be appropriately identified (chemical composition, origin, batch number, purity, solubility, stability, etc.) and stored under conditions ensuring its stability. The stability of the substance under the test conditions should also be known. A solution of the test substance should be prepared just before the test. Solutions with concentrations of 0.5 mg/ml and 10 mg/ml should be prepared. The preferable solvent is 0.85 per cent saline. Where the solubility of the test substance is a problem, a minimum amount of an organic solvent such as ethanol, propylene glycol or polyethylene glycol may be used to achieve solution.

3.3 Test method Twenty animals receive in the back region 1 ml/kg of the solution containing 0.5 mg/ml of the test substance. The number of dead animals is determined within 48 hours and again after 7 days. If the death rate is lower than 10 animals, another group of 20 animals should be injected by the same way with 1 ml/kg of the solution containing 10 mg/ml of the test substance. The number of dead animals should be determined within 48 hours and again after 7 days. If the result is doubtful (e.g. death rate = 10), the test should be repeated.

3.4 Evaluation of the results If the death rate in the first group of animals (receiving a solution containing 0.5 mg/ml) is equal to or higher than 50 per cent, the test substance will fall into the "super-toxic lethal chemical" category. If the death rate in the second group (receiving a solution containing 10 mg/ml) is equal to or higher than 50 per cent, the test substance will fall into the "other lethal chemical" category; if lower than 50 per cent, the test substance will fall into the "other harmful chemical".

4. Data reporting

A test report should include the following information:

(i) test conditions: date and hour of the test, air temperature and humidity;

(ii) animal data: strain, weight and origin of the animals;

(iii) test substance characterization: chemical composition, origin, batch number and purity (or impurities) of the substance; date of receipt, quantities received and used in the test; conditions of storage, solvent used in the test;

(iv) results: the number of dead animals in each group, evaluation of results.

Recommended standardized operating procedures for acute inhalation toxicity criteria

1. In the assessment and evaluation of the toxic characteristics of chemicals in a vapour or aerosol state determination of acute inhalation toxicity is necessary. In every case, when it is possible, this test should be preceded by subcutaneous toxicity determination. Data from these studies constitute the initial steps in the establishing of a dosage regimen in subchronic and other studies and may provide additional information on the mode of toxic action of a substance.

Three categories of agents were defined on the basis of their toxicity:

(i) super-toxic lethal chemicals;

(ii) other lethal chemicals;

(iii) other harmful chemicals.

Lethality limits in terms of LCt_{50} for inhalatory application were established to separate three toxic categories at 2,000 mg min/m^3 and 20,000 mg min/m^3.

2. Principles of the test method

A group of animals is exposed for a defined period to the test substance in concentration corresponding exactly to the category limits (2,000 mg min/m^3 or 20,000 mg min/m^3) respectively. If in an actual test the death rate was greater than 50 per cent, then the material would fall into the higher toxicity category; if it was lower than 50 per cent, the material would fall into the lower toxicity category.

3. Description of the test procedure

3.1 Experimental animal Healthy young adult male albino rats of Wistar strain weighing 200 $\pm$ 20 g should be used. The animals should be acclimatized to the laboratory conditions for at least five days prior to the test. The temperature of the animal room before and during the test should be 22 $\pm$ 3°C and the relative humidity should be 50-70 per cent. With artificial lighting, the sequence should be 12 hours light, 12 hours dark. Conventional laboratory diets may be used for feeding with an unlimited supply of drinking water. The animals should be group-caged but the number of animals per cage should not interfere with proper observation of each animal. Prior to the test the animals are randomized and divided into two groups; 20 animals in each group.

3.2 Test substance Each test substance should be appropriately identified (chemical composition, origin, batch number, purity, solubility, stability, boiling point, flash point, vapour pressure etc.) and stored under conditions ensuring its stability. The stability of the substance under the test conditions should also be known.

3.3 Equipment A constant vapour concentration may be produced by one of several methods:

(i) by means of an automatic syringe which drops the material on to a suitable heating system (e.g. hot plate);

(ii) by sending airsteam through a solution containing the material (e.g. bubbling chamber);

(iii) by diffusion of the agent through a suitable material (e.g. diffusion chamber).

A dynamic inhalation system with a suitable analytical concentration control system should be used. The rate of air flow should be adjusted to ensure that conditions throughout the equipment are essentially the same. Both a whole body individual chamber exposure or head only exposure may be used.

3.4 Physical measurements Measurements or monitoring should be conducted of the following parameters:

(i) the rate of air flow (preferably continuously);

(ii) the actual concentration of the test substance during the exposed period;

(iii) temperature and humidity.

3.5 Test method Twenty animals are exposed for 10 minutes to the concentration of 200 mg/m^3 and then removed from the chamber. The number of dead animals is determined within 48 hours and again after 7 days. If the death rate is lower than 10 animals, another group of 20 animals should be exposed for 10 minutes to the concentration of 2,000 mg/m^3. The number of dead animals should be determined within 48 hours and again after 7 days. If the result is doubtful (e.g. death rate = 10), the test should be repeated.

3.6 Evaluation of results If the death rate in the first group of animals (exposed to the concentration of 200 mg/m^3) is equal to or higher than 50 per cent, the test substance will fall into the "super-toxic lethal chemical" category. If the death rate in the second group (exposed to the concentration of 2,000 mg/m^3) is equal to or higher than 50 per cent, the test substance will fall into the "other lethal chemical" category; if it is lower than 50 per cent, the test substance will fall into the "other harmful chemical".

4. Data reporting

A test report should include the following information:

(i) Test conditions: date and hour of the test, description of exposure chamber (type, dimensions, source of air, system for generating the test substance, method of conditioning air, treatment of exhaust air etc.) and equipment for measuring temperature, humidity, air flow and concentration of the test substance;

(ii) Exposure data: air flow rate, temperature and humidity of air, nominal concentration (total amount of test substance fed into the equipment divided by volume of air), actual concentration in test breathing zone;

(iii) Animal data: strain, weight and origin of animals;

(iv) Test substance characterization: chemical composition, origin, batch number and purity (or impurities) of the substance; boiling point, flash point, vapour pressure; date of receipt, quantities received and used in the test; condition of storage, solvent used in the test;

(v) Results: number of dead animals in each group, evaluation of results.

ADDENDUM TO APPENDIX I

GUIDELINES ON THE INTERNATIONAL INSPECTORATE 1/

This document consists of Sections I-III which reproduce Attachment (A) of the Report of the Co-ordinator for Cluster IV (CD/CW/WP.175) for the 1987 session and Section IV which represents the work in Group C during the 1988 session.

I. Designation

1. Verification activities in a State Party to the Convention shall only be performed by Inspectors designated to this State in advance.

2. The Technical Secretariat shall communicate, in writing, to the State concerned the names, nationality and ranks of the Inspectors proposed for designation. Furthermore, it shall furnish a certificate of their qualifications and enter into such consultations as the State concerned may request. The latter shall inform the Secretariat, within (30) days after receipt of such a proposal, whether or not it will accept the designation of each Inspector proposed. The Inspectors accepted by the State Party shall be designated to that State. The Technical Secretariat shall notify the State concerned of such a designation.

3. Should any State Party object to the designation of inspectors, be it at the time they are proposed or at any time thereafter, it shall inform the Technical Secretariat of its objection. If a State Party raises objections to an Inspector already designated, this objection shall come into effect 30 days after receipt by the Technical Secretariat. The Technical Secretariat shall immediately inform the State concerned of the withdrawal of the designation of the inspector. In cases of objections to designation of Inspectors the Technical Secretariat shall propose to the State Party in question one or more alternative designations. The Technical Secretariat shall refer to the Executive Council any repeated refusal by a State Party to accept the designation of Inspectors if the Secretariat is of the opinion that such refusal impedes inspections to be conducted in the State concerned.

II. Privileges and immunities of Inspectors

1. To the extent necessary for the effective exercise of their functions, Inspectors shall be accorded the following privileges and immunities, which shall also apply to the time spent travelling in connection with their missions:

(a) immunity from personal arrest or detention and from seizure of their personal baggage;

(b) immunity from legal process of every kind in regard to what they do, say or write in the performance of their official functions;

(c) inviolability of all the papers, documents, equipment and samples they carry with them;

1/ The texts contained in this document require further consideration and elaboration.

(d) the right to use codes for their communication with the Secretariat and to receive papers or correspondence by courier or in sealed bags from the Secretariat;

(e) multiple entry/exit and/or transit visas and the same treatment in entry and transit formalities as is given to members of comparable rank of diplomatic missions;

(f) the same currency and exchange facilities as are accorded to representatives of foreign Governments on temporary official missions;

(g) the same immunities and facilities in respect to their personal baggage as are accorded to members of comparable rank of diplomatic missions.

2. Privileges and immunities shall be granted to Inspectors for the sake of the Convention and not for the personal benefit of the individuals themselves. The Secretariat shall have the right and the duty to waive the immunity of any Inspector whenever it is of the opinion that the immunity would impede the course of justice and can be waived without prejudice to the Convention.

3. If any State Party to the Convention considers that there has been an abuse of an above-mentioned privilege or immunity, consultations shall be held between that State and the Secretariat to determine whether such an abuse has occurred and, if so, to ensure that it does not repeat itself.

III. General rules governing inspections and the conduct of Inspectors

1. Inspectors shall carry out their functions under the Convention on the basis of the inspection mandate issued by the Technical Secretariat. They shall refrain from activities going beyond this mandate.

2. The activities of Inspectors shall be so arranged as to ensure on the one hand the effective discharge of the Inspectors' functions and, on the other, the least possible inconvenience to the State concerned and disturbance to the facility or other location inspected. Inspectors shall only request the information and data which are necessary to fulfil their mandate. States Parties shall furnish such information. Inspectors shall not communicate to any State, Organization or person outside the Technical Secretariat any information to which they have access in connection with their activities in a State Party. They shall abide by relevant regulations established within the Technical Secretariat for the protection of confidential information. They shall remain bound by these relevant regulations after they have left their functions as International Inspectors.

3. In the performance of their duties on the territory of a State Party, Inspectors shall, if the State Party so requests, be accompanied by representatives of this State, provided Inspectors are not thereby delayed or otherwise hindered in the exercise of their functions. If a State Party designates the Inspectors' point of entry into, and departure from, the State concerned and their routes and modes of travel within the State, it shall be guided by the principle of minimizing the time of travel and any other inconvenience.

4. In exercising their functions, Inspectors shall avoid unnecessarily hampering or delaying the operation of a facility or affecting its safety. In

particular, Inspectors shall not operate any facility or direct the staff of the facility to perform any operation. 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 perform them.

5. After the inspection visit, Inspectors shall submit to the Technical Secretariat a report on the activities conducted by them and on their findings. The report shall be factual in nature. It shall only contain facts relevant to compliance with the Convention, as provided for under the inspection mandate. Relevant regulations, governing the protection of confidential information, shall be observed. The report shall also provide information as to the manner in which the State Party inspected co-operated with the inspection team. Different views held by Inspectors may be attached to the report.

6. The report shall be kept confidential. The National Authority of the State Party shall be informed of the findings of the report. Any written comments, which the State Party may immediately make on these findings shall be annexed to it. Immediately after receiving the report, the Technical Secretariat shall transmit a copy of it to the State Party concerned.

7. Should the report contain uncertainties, or should co-operation between the National Authority and the Inspectors not measure up to the standard required, the Technical Secretariat shall approach the State Party for clarification.

8. 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 Technical Secretariat shall inform the Executive Council without delay.

IV. General rules governing inspections under article IX 1/

1. For inspections under article IX, the guidelines set out in sections II and III shall apply, as appropriate, unless otherwise provided for in the following.

2. (a) (i) Inspections under article IX shall only be performed by Inspectors especially designated for this function. In order to designate Inspectors for inspections under article IX, the Director-General shall, by selecting Inspectors from among the full-time Inspectors for routine inspection activities, establish a list of proposed inspectors. It shall comprise a sufficiently large pool of International Inspectors having the necessary qualification, experience, skill and training, to allow for rotation and availability of Inspectors.

1/ The view was expressed that some main elements of the guidelines contained in this Section are subject to further consideration and elaboration of the principles of on-site inspection on challenge contained in Appendix II (pp. 141-144), which do not yet constitute any agreement and that these guidelines are presented with the aim of facilitating for delegations to analyse the situation and to arrive at common positions in the future work of the Committee.

(ii) The Director-General shall communicate to all States Parties the list of proposed Inspectors with their names, nationality and other relevant details. [Any Inspector included in this list shall be presumed accepted by States Parties as from 30 days after acknowledgement of receipt of the list. A State Party may indicate the ineligibility of an Inspector proposed or already designated for inspection of its facilities only in cases affecting its national interest.] 1/ [Any Inspector included in this list shall be regarded as accepted unless a State Party, within 30 days after acknowledgement of receipt of the list or at any time thereafter, declares its non-acceptance. In the case of non-acceptance, the proposed Inspector shall not be eligible for facilities of the State Party which has declared his non-acceptance.] 1/ The Director-General shall, as necessary, submit further proposals in addition to the original list of proposed inspectors. 2/

(iii) If, in the opinion of the Director-General [the cases of ineligibility] [the non-acceptance] of proposed Inspectors impede the designation of a sufficient number of Inspectors or otherwise hamper the effective fulfilment of the task of the International Inspectorate relating to inspections to be carried out under article IX, the Director-General shall refer them to the Executive Council.

(b) The Director-General shall establish a list of experts who may be called upon to complement the Inspectors designated under subparagraph (a) above for those types of inspection which require highly specialized skills. Paragraphs I 1, 2 and 3 and subparagraph 2 (a) (ii) and (iii) above shall apply to this list. 2/ 3/

Should there be circumstances requiring the service of experts not included in the above list, the Director-General may dispatch such experts to complement the team of Inspectors only with the consent of the requested State. 4/

1/ A view was expressed that measures against arbitrary handling of the right to refuse Inspectors needs to be considered.

2/ In order to ensure that the process of designation of Inspectors, experts and supporting staff as well as of points of entry (and departure) function smoothly as from the date of entry into force of the Convention, the idea of the signatories indicating advance acceptance on the basis of a preliminary list drawn up by the Preparatory Commission should be considered.

3/ A view was expressed that the list of the experts and supporting staff should be kept to a minimum.

4/ This provision needs to be discussed further.

These experts shall be bound by the same obligations as provided for in article VIII.D.6 as well as in these guidelines.

(c) In order to assist the Inspectors in carrying out inspections under article IX, a list of supporting staff with special skills or training such as interpreters 1/ 2/ and security personnel shall be drawn up by the Director-General. 3/ 4/ Paragraphs I 1, 2 and 3 and subparagraph 2 (a) (ii) and (iii) above shall apply to this list.

(d) Whenever amendments to the above-mentioned lists of Inspectors, experts and supporting staff are necessary, new Inspectors, experts and supporting staff shall be designated in the same manner as set forth with respect to the initial list.

(e) Each State Party shall, within 30 days of the receipt of the list of designated Inspectors, experts and supporting staff, provide for or ensure the provision of visas and other such documents which each Inspector, expert or each member of the supporting staff may need to enter and to remain on the territory of the State Party 5/ for the purpose of carrying out inspection activities under article IX. These documents shall have a validity of at least 24 months.

1/ The Technical Secretariat should make arrangements for interpreters for national languages of States Parties, to the extent possible, to facilitate inspections.

2/ A view was expressed that consideration should be given to include provision in the Convention for the selection by States Parties of what languages of the Convention they will operate in for the conduct of inspections and submission of reports to the Technical Secretariat.

3/ In order to ensure that the process of designation of Inspectors, experts and supporting staff as well as of points of entry (and departure) function smoothly as from the date of entry into force of the Convention, the idea of the signatories indicating advance acceptance on the basis of a preliminary list drawn up by the Preparatory Commission should be considered.

4/ A view was expressed that the list of the experts and supporting staff should be kept to a minimum.

5/ In cases where the facilities of a State Party subject to inspection are located in the territory of another State or where the access from the point of entry to the facilities subject to inspection requires transit through the territory of another State, consideration will need to be given to the arrangements to be worked out concerning the rights and obligations under these guidelines between a State Party and the State in which the State Party's facilities subject to inspection are located or the State through which the inspection team has to transit.

3. Each State Party shall designate the points of entry into (and departure from) its territory 1/ and shall supply the required information to the Technical Secretariat not later than 30 days after the Convention enters into force. 2/ These points of entry shall be such that the inspection team can reach any inspection site from at least one point of entry within the time frames set forth in ...

Each State Party may change the points of entry (and departure) by giving notice of such change to the Technical Secretariat, which shall become effective upon receipt of the notice, unless the Technical Secretariat considers that the change hampers the timely conduct of inspections and enters into consultation with the State Party to resolve the problem.

4. The Director-General shall select the members of an inspection team. 3/ Each inspection team shall consist of not less than [3] Inspectors and shall be [kept to a minimum necessary for the proper execution of its task] [not more than ... members]. No national of the requesting State Party, the State Party receiving the inspection, or another State Party cited by the requesting State Party as having been involved in the case to be inspected shall be a member of the inspection team.

5. (a) The State Party, which has been notified of the arrival of an inspection team, shall ensure its immediate entry into the territory and shall do everything in its power to ensure the safe conduct of the inspection team and their equipment and supplies, within the prescribed time frames of ... (hours), from their points of entry to the site(s) to be inspected and to their points of departure. 1/ It shall provide or arrange for the facilities 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. The State Party receiving the inspection shall be reimbursed for its expenses by the Organization (Details to be developed).

1/ In cases where the facilities of a State Party subject to inspection are located in the territory of another State or where the access from the point of entry to the facilities subject to inspection requires transit through the territory of another State, consideration will need to be given to the arrangements to be worked out concerning the rights and obligations under these guidelines between a State Party and the State in which the State Party's facilities subject to inspection are located or the State through which the inspection team has to transit.

2/ In order to ensure that the process of designation of Inspectors, experts and supporting staff as well as of points of entry (and departure) function smoothly as from the date of entry into force of the Convention, the idea of the signatories indicating advance acceptance on the basis of a preliminary list drawn up by the Preparatory Commission should be considered.

3/ The detailed procedure for selection need to be addressed later.

(b) The representative(s) of the State Party receiving the inspection shall assist the inspection team in the exercise of its functions. They shall have the right to accompany the inspection team at all times, from the point of entry to the point of departure, provided that the inspection team is not thereby delayed or otherwise hindered in the exercise of its functions.

6. (a) There shall be no restriction by the State Party receiving the inspection on the inspection team bringing on to the inspection site such instruments and devices which the Technical Secretariat has determined to be necessary to fulfill the inspection requirements.

This includes, inter alia, equipment for discovering and preserving evidence related to the compliance with the Convention, equipment for recording 1/ and documenting the inspection, as well as for communication with the Technical Secretariat 2/ and for determining that the inspection team has been brought to the site for which the inspection has been requested. The Technical Secretariat shall to the extent possible, prepare and, as appropriate, update a list of standard equipment which may be needed for the purposes described above and regulations governing such equipment which shall be in accordance with these guidelines. 3/ 4/

(b) The equipment shall be in the property of the Technical Secretariat and be designated and approved by it. The Technical 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.

(c) The State Party receiving the inspection shall have the right, without prejudice to the time frames set forth in Article IX, to inspect the equipment at the point of entry, i.e. to check the identity of the equipment. To facilitate such identification, the Technical Secretariat shall attach documents and devices to authenticate its designation and approval of the equipment. The State Party receiving the inspection may exclude equipment

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1/ The possible use of photographic or imaging equipment requires further consideration.

2/ The issue of communication requires further consideration.

3/ Further consideration needs to be given to when and how such equipment will be agreed upon and to what extent they will need to be specified in the Convention.

4/ The relationship between equipment for routine inspections and challenge inspections and provisions for their respective uses will need to be considered.

without the above-mentioned authentification documents and devices. Such equipment shall be kept at the point of entry until the inspection team leaves the respective country. 1/

(d) In cases where the inspection team finds it necessary to use equipment available on site not belonging to the Technical Secretariat and requests the State Party to enable the team to use such equipment, the State Party receiving the inspection shall comply with the request to the extent it can. 2/

7. Upon receipt of the notification of the request for inspection and pending the arrival of the inspection team at the inspection site, the State Party receiving the inspection shall ensure that no action is taken at the site to clean up, conceal or remove material of relevance, alter facility records or otherwise jeopardize the proper conduct of the inspection, while keeping possible disruption to the normal operation of the facility to a minimum. 3/

8. (a) The Technical Secretariat may, as far as feasible, dispatch an advance team to monitor how the obligations under paragraph 7 above are fulfilled and to prepare for the securing of the site, prior to the arrival of the remainder of the inspection team. The State Party receiving the inspection shall arrange for the earliest possible arrival of the advance team and shall assist it in its activities at the site. 3/

1/ A view was expressed that consideration should be given to the possibility for the State Party receiving the inspection to check, in exceptional circumstances, any pice of equipment to ascertain that its characteristics correspond to the attached documentation.

2/ A view was expressed that the possibility of agreed procedures should be considered in this regard.

3/ Two views have been expressed on specification of the site to be inspected:

(a) Specificiation of the site should be made at the time of notification of the inspection to the State Party receiving the inspection.

(b) For the purposes of minimizing the chances of the removal of relevant material and securing the site effectively, the site should be specified to the State Party receiving the inspection only upon arrival of the inspection team at the point of entry.

(b) In securing the site, upon arrival and up to the completion of the inspection, the inspection team shall be permitted to patrol the perimeter of the site, station personnel at the exits and inspect any means of transport of the inspected Party leaving or entering the site, in order to ensure that there is no removal or destruction of relevant material.

9. Upon arrival at the 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 nature of the facility, the activities carried out there, safety measures and administrative arrangements necessary for the inspection. In the course of the briefing, the State Party receiving the inspection may indicate to the inspection team the equipment, documentation or areas that it considers sensitive and not related to the purpose of the inspection. The time spent for the briefing shall be limited to the minimum necessary, [in any event not exceeding [3] hours], and shall not be counted within the duration of the inspection.

10. (a) 1/ The inspection team shall have the right to apply verification methods and procedures necessary for detecting and preserving evidence, appropriate to the specific types and cases of inspection. It shall have the right, inter alia, to:

(i) have access to the areas of the site it deems relevant to the conduct of its mission, 2/

(ii) interview facility personnel,

(iii) have samples taken at its request and in its presence by representatives of the State Party receiving the inspection or take samples itself, if so agreed in advance with those representatives,

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1/ It has been suggested that the procedures for inspections of alleged use of chemical weapons should be considered separately and comprehensively on the basis of the proposed Annex to Article IX (documents CD/766 and CD/CW/WP.173). Experience gained through investigations by the Secretary-General of the United Nations of the possible use of chemical weapons may also be taken into account.

2/ A view was expressed that this point can be usefully considered only after solution of the pending issues in paragraph 12, page 142.

(iv) inspect documentation and records it deems relevant to the conduct of its mission, 1/ and

(v) have photographs taken at its request by representatives of the State Party receiving the inspection.

(b) 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 State Party receiving the inspection, but shall neither seek nor document information which is clearly not related thereto, unless the State Party receiving the inspection expressly requests it to do so. Any material collected and subsequently found not to be relevant shall not be retained. 2/

(c) The inspection team shall be guided by the principle of conducting the inspection in the least instrusive manner possible, consistent with the effective and timely accomplishment of its mission. 3/ It shall, to the extent it deems them appropriate, take into consideration and adopt 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.

(d) The State Party receiving the inspection shall co-operate with the inspection team in clarifying anomalies arising in the course of the inspection.

11. Post-inspection procedures

(To be developed)

1/ A view was expressed that this point can be usefully considered only after solution of the pending issues in paragraph 12, page ... .

2/ It has been pointed out that the operational meaning of this paragraph would be largely contingent on the specificity of the request, which needs to be considered in the context of paragraph 4, page ... .

3/ Possible standardization of procedures to facilitate the implementation, inter alia, of this principle may be considered in the context of a manual for inspectors to be elaborated by the Technical Secretariat.

APPENDIX II

PRINCIPLES AND ORDER OF DESTRUCTION OF CHEMICAL WEAPONS 1/

1. The elaboration of the Order of Destruction shall build on the undiminished security for all States during the entire destruction stage, confidence-building in the early part of the destruction stage, gradual acquisition of experience in the course of destroying chemical weapons stocks and applicability irrespective of the actual composition or size of the stockpiles and the methods chosen for the destruction of the chemical weapons.

2. Each State Party possessing chemical weapons shall begin destruction not later than one year after it becomes a Party to the Convention, and all stockpiles must have been destroyed by the end of the tenth year after the entry into force of the Convention. 2/

3. The entire destruction period is divided into annual periods.

4. 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;

Category 2: Chemical weapons on the basis of all other chemicals;

Category 3: Unfilled munitions and devices, and equipment specifically designed for use directly in connection with employment of chemical weapons.

5. The Order of Destruction shall be based on the principle of levelling out the stockpiles of chemical weapons of State Parties, while observing the principle of undiminished security. (The level of such stockpiles shall be agreed upon).

6. Each State Party possessing chemical weapons

- shall start the destruction of Category 1 chemical weapons not later than one year after it becomes a Party to the Convention, and shall complete it not later than 10 years after the entry into force of the Convention; the comparison factor for such weapons shall be agent tons, i.e. the aggregate weight of the chemicals within such Category,

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1/ Some delegations drew attention to another proposal which suggests a specific phased approach, including a special phase for advance destruction by the largest chemical weapons owners until midway of the destruction period. This proposal is contained in CD/822 of 29 March 1988.

2/ The view was expressed that possible additional provisions applicable to States possessing chemical weapons but which ratify the Convention at a later stage would need to be discussed. The view was also expressed that the Convention should include from the beginning all States possessing chemical weapons. Another view was expressed that the final version of this paragraph depends on what is agreed in Article IV.

- shall start the destruction of Category 2 chemical weapons not later than one year after it becomes a Party to the Convention and shall complete it not later than five years after the entry into force of the Convention; the comparison factor for such weapons shall be agent tons, i.e. the aggregate weight of the chemicals within such Category,

- shall start the destruction of Category 3 chemical weapons not later than one year after it becomes a Party to the Convention, and shall complete it not later than five years after the entry into force of the Convention; the comparison factor(s) for unfilled munitions and devices shall be expressed in fill volume (m3) and for equipment in number of items.

7. Within each Category a State Party shall carry out the destruction in such a way that not more than what is specified in the table below remains at the end of each annual period. A State Party is not precluded from destroying its stocks at a faster pace.

TABLE

Year	Category 1	Category 2	Category 3
2			
3			
4			
5		(TO BE DEVELOPED)	
6			
7			
8			
9			
10			

8. Within each category a State Party shall determine its detailed plans for each annual period in such a way that not more than what is specified in the Convention will remain by the end of each such period.

These plans shall be submitted to and approved by the Executive Council, in accordance with the relevant provisions in Section V of the Annex to Article IV.

9. Each State Party shall report annually to the Organization on the implementation of the destruction in each annual period.

GUIDELINES FOR SCHEDULE [1] 1/

The following guidelines, singly or in combination, should be taken into account in considering whether a chemical should be included in Schedule [1]:

1. Super-toxic lethal chemicals which have been stockpiled as chemical weapons.

2. Super-toxic lethal chemicals which pose a particular risk of potential use as chemical weapons.

3. Super-toxic lethal chemicals which have little or no use except as chemical weapons.

4. Super-toxic lethal chemicals which possess physical and chemical properties enabling them to be used as chemical weapons. 2/

5. Super-toxic lethal chemicals with chemical structure related/similar to those super-toxic lethal chemicals already listed in Schedule 1. 3/

6. Chemicals whose principal effect is to cause temporary incapacitation and which possess physical and chemical properties enabling them to be used as chemical weapons.

7. Any toxic chemical with a chemical structure related/similar to those chemicals already listed in Schedule 1. 3/

8. Other chemicals which have bbeen stockpiled as chemical weapons.

9. Other chemicals which have little or no use except as chemical weapons.

10. Key precursors which participate in a one-stage process of producing toxic chemicals in munitions and devices. 4/

11. Key precursors which pose a high risk to the objectives of the Convention by virtue of their high potential for use to produce chemical weapons.

1/ The basis and modalities for the application and revision of the guidelines are to be developed.

2/ A view was expressed that compounds listed in Schedule[1] should possess the properties of chemical warfare agents.

3/ The view was expressed that this by itself would not be sufficient to include a chemical in Schedule [1].

4/ One delegation believes that this provision is not necessary and that it is already covered under point 12.

12. Key precursors which may possess the following characteristics:

(i) it may react with other chemicals to give, within a short time, a high yield of a toxic chemical defined as a chemical weapon;

(ii) the reaction may be carried out in such a manner that the toxic product is readily available for military use; and

(iii) key precursors which have little or no use except for chemical weapons purposes.

Production of Schedule [1] chemicals outside the single small-scale production facility

Facilities which synthesize, produce, acquire or use chemicals in Schedule [1] for research, pharmaceutical or other medical purposes shall be approved by the State Party. 1/

(a) Facilities which produce Schedule [1] chemicals in quantities exceeding 100 g per year

Production of a specific Schedule [1] chemical in quantities of more than 100 g per year may be carried out under systematic international verification for [pharmaceutical] [research, pharmaceutical or other medical] purposes outside a single small-scale production facility in quantities not exceeding [10 kg] [the fixed amount depending on properties and specific purpose of the consumption of the chemical] per year. 2/

I. Declarations

A. Initial declarations

Each State Party shall provide the Technical Secretariat with the name, location and a detailed technical description of each facility or its relevant part(s), as appropriate [, 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 not less than ... before operations are to begin.

B. Advance notifications

Each State Party shall give advance notification to the Technical Secretariat of planned changes related to the initial declaration. The notification shall be submitted not later than ... before the changes are to take place.

C. Annual declarations

(a) 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 ... months after the end of that year and shall include:

1. Identification of the facility
2. For each chemical in Schedule [1] the following information:
   (i) The chemical name, structural formula and Chemical Abstracts Service Registry Number (if assigned);

1/ A view was expressed that synthesis for protective purposes in such facilities should also be allowed.

2/ A view was expressed that ultratoxic substances (to be determined) shall not be allowed to be produced in excess of 10 g per year.

(ii) the [methods employed and] quantity produced;

(iii) the name and quantity of precursor chemicals listed in Schedules [1], [2] 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.

3. Information on any changes at the facility during the year compared to previously submitted detailed technical description of the facility including inventories of equipment and detailed diagrams. 1/

(b) 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 ... before the beginning of that year and shall include:

1. Identification of the facility

2. For each chemical in 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.

3. Information on any anticipated changes at the facility during the year compared to previously submitted detailed technical descriptions of the facility. 1/

II. Verification

1. The aim of verification activities at the facility shall be to verify that:

(i) the facility is not used to produce any chemical listed in Schedule [1], except for the declared chemical;

1/ Feasibility and practicability of these provisions need to be further considered.

(ii) the quantities of the chemical listed in Schedule [1] produced, processed or consumed are correctly declared and consistent with needs for the declared purpose;

(iii) the chemical listed in 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 to be used shall include: (to be developed).

4. Each facility shall receive an initial visit from international inspectors promptly after the facility is declared. The purpose of the initial visit shall be to verify information provided concerning the facility, [including verification that the capacity will not permit the production, on an annual basis, of quantities (significantly) above [10 kg] [the fixed amount] of the chemical listed in Schedule [1]] and to obtain any additional information needed for planning future verification activities at the facility, including inspection visits and use of on-site instruments.

5. Each State Party shall, for each facility, execute an agreement, based on a model for an agreement, with the Organization, before the facility begins operation or is used, covering detailed inspection procedures for the facility. Each agreement shall include: (to be developed).

(b) Facilities which synthesize Schedule[1] chemicals in quantities less than 100 g per year (to be developed) 1/ 2/

1/ Several delegations expressed the view that such synthesis may be conducted only for research and medical purposes. Another view was that synthesis for protective purposes should also be allowed. A proposal was made that the number of such facilities in any State Party should not exceed a certain limit. Some other delegations considered that facilities in question should be subject to (an) annual declaration(s). The content of such declarations, in their view, needed further consideration. According to another view there was no need for any declaration of such facilities.

2/ A view was expressed that ultratoxic substances (to be determined) shall not be allowed to be produced in excess of 10 g. per year.

POSSIBLE FACTORS IDENTIFIED TO DETERMINE THE NUMBER, INTENSITY, DURATION, TIMING AND MODE OF INSPECTIONS OF FACILITIES HANDLING SCHEDULE [2] CHEMICALS 1/

1. Factors related to the listed chemical

   (a) Toxicity of the end-product.

2. Factors related to the facility

   (a) Multipurpose or dedicated facility.

   (b) Capability and convertibility for initiating production of highly toxic chemicals.

   (c) Production capacity.

   (d) On-site storage of listed key precursors in quantities exceeding ... tonnes.

   (e) Location of the facility and infrastructure for transportation.

3. Factors related to the activities carried out at the facility

   (a) Production e.g. continuous, batch, types of equipment.

   (b) Processing with conversion into another chemical.

   (c) Processing without chemical conversion.

   (d) Other types of activities, e.g., consumption, import, export, transfer.

   (e) Volume produced, processed, consumed, transferred.

   (f) Relationship between maximum and utilized capacity for a scheduled chemical.

      - multipurpose facility

      - dedicated facility

4. Other factors

   (a) International monitoring by on-site instruments.

   (b) Remote monitoring.

1/ The order in which these factors are listed does not indicate any priority.

REPORT ON HOW TO DEFINE "PRODUCTION CAPACITY"

During the 1987 session, consultations were held with Lt. Col. Bretfeld (German Democratic Republic), Dr. Cooper (United Kingdom), Prof. Kuzmin (USSR), Dr. Mikulak (United States), Dr. Ooms (Netherlands) and Prof. Pfirschke (Federal Republic of Germany), as well as with Col. Koutepov (USSR) and Col. Lovelace (United States). This report summarized the results of the consultations, as seen by the rapporteur, Dr. Santesson (Sweden).

Although it was generally felt that it would be desirable to have one definition of "production capacity" applicable all through the Convention, it was also concluded that this might not be possible.

A definition could consist of a verbal part and a mathematical formula to be used for the calculation of the numerical value of the production capacity. Such a single definition, as exemplified below, could be utilized in the Annex to Article V, paragraphs I.A.5 (a) and I.B.7 (cf. in this context CD/CW/WP.148), in the Annex to Article VI [2], paragraph 2 in the Annex to Article VI [3], paragraph 1 (iv), and in the case of "Possible factors identified to determine ... Schedule [2] chemicals", contained in CD/782, Appendix II, p. 12.

On the basis of CD/CW/WP.171 and proposals presented during the consultations, the following suggestion was worked out.

Verbal part:

Alt. 1 The production capacity is the annual quantitative potential for manufacturing a specific substance on the basis of the technological process used at a facility where the substance in question is actually produced.

Alt. 2 The production capacity is the annual quantitative potential for manufacturing a specific substance on the basis of the technological process actually used or planned to be used at a facility.

Mathematical formulae:

Production capacity per year =

$$= \frac{\text{quantity produced}}{\text{hours of production}} \times \text{constant} \times \text{no. of units}$$

or in the case of dedicated units not yet in operation

$$= \frac{\text{nameplate or design capacity}}{\text{hours of planned operation}} \times \text{constant} \times \text{no. of units}$$

The constant is the number of hours of availability per year. In both formulae, the constant will have different values for continuous and batch operations. Furthermore, different values may have to be assigned for "dedicated batch processes" and "multipurpose batch processes". The values of the constant remains to be determined.

It was noted that the formulae relate to the production step in which the product is actually formed. They might not necessarily be applicable e.g. to subsequent purification steps in the process.

It was also noted that in the case of multipurpose facilities producing more than one declared chemical, the production capacity of the facility for each of the chemicals should be calculated independently of the other chemicals being produced.

In the case of the Annex to Article VI [...], it appears that for limited production, the above mathematical formulae might possibly give rise to an overestimate of the actual production capacity. It was suggested that the formulae could be used if the annual production was more than five tonnes.

In the case of the Annex to Article VI [1] it was felt that the above type of definition would be unsuitable and that other ways of delimiting the "production capacity" of the single small-scale production facility should be explored.

Further refinement of the definition of production capacity is required. Also, methods for verification of the declared production capacity will have to be discussed. In this context opinions were expressed on the use of production log books and to which extent inspectors would need access to technical information on the production process.

As a continuation of the consultations reported in CD/795, further consultations were held with Dr. Boter (Netherlands), Lt. Col. Bretfeld (German Democratic Republic), Dr. Cooper (United Kingdom) Prof. Kuzmin (Union of Soviet Socialist Republics), Prof. Pfirschke (Federal Republic of Germany) and Dr. Schröder (Federal Republic of Germany). This report summarizes the results of the continued consultations, as seen by the rapporteur, Dr. Santesson (Sweden).

In the view of the technical experts, "production capacity" could be defined thus:

> The production capacity is the annual quantitative potential for manufacturing a specific substance on the basis of the technological process actually used or, in case of processes not yet operational, planned to be used at the facility, as specified in the subsidiary agreements.

For the purpose of the declaration, an approximate production capacity shall be calculated using the formula:

Production capacity (tons/year) =

$$= \frac{\text{des. cap.}}{\text{pl. op. hours}} \times \text{op. factor} \times \text{no. of units}$$

where:

des. cap. = nameplate or design capacity of one unit (tons/year)
pl. op. hours = hours of planned operation to achieve the design capacity
op. factor = operational factor (hours)

The operational factor should take into account the various facility-specific and process-specific factors which would affect the actual practical production capacity, and could e.g. be determined during the initial visit. A need might exist for a provisional value of the operational factor to be applied before the initial visit has taken place.

REPORT ON INSTRUMENTAL MONITORING OF NON-PRODUCTION IN FACILITIES DECLARED UNDER THE ANNEX TO ARTICLE VI [2]

During the 1988 session, consultations were held on instrumental monitoring of non-production in facilities declared under the Annex to Article VI [2]. This report summarizes the results of the consultations, as seen by the rapporteur, Dr. Rautio (Finland).

It was suggested that it is preferable to have only a few general paragraphs in the Convention regarding instrumental monitoring. Detailed provisions for a particular facility will be included in the facility attachment tailored for each facility according to the guidelines presented in the Model Agreement.

It was also suggested that depending on a number of factors laid out in CD/831 and possibly the preference of the facility, the facility may be:

(i) monitored with on-site instruments and visits by inspectors; or

(ii) monitored only by visits of inspectors, but at a higher frequency than if there were also monitoring by on-site instruments.

Inspectors and instrumental monitoring should be considered complementary. Instruments cannot replace inspectors but they could reduce the need for inspection. In cases where instrumental monitoring is not feasible or desirable, the number of inspections might need to be higher than if instruments were used. Instrumental monitoring would be needed in cases where continuous monitoring is required.

Specific verification objectives

(i) Facilities declared under Annex to Article VI [2] are not used to produce any chemical listed in Schedule [1].

(ii) The quantities of chemicals listed in Schedule [2] produced, processed or consumed are consistent with needs for purposes not prohibited by the Chemical Weapons Convention.

(iii) The chemicals listed in Schedule [2] are not diverted or used for purposes prohibited by the Chemical Weapons Convention.

(i) Monitoring the non-presence of chemicals in Schedule [1]

The objective would necessitate either continuously-operating chemical sensors or sampling and subsequent analysis of the samples, preferably on-site. Off-line analysis of the samples during an on-site inspection could be adequate. If all production at facilities producing chemicals in Schedule [2] were declared, then detection of any undeclared chemical would indicate an anomaly.

Infra-red spectrometers are already available for in-line process monitoring. Their potential and reliability for verification purposes will have to be tested carefully. Whether it is possible to establish sets of common spectrometric properties for various groups of chemicals in Schedule [1] remains to be determined, for example.

For the time being, on-line instruments such as process chromatographs and mass spectrometers requiring sample transfer lines from the process stream to the instrument are too prone to malfunctions without frequent servicing.

A prototype of a sampling device has been demonstrated for sampling at programmed intervals of microgram quantities that can be analysed later by a mobile mass spectrometer during on-site inspections. Further development of the sampling device is necessary.

Monitoring of a particular facility for the non-presence of chemicals listed in Schedule [1] could be restricted to those corresponding to chemicals listed in Schedule [2] being produced by the facility.

(ii) Monitoring production quantities

The least intrusive way of verifying the quantities of declared chemicals that are produced would be to measure production volumes and to make a qualitative test of the chemical produced. Indirect methods for production control by recording temperature/pressure and time/temperature profiles were considered more intrusive.

Sometimes it may be sufficient to monitor "simple" physical parameters not directly related to the chemical structure of the compounds (e.g. energy consumption). Instruments required for measuring physical parameters are available. The most advantageous way of measuring the volume of production should be considered individually for each facility.

(iii) Monitoring non-diversion

Diversion of chemicals in Schedule [2] by further processing on-site to chemicals in Schedule [1] could be detected with composition-indicating instruments by monitoring what goes in and out of product storage tanks.

Confidentiality problems connected with instrumental monitoring

It was pointed out that successful, non-intrusive instrumental monitoring might in some cases necessitate modifications of the facility. On the other hand, it was noted that "sensitive" parameters such as temperature and pressure might not need to be monitored. On-site analyses in the presence of facility personnel of the samples collected by the automatic sampling devices and destruction of the analytical samples after the analysis would facilitate keeping the confidential information within the facility. The samples could be analysed either for the non-presence of chemicals in Schedule [1] or for the presence of declared chemicals while not going into the details of the production process.

It was also suggested that data generated by instruments could be stored on-site and retrieved by inspectors during on-site visits so that no direct

data produced by the sensors would need to be transmitted to the Technical Secretariat. What would need to be transmitted, however, is information (yes/no answer) that the sensors are working properly. This could be done via telephone lines, which would keep the cost low.

Storage of data on-site would allow easy access for the inspectors to the data and the operators would have higher level of confidence in the protection of data than if the data were transmitted off-site. New techniques such as write-only lasers are under way for reliable data storage.

There should be fewer confidentiality problems in instrumental monitoring of dedicated facilities producing chemicals listed in Schedule [2] because there is less confidential information than in multipurpose facilities and it is easy to verify that the product type is not changed. Probably very few dedicated plants producing chemicals in Schedule [2] exist.

Most of the confidentiality problems are connected with the multipurpose facilities. The production of a variety of chemicals would increase the amount of data needed for verification. Inter alia, these facilities would have to prove the absence of chemicals listed in Schedule [2] when these are not being produced.

Ownership of the instrumentation used for verification

It was suggested that use of instruments already existing at the facility for process control should be maximized, but in a non-intrusive way. The possibility of using facility-owned instrumentation would depend on instruments available, the lay-out of the facility and of the reliability of the instruments installed. Therefore their use would have to be decided individually for each plant.

If facility-owned instruments were to be used, personnel of the facility would be in charge of their service, maintenance and calibration. This would necessitate the right for the inspectors to check the calibration and perhaps to install additional, parallel instruments, owned by the International Organization, (e.g. flow or loadmeters) for redundancy.

Establishment of a group of international technical experts

It was suggested that it would be advantageous to establish an informal international group of technical experts in the framework of the Conference already at this stage of the negotiations to facilitate exchange of information on efforts under way in a number of countries on development of verification techniques, procedures, and devices. The technical experts group might also be useful in co-ordinating national efforts, including national inspection trials to assure that as many open questions as possible could be answered as a result of the trials. Results from the national inspections could also be evaluated by the technical body.

MODELS FOR AGREEMENTS

A. MODEL FOR AN AGREEMENT RELATING TO FACILITIES PRODUCING, PROCESSING, OR CONSUMING CHEMICALS LISTED IN SCHEDULE [2] 1/

1. Identification of the facility

(a) Facility identification code

(b) Name of the facility

(c) Owner(s) of the facility

(d) Name of the company or enterprise operating the facility

(e) Exact location of the facility

- Location of the complex
- Location of the facility within the complex, including the specific building and structure number, if any
- Location of relevant support facilities within the complex: e.g. research and technical services, laboratories, medical centres, waste treatment plants

(f) Determination of the area(s) and place(s)/site(s) to which inspectors shall have access.

2. Information on the facility

This agreement is based on the design information obtained during the initial visit on [date of visit]. Design information should include:

(a) Data on the production process (type of process: e.g. continuous or batch; type of equipment; the technology employed; process engineering particulars)

(b) Data on processing with conversion into another chemical (description of the conversion process, process engineering particulars and end-product)

(c) Data on processing without chemical conversion (process engineering particulars, description of the process and the end-product, concentration in the end-product)

(d) Data on waste treatment (disposal and/or storage, waste treatment technology, recycling)

1/ This paper relates to agreements which have commonly been named "facility attachments". Further work is needed on this issue.

(e) Data on safety and health measures at the facility

(f) Data on clean-up procedures and general overhauls

(g) Data on feedstocks used in the production or processing of declared chemicals (type and capacity of storage)

(h) Maps and plans of the facility, including data on infrastructure for transportation (site maps showing, for example, all buildings and functions, pipework, roads, fences, mains electricity, water and gas points, and diagrams indicating the relevant material flow at the designated facility).

2.1. Storage of information

Designation of information, provided about the facility under paragraph 2, which shall be kept by the Technical Secretariat under lock and key at the facility. (In the event of unresolved ambiguities, the Organization 1/ shall have the right to study such information.)

3. Number and modalities of inspections

After the initial visit, the number and modalities of inspections shall be decided by the Technical Secretariat on the basis of guidelines (compare CD/CW/WP.167, page 63, subparagraph 5.ii. and CD/CW/WP.167, Appendix II, page 3).

4. Verification measures and identification of the specific area(s) and place(s) of a facility to be inspected

(a) Identification of the relationship between feedstocks and the quantity of end-products

(b) Identification of key points for measurement (KMP) and sample-taking (STP)

(c) Identification of methods for continuous monitoring and surveillance, e.g.

- key points for the application of monitoring and surveillance measures
- installed instruments and devices, seals and markers, methods to check the proper functioning of those instruments, servicing of installed instruments
- activities to be undertaken by the State Party concerned with a view to providing the conditions necessary for the installation and proper functioning of the devices

(d) Certification of relevant losses within the production process and their implications for key measurement points (KMP)

1/ The question of which organ(s) of the Organization should be entrusted with this task should be considered further.

5. Inspection activities

5.1. Mode of routine inspection

To be developed on the basis of the initial visit.

5.2. Indication of the scope of the inspection effort in agreed areas under ordinary circumstances

Access to the area to be inspected, including all key points. Activities may comprise:

(a) Examination of relevant records

(b) Identification of relevant plant equipment

(c) Identification and validation of measuring equipment (examination and calibration of measuring equipment; verification of measuring systems using, as appropriate, independent standards)

(d) Taking of analytical samples

(e) Verification of chemical inventory records

- verification of the operator's inventory-taking for completeness and accuracy

- verification of the quantities of feedstocks

(f) Observation of operations relating to movement of chemical substances in the plant

(g) Installation, servicing and review of surveillance and monitoring instruments

(h) .

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5.3. Specific arrangements for the use of special equipment

As the need arises, specific arrangements for the use of special equipment, as requested by inspectors.

6. Provisions governing sample-taking, on-site analyses of samples and on-site analysis equipment

(a) Sample-taking (e.g. standardized procedures)

(b) On-site analyses (e.g. provisions concerning on-site/in-house analyses, analytical methods, equipment, precision and accuracy of analyses)

(c) Duplicates and additional samples

7. Records

7.1. Type of records

The records to be examined shall be determined after the initial visit and shall include the following:

(a) Accounting records (for example, discards, retained wastes, shipments of end-products, receipts/shipments)

(b) Operating records

Operating records used to establish the quantity, quality and composition of the end-product. These may include:

- Information on any accident that resulted in a loss/gain of material
- Information on dissolution, evaporation, etc.

(c) Calibration records

Information on the functioning of analytical/monitoring equipment.

7.2. Location and language of records

To be determined during the initial visit.

7.3. Access to records

To be determined after the initial visit.

7.4. Retention period of records

To be determined on the basis of the initial visit.

8. Services to be provided by the facility

Point of contact for each type of service, e.g.

- operator assistance
- medical and health services.

9. Specific facility health and safety rules and regulations to be observed by inspectors

10. Changes, revision and updating of advance information to be provided on the facility

(To be announced in reference to the paragraph on the design information obtained during the initial visit)

11. Interpretation services

B. MODEL FOR AN AGREEMENT RELATING TO SINGLE SMALL-SCALE PRODUCTION FACILITIES 1/

Proposal by the Co-ordinator of Cluster IV for the 1987 session

1. Information on the single small-scale production facility

(a) Identification

(i) Facility identification code

(ii) Name of the facility

(iii) Exact location of the facility

If the facility is located within a complex, then also

- Location of the complex
- Location of the facility within the complex, including the specific building and structure number, if any
- Location of relevant support facilities within the complex, e.g. research and technical services, laboratories, medical centres, waste treatment plants
- Determination of the area(s) and place(s)/site(s) to which inspectors shall have access

(b) Detailed technical information

(i) Maps and plans of the facility, including site maps showing, with functions indicated, for example, all buildings, pipework, roads, fences, mains electricity, water and gas points, diagrams indicating the relevant material flow at the designated facility and data on infrastructure for transportation

(ii) Data on each production process (type of process, type of equipment, technology employed, production capacity, process engineering particulars)

(iii) Data on the feedstocks used (type of feedstock, storage capacity)

(iv) Data on the storage of the chemicals produced (type and capacity of storage)

(v) Data on waste treatment (disposal and/or storage, waste treatment technology, recycling)

1/ Prepared by Lt. Col. Bretfeld, German Democratic Republic; Dr. Cooper, United Kingdom; Dr. Lau, Sweden; and Dr. Santesson, Sweden.

(c) Specific facility health and safety procedures to be observed by inspectors

(d) Dates

(i) Date when the initial visit took place

(ii) Date(s) when additional information was provided

(e) Storage of information

Identification of which information, provided about the facility under paragraph 1, shall be kept by the Technical Secretariat under lock and key at the facility.

2. Number and modalities of inspections

The number and modalities of inspections shall be decided by the Technical Secretariat on the basis of guidelines.

3. Inspections

On-site inspection activities may include, but shall not necessarily be restricted to, the following:

(i) Observation of any and all activities at the facility

(ii) Examination of any and all equipment at the facility

(iii) Identification of technological changes in the production process

(iv) Comparison of process parameters with those ascertained during the initial visit

(v) Verification of chemical inventory records

(vi) Verification of equipment inventory records

(vii) Review, servicing and maintenance of monitoring equipment

(viii) Identification and validation of measuring equipment (examination and calibration of measuring equipment, verification of measuring systems using, as appropriate, independent standards)

(ix) Application, examination, removal and renewal of seals

(x) Investigation of indicated irregularities

4. Monitoring system

(a) Description of items and their location

(i) Sensors and other instruments

(ii) Data transmission system

(iii) Ancillary equipment

(iv) ...

(b) Installation of the system

(i) Time schedule

(ii) Advance preparations

(iii) Assistance to be provided by the State Party during installation

(c) Activation, initial testing and certification

(d) Operation

(i) Regular operation

(ii) Routine tests

(iii) Service and maintenance

(iv) Measures in case of malfunctions

(v) Responsibilities of the State Party

(e) Replacement, modernization

5. Temporary closure

(a) Notification procedure

(b) Description of the types of seals to be used

(c) Description of how and where seals shall be fixed

(d) Provisions for surveillance and monitoring

6. Instruments and other equipment to be used during inspections

(a) Instruments and other equipment installed or brought in by inspectors

(i) Description

(ii) Testing, calibration and examination by the State Party

(iii) Use

(b) Instruments and other equipment to be provided by the State Party

(i) Description

(ii) Testing, calibration and examination by inspectors

(iii) Use and maintenance

7. Sample-taking, on-site analyses of samples and on-site analysis equipment

(a) Sample-taking from production

(b) Sample-taking from stocks

(c) Other sample-taking

(d) Duplicates and additional samples

(e) On-site analyses (e.g. provisions concerning on-site/in-house analyses, analytical methods, equipment, precision and accuracy of analyses)

8. Records. The records to be examined shall be determined after the initial visit and shall include the following:

(a) Accounting records

(b) Operating records

(c) Calibration records

The following shall be determined on the basis of the initial visit:

(a) Location and language of records

(b) Access to records

(c) Retention period of records

9. Administrative arrangements

(a) Preparations for the arrival and departure of inspectors

(b) Transport of inspectors

(c) Accommodation for inspectors

(d) ...

10. Services to be provided 1/

Such services may include, but shall not necessarily be restricted to, the following:

(a) Medical and health services

(b) Office space for inspectors

(c) Laboratory space for inspectors

1/ The question of charges for the services needs to be discussed.

(d) Technical assistance

(e) Telephone and telex

(f) Power and cooling water supplies for instruments

(g) Interpretation services

For each type of service, the following information shall be included:

(a) The extent to which that service shall be provided

(b) Points of contact at the facility for the service

11. Other matters

12. Revisions of the agreement

C. MODEL FOR AN AGREEMENT RELATING TO CHEMICAL WEAPONS STORAGE FACILITIES 1/

Proposal by the Co-ordinator of Cluster IV for the 1987 session

1. Information on the storage facility

(a) Identification:

(i) Storage facility identification code;

(ii) Name of the storage facility;

(iii) Exact location of the storage facility.

(b) Dates:

(i) Date of the initial verification of the Declaration of the facility;

(ii) Date(s) additional information provided

(c) Layout:

(i) Maps and plans of the facility, including

- boundary map to show entrances, exits, nature of boundary (e.g. fence);

- site maps to include locations of all buildings and other structures, bunkers/storage areas, fences with access points indicated, mains electricity and water points, and infrastructure for transports including loading areas;

(ii) Details of the construction of bunkers/storage areas which might be of relevance for verification measures;

(iii) ...

(d) Detailed inventory of the contents of each bunker/storage area;

(e) Specific facility health and safety procedures to be observed by inspectors.

2. Information relating to the transport of chemical weapons from the facility

(a) Detailed description of loading area(s);

(b) Detailed description of loading procedures;

1/ Prepared by Lt. Col. Bretfeld, German Democratic Republic; Dr. Cooper, United Kingdom; Dr. Lau, Sweden; and Dr. Santesson, Sweden.

(c) Type of transport to be used, including construction details relevant to verification activities, e.g. where to place seals;

(d) ...

3. Number and modalities of systematic inspections, etc.

The number and modalities of systematic inspections will be decided by the Technical Secretariat on the basis of guidelines.

4. Inspections

(a) Systematic on-site inspections

Systematic on-site inspection activities may include, but are not necessarily restricted to, the following:

(i) Application, examination, removal and renewal of seals;

(ii) Review, servicing and maintenance of monitoring equipment;

(iii) Verification of the inventory of randomly selected sealed bunkers/storage areas.

- Percentage of bunkers/storage areas to be verified during each systematic on-site inspection.

(b) On-site inspections of transports from the facility

On-site inspections of transports of chemical weapons from the storage facility may include, but are not necessarily restricted to, the following:

(i) Application, examination, removal and renewal of any seals relevant to the transportation of chemical weapons;

(ii) Verification of the inventory of bunkers/storage areas from which chemical weapons are to be transported;

(iii) Observation of the loading procedure and verification of items loaded;

(iv) Adjustment/realignment of the coverage of the monitoring system.

(c) Inspections to resolve indicated irregularities (ad hoc inspections)

Ad hoc inspection activities may include, but are not necessarily restricted to, the following:

(i) Investigation of indicated irregularities;

(ii) Examination, removal and renewal of seals;

(iii) Verification as required of the inventory of bunkers/storage areas.

(d) Continuous presence of inspectors

The activities of continuously present inspectors may include, but are not necessarily restricted to, the following:

(i) Application, examination, removal and renewal of seals;

(ii) Verification of the inventory of any selected sealed bunkers/storage areas;

(iii) Observation of any and all activities at the storage facility, including any handling of stored chemical weapons for the purpose of transport from the storage facility.

5. Seals and markers

(a) Description of types of seals and markers

(b) How and where seals are to be fixed

6. Monitoring system

(a) Description of items and their locations:

(i) Sensors and other instruments;

(ii) Data transmission system;

(iii) Ancillary equipment;

(iv) ...

(b) Installation:

(i) Time schedule;

(ii) Advance preparations at the storage facility;

(iii) Assistance to be provided by the State Party during installation.

(c) Activation, initial testing and certification

(d) Operation:

(i) Regular operation;

(ii) Routine tests;

(iii) Service and maintenance;

(iv) Measures in case of malfunctions;

(v) Responsibilities of the State Party.

(e) Replacements, modernizations

(f) Dismantling and removal

7. Provisions governing instruments and other equipment to be used during inspections

(a) Instruments and other equipment brought in by inspectors:

(i) Description;

(ii) Testing, calibration and examination by the State Party;

(iii) Routine use.

(b) Instruments and other equipment to be provided by the State Party:

(i) Description;

(ii) Testing, calibration and examination by inspectors;

(iii) Routine use and maintenance.

8. Provisions governing sample-taking, on-site analyses of samples and on-site analysis equipment

(a) Sample-taking from munitions, notably the standardization of methods for each different type of munition present at the facility

(b) Sample-taking from bulk stocks

(c) Other sample-taking

(d) Duplicates and additional samples

(e) On-site analyses (e.g. provisions concerning on-site/in-house analyses, analytical methods, equipment, precision and accuracy of analyses)

9. Administrative arrangements

(a) Preparations for arrival of inspectors

(b) Transport for inspectors

(c) Accommodation for inspectors

(d) ...

10. Services to be provided 1/

Such services should include, but are not necessarily restricted to, the following:

- medical and health services;
- office space for inspectors;
- laboratory space for inspectors;
- technical assistance;
- telephone and telex;
- power and cooling water supplies for instruments;
- interpretation services.

For each type of service, the following information should be included:

- the extent to which that service is to be provided;
- point of contact at the facility for the service.

11. Amendments and revisions of the agreement

(e.g. changes in loading procedures, types of transport, analytical methods)

12. Other matters

1/ The question of charges for the services needs to be discussed.

Guidelines to be used in the elaboration of a régime for the handling and protection of confidential information

1. All data and documents obtained by the Technical Secretariat will be evaluated by the appropriate unit of the Technical Secretariat in order to establish, using appropriate criteria, whether they contain confidential information. Data may also be considered as confidential upon request of a State Party providing this data. 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.

2. The level of sensitivity of confidential data or documents will be established in order to ensure its appropriate handling and protection. For this purpose, a classification system shall be introduced, taking into account relevant work undertaken in the preparation of the Convention.

3. Confidential information provided to the Organization will be stored securely at its premises. Some data or documents (to be specified) may also be stored with the National Authority of a State Party. Highly sensitive information, required only for the inspection of a specific facility, shall be kept under lock and key at this facility in conformity with the agreement to be concluded on the basis of a relevant model.

4. Information classified as confidential may be released by the Organization only through agreed procedures which ensure that release of information occurs only in strict conformity with the needs of the Convention.

5. Access to confidential information will be regulated, in accordance with its classification, on a "need-to-know" basis and specific procedures will be developed for the handling of highly sensitive information.

6. Employment of inspectors and other staff members will be organized in a way to ensure, that:

- only citizens of States Parties shall serve as international inspectors or as other members of the professional and clerical staff;
- personnel enter into individual secrecy agreements with the Technical Secretariat covering their period of employment and an agreed time after it is terminated;
- individual liability for any breach of secrecy agreements by them shall be established.

7. In order to avoid improper disclosures, inspectors and staff members should be appropriately advised and reminded about security considerations and of the possible penalties that they could incur, including the likelihood of the Organization's waiving their immunity from private suit.

8. Appropriate inquiry and appeal procedures shall be established for cases of breach of confidentiality by the personnel of the Technical Secretariat.

Classification system of confidential information

During the verification activities under the Chemical Weapons Convention the proper balance should be observed between the degree of intrusiveness and the need to protect confidential information. Only when necessary data reporting and verification should rely on confidential information. Its handling shall not be in conflict with the existing international legal norms, namely with regard to the protection of intellectual property. In drawing the rules for handling and protection of confidential information the Director General of the Technical Secretariat shall use the following classification, establishing the level of confidentiality of information:

(a) Information, which could be released for public use through the official reports of the Organization to the United Nations or other institutions or upon request to States Non-Parties to the CWC, various organizations or individuals. The Executive Council shall determine the general parameters covering the release of information for public use, within which the Director General of the Technical Secretariat shall consider and decide upon individual requests. Requests going beyond these parameters shall be referred to the Executive Council for decision. However, information from other classifications related to specified States Parties shall not be made public without the consent of the State Party concerned. The Director General may disseminate any other information in accordance with a request by a State Party to which the information refers. This category shall cover, i.a., general information on the course of the implementation of the Convention.

(b) Information with distribution limited to States Parties to the Convention. The main source of such information will be the Initial and Annual Declarations on the aggregate quantities of chemicals produced and number of facilities operating in individual States Parties. Data of such nature might be included in the reports to various bodies of the Organization. States Parties shall have easy access to such information and shall treat it as confidential (e.g. not to be offered to press). A routine distribution of this information shall be made to the Executive Council members and to the Technical Secretariat. Data, not contained in the regular reports, might be requested by States Parties. The Director General shall respond positively to such requests, unless they contravene the agreed rules for the classification of confidential information.

(c) Information limited to the Technical Secretariat, to be used primarily for the planning, preparation and carrying out of verification activities. This category shall comprise mainly detailed, facility-related information, obtained from the relevant declarations, facility attachments and conclusions from on-site inspections. The Director General shall regulate the access to such information by the Technical Secretariat personnel on the "need-to-know" basis. Respect by the International Inspectorate and other Technical Secretariat personnel for confidential nature of information obtained will be ensured through contracts or appropriate recruitment and employment procedures as well as agreed measures applied against the Technical Secretariat staff in case of breach of rules for the protection of confidential information. Most sensitive information might be stored under code numbers rather than names of countries and facilities. Information, achieved through generalization of the facility-related data, could be, in accordance with the agreed procedure, released for use by States Parties.

(d) Most sensitive kind of confidential information, containing data required only for the actual performance of an inspection like, e.g. blueprints, specific data related to technological processes, types of records. Such information shall be limited to justified needs for protection of technological know-how and shall only be available to inspectors on the site. It shall not be taken from the premises.

* * *

The rules for classifying and handling of confidential information should contain sufficiently clear criteria ensuring:

- inclusion of information into appropriate category of confidentiality;
- establishing justified durability of confidential nature of information;
- rights of States Parties providing confidential information;
- procedures allowing, if necessary, to move a kind of information from one confidentiality category to another;
- modifications, when necessary, of procedures for handling individual categories of information.

ON-SITE INSPECTION ON CHALLENGE

This paper represents the state of affairs of work done on the issue of On-Site Inspection on Challenge, as seen by the Chairman of the Ad Hoc Committee for the 1987 session and by the Chairman of Group C for the 1988 session. Nothing contained therein constitutes any agreement and therefore does not bind any delegation. The paper is presented with the aim of facilitating for delegations to analyse the situation and to arrive at common positions in the future work of the Committee.

Under Part I, (paragraphs 1-13) material is found on the initial process for an on-site inspection on challenge, up until the submission of the report by the inspectors, as put together by the Chairman of the Ad Hoc Committee for the 1987 session. Under Part II (paragraphs 14-18), material is found on the process after the submission of the report, as put together by the Chairman of Group C for the 1988 session.

PART I

1. Each State Party has the right at any time to request an on-site inspection of any site under the jurisdiction or control 1/ of a State Party, anywhere, in order to clarify doubts about compliance with the provisions of the Convention. A requesting State is under the obligation to keep the request within the objectives of the Convention.

2. Throughout the inspection the requested State has the right and is under the obligation to demonstrate its compliance with the Convention.

3. The on-site inspection on challenge shall be carried out in accordance with the request.

(The initiation of a challenge inspection)

4. The request shall be submitted to the Head of the Technical Secretariat. 2/ It shall as precisely as possible specify the site to be inspected and the matters on which reassurance is required, including the circumstances and nature of the suspected non-compliance, as well as indicate the relevant provision(s) of the Convention, about which doubts of compliance have arisen.

5. The Head of the Technical Secretariat shall immediately notify the State Party to be inspected, and inform the members of the Executive Council about the request.

1/ The question of "jurisdiction or control" spans over many parts of the Convention. It is under continuous discussion and the exact formulations remain to be agreed upon.

2/ It has been pointed out that there is a need to discuss ways and means to prevent misuse of such requests. One suggested approach is to transmit the request through a Fact-finding Panel.

6. A team of inspectors shall be dispatched as soon as possible and arrive at the site to be inspected not later than ... hours 1/ after the request.

7. The requested State is obliged to admit the team of inspectors and representative(s) of the requesting State into the country and assist them so that they can arrive at the site on time. 2/

8. The inspectors shall at the arrival be permitted to secure the site in a way they deem necessary to ensure that no material of relevance for the inspection is removed from the site.

9. Access to the site for the inspection team shall be provided not later than ... hours after the request.

(The conduct of challenge inspection)

10. The team of inspectors shall conduct the requested on-site inspection with the purpose of establishing relevant facts.

11. The inspectors shall have the access to the site they deem necessary for the conduct of their mission, within the limits of the request. They shall conduct the inspection in the least intrusive manner possible to accomplish their task. The requested State shall facilitate the task of the inspectors.

The inspectors shall consult with the requested State which in keeping with its right and obligation may propose ways and means for the actual conduct of the inspection. The requested State may also make proposals for the protection of sensitive equipment or information, not related to chemical weapons. The inspectors shall consider the proposals made to the extent they deem them adequate for the conduct of their mission.

The inspectors shall conclude the inspection as soon as possible and not later than ... after the commencement of the inspection, and return to the Headquarter.

12. In the exceptional case the requested State proposes arrangements to demonstrate compliance, alternative to a full and comprehensive access, it shall make every effort through consultations with the requesting State to reach agreement on the modalities for establishing the facts and thereby clarifying the doubts.

If agreement is reached within ... hours after the request, the inspection team shall carry out its task in accordance with the agreement. If no agreement is reached within ... hours after the request [the inspection shall be carried out in accordance with points 10 and 11 above.] [the inspection team shall report on the matter to the Executive Council which, within ... hours, shall ...].

1/ A time span of 24-48 hours from the request to the arrival has been discussed.

2/ Situations could be envisaged, i.e. when the site to be inspected is not on the territory of the requested State Party. Such cases could however be considered in the context of questions related to jurisdiction.

(The report)

13. The team of inspectors shall submit a report to the Head of the Technical Secretariat as soon as possible and not later than ... days after the conclusion of the inspection.

The report shall be strictly factual and only contain relevant information, and may within these parameters, include information as to the manner in which the State Party inspected co-operated with the inspection team. Different views held by inspectors shall be attached to the report.

The Head of the Technical Secretariat shall promptly transmit the report to the requesting State, the requested State and to the Executive Council.

PART II

(The process after the submission of the report)

14. The requesting State shall promptly notify the members of the Executive Council, through the Director-General of the Technical Secretariat, of its assessment on the result of the inspection [and, to the extent it deems appropriate, of the course of action it intends to take under the Convention].

15. The Director-General of the Technical Secretariat shall provide to States Parties the inspection report, 1/ the assessment of the requesting State, and the views of the requested State and of other States Parties which may be conveyed to him for that purpose.

16. When requested by any State Party, the Executive Council shall meet to assess the situation, taking into account the report, the assessment by the requesting State and the views of the requested State and of other States Parties. 2/

17. 3/ The Executive Council shall, as it deems necessary, consider [and recommend] [and decide on] [whether there has been a violation of the Convention and] appropriate further actions to clarify or remedy the situation. [Such further actions may, inter alia, be designed to induce the requested State to bring itself into conformity with the Convention or to address the misuse or abuse of requests by the requesting State].

1/ The question of the stages of the inspection report and the decision by which some of the contents of the final report is provided to all parties needs further consideration.

2/ A view was expressed that this paragraph is superfluous because the procedures for meetings of the Executive Council are to be set forth under the relevant provisions in Article VIII and possibly in Article IX.

3/ The question of the procedure and decision-making of the Executive Council in connection with this paragraph needs to be considered.

18. The Executive Council shall [provide any report it may make] [report] on its consideration of the matter to States Parties. [If a breach of the Convention remains unrectified, the Executive Council shall refer the matter to the Conference of the States Parties, which should decide on sanctions including the withdrawal of rights and privileges]. 1/ 2/ [The [Executive Council or the] [Conference of the States Parties] shall, where appropriate, bring the matter to the attention of the Security Council of the United Nations].

1/ The question of possible sanctions including the withdrawal of rights and privileges needs further careful examination in the context not only of challenge inspections but also of routine inspections and other elements of the Convention.

2/ A view was expressed that the possibility of the withdrawal of rights and privileges of the requesting State Party which has abused or misused the request needs also to be considered.

Article X: Assistance and protection against chemical weapons 1/

GENERAL

1. For the purposes of this Article protection against chemical weapons, which contributes to the undiminished security of States Parties, covers inter alia, the following areas: protective equipment and advice on protective measures, medical antidotes and treatments, detection equipment and alarm systems, decontamination equipment and decontaminants.

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

3. [All States Parties to the Convention undertake to facilitate, and shall have the right to participate in, the fullest possible] [Nothing in this Convention shall be interpreted as impeding the right of States Parties to] exchange [of] equipment, material and scientific and technological information concerning means of protection against chemical weapons.

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

Alternative 1

1. Each State Party has the right to request assistance [for protection against chemical weapons] through the Executive Council:

(a) in case it considers that chemical weapons have been used against it;

(b) in case it has serious reasons to believe that there is a threat of use of chemical weapons against it;

[(c) in case it feels that its security has been, or is likely to be, threatened as a result of any other violation of the Convention by another State Party or of the development, production, acquisition, stockpiling possession of chemical weapons by a State not Party to the Convention or of the transfer of chemical weapons to any such State.]

1/ It was proposed that paragraphs on "Assistance" be added to the four existing paragraphs of the general part subsequently.

2. Such a request shall be substantiated by relevant information supporting its validity.

3. The Technical Secretariat shall promptly inform all States Parties about the request.

4. The Executive Council shall: 1/

(a) meet [immediately] to evaluate the request in the light of the information provided; 2/

(b) if so deemed necessary, instruct the Technical Secretariat, within ... hours, to initiate an investigation of the facts related to the alleged use or threat of use and, when applicable, to establish an inventory of the specific assistance needed; [in appropriate cases, the Executive Council may direct that the investigation should include on-site inspection;] if an on-site inspection takes place, its conduct shall be governed by the principles and rules established in Article IX of the Convention; 3/

(c) on the basis of the results of the investigation carried out by the Technical Secretariat, decide on whether to request the provision of assistance; the decision to request assistance shall require a two-thirds majority;

(d) inform all States Parties of its decision.

5. Each State Party to the Convention undertakes:

(a) to co-operate and facilitate, as appropriate, the investigation including on-site inspection initiated by the Executive Council under paragraph 4 (b);

[(b) that, whenever so requested by the Executive Council, it shall, to the extent possible, provide assistance and support the provision of assistance to the requesting State.]

1/ A view was expressed that assistance should be provided automatically in case of actual use of chemical weapons. Another view was expressed that assistance should be provided on a voluntary basis.

2/ Some reservations have been expressed about the ability of the Executive Council to assess "threat of use".

3/ A view was expressed that all aspects related to investigations and fact-finding procedures should be dealt with in the context of Article IX.

6. The Technical Secretariat, in close co-operation, as appropriate, with the relevant international agencies in the humanitarian field, will co-ordinate the actions undertaken in providing the necessary assistance. 1/ 2/

[7. Within six months after the entry into force of the Convention, States Parties shall conclude with the Organization an agreement on the provision of assistance under this Article. Such agreement shall be based on a Model Agreement and shall specify the equipment, training facilities and other technical advice or services to be provided by the State Party to the States concerned.]

[8. The organization 3/ shall prepare, and be responsible for the implementation of, programmes for the promotion of international co-operation for the development and strengthening of a protective capacity against chemical weapons by interested States, including programmes for the dissemination of scientific and technological information on protective measures against chemical weapons and for training in such measures.]

9. Nothing in this Convention shall be interpreted as affecting the right of all the Parties to the Convention to conduct research with, develop, produce, acquire and use means of protection against chemical weapons, for purposes not prohibited by the Convention.

[10. All the parties to the Convention undertake to facilitate, and have the right to participate in, the fullest possible exchange of equipment, material and scientific and technological information for protection against chemical weapons.] 4/

1/ A view was expressed that States Parties should conclude subsidiary arrangements with the Technical Secretariat whereby they indicate ways and means by which they can provide assistance. Another view was expressed that the conclusion of such arrangements was not needed.

2/ The question of how to meet the costs needs to be discussed.

3/ The question of which organ(s) of the Organization should be entrusted with this task should be considered further.

4/ The view was expressed that co-operation in this field could be conducted through voluntary bilateral and multilateral agreements.

Alternative 2:

ASSISTANCE

A. Request

1. Each State Party has the right to request assistance from [other States Parties] [the Organization] if it considers that: (i) chemical weapons have been used against it; or (ii) it faces actions or activities by another State which are prohibited for States Parties to this Convention.

2. Such a request shall be addressed to the [Director-General of the Technical Secretariat] [Organization] and shall be accompanied by relevant information.

3. The Director-General of the Technical Secretariat shall promptly inform all States Parties [and the United Nations Security Council] about the request.

B. Investigation

4. In all cases where chemical weapons are alleged to have been used on the territory of a State Party or States Parties to this Convention, the Director-General of the Technical Secretariat shall instruct the Technical Secretariat to initiate within. ... hours an investigation in accordance with the General Procedures for Verification of Alleged Use of Chemical Weapons contained in Annex to Article IX. In the case of use outside the territories of States Parties, the Director-General of the Technical Secretariat shall instruct the Technical Secretariat [, in co-operation with the United Nations Secretary-General as appropriate,] to conduct what investigations are possible. [Such action under this Article does not alter or affect the right of States to invoke such United Nations procedures as may be available to investigate violations of the 1925 Geneva Protocol.]

5. In cases where the request for assistance is not based on allegations of chemical weapons use, but on actions and activities of the type mentioned in paragraph 5 (ii) above, the Director-General of the Technical Secretariat shall, if the activities concerned are being undertaken by a State Party, instruct the Technical Secretariat to investigate the matter within ... hours in accordance with the provisions for on-site challenge inspection laid down in Article IX. If the activities are being undertaken by a non-State Party, the Director-General of the Technical Secretariat shall instruct the Technical Secretariat to carry out what investigations it can [in co-operation, as appropriate, with the relevant organs of the United Nations.]

C. Decision-making

6. In all cases the Executive Council shall meet as soon as possible (within ... hours) to consider the results of the investigation(s) carried out by the Technical Secretariat. On the basis of these results, the Executive Council shall decide whether to instruct the Technical Secretariat to co-ordinate multilateral efforts and distribute the requested assistance in accordance with paragraph 14 below. Such a decision shall require a two-thirds majority.

7. The Executive Council shall in all cases inform all States Parties [and the United Nations Security Council] of the results of the investigation and of its decision.

D. Provision of Assistance

8. Within six months after becoming a party to the Convention, a State shall declare to the [Technical Secretariat] [Organization] what forms of assistance it might make available in response to a request for multilateral assistance. The Technical Secretariat shall collate the information contained in these declarations and circulate it to all States Parties.

9. Taking into account their declarations under paragraph 12, States Parties shall make every effort to respond to a request for assistance circulated in accordance with paragraphs 10 and 11 above.

10. The Technical Secretariat shall, in close co-operation, as appropriate, with the relevant international agencies in the humanitarian field, co-ordinate multilateral efforts in collecting and distributing the requested assistance.

[OTHER ACTION

1. Nothing in this Convention shall be interpreted as limiting or detracting from the right of a State Party to refer such issues to the Security Council of the United Nations in accordance with the United Nations Charter.]

Article XI: Economic and technological development 1/

1. The provisions of this Convention shall be implemented in a manner designed, in so far as possible, to avoid hampering the economic or technological development of Parties to the Convention and international co-operation in the field of peaceful chemical activities including the international exchange of scientific and technical information and chemicals and equipment for the production, processing or use of chemicals for peaceful purposes in accordance with the provisions of the Convention.

2. The States Parties to this Convention, subject to its provisions, shall:

(a) have the right, individually or collectively, to conduct research with, to develop, produce, acquire, retain, transfer and use chemicals;

(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 for purposes not prohibited by this Convention;

(c) not impose any restrictions [on a discriminatory basis] which would impede development and promotion of scientific and technological knowledge in the field of chemistry.

This provision shall be without prejudice to the generally recognized principles and applicable rules of international law concerning peaceful chemical activities [including those concerning any proprietary rights and environmental or health protection].

1/ Some delegations expressed the view that this Article required further consideration. In particular, in their view, there exists no common understanding as to the definition of key terms in the wording proposed for this Article, and therefore no clear picture of the extent of the obligations to be undertaken by States Parties.

Articles XII, XIII, XIV, XV and XVI of the Preliminary Structure of a Convention on Chemical Weapons

During the 1988 session, the Chairman of the Ad Hoc Committee initiated and carried out open-ended consultations, as well as private consultations with interested delegations, on the final provisions of the Convention (Articles XII to XVI).

This discussion paper constitutes an attempt by the Chairman to summarize the views expressed during these consultations. The paper is presented with the aim of facilitating further consideration. Nothing contained therein constitutes any agreement and therefore does not in any way bind any delegation.

Together with existing as well as future proposals and documents on these Articles, the discussion paper will be used for further work on these Articles.

Article XII: Relation to other international agreements

Commentary

(a) Views were expressed that Article XII is not needed. In this case the relationship between the CW Convention and other international agreements would be regulated by general rules of international law, as well as by the rules of the Vienna Convention on the Law of Treaties.

(b) Some delegations are in favour of a reference to specific international agreements, i.e. the Geneva Protocol of 1925 and BW Convention.

(c) It has been suggested that a general reference to other international agreements be included.

(d) It might be possible to combine the approaches reflected in paragraphs (b) and (c) above thus having references both to specific and other unnamed international agreements.

Possible wording for Article XII

1. None.

2. Nothing in this Convention shall be interpreted as in any way limiting or detracting from the [obligations] [rights and 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 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.

Each Party to this Convention that is also Party to 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, affirms that the obligation set forth in paragraph 3 of Article I supplements its obligations under the Protocol.

or/and

3. This Convention shall not affect the rights and obligations of States Parties which arise from other agreements compatible with this Convention.

- or alternatively -

None of the provisions of this Convention shall suspend or modify the commitments undertaken by States Parties pursuant to other international instruments related to this Convention.

Article XIII: Amendments

Commentary

(a) There is a common understanding by the delegations that any State Party may, in accordance with the agreed procedure, propose amendments to this Convention.

(b) Views were expressed that certain basic provisions should not be subject to amendments. Article I, Article IV, paragraph 5 (a) and Article V, paragraph 8 (a) were mentioned in this respect.

(c) According to the majority of the views expressed, a differentiated amendment mechanism is required to meet the special needs of various provisions of the Convention. It is understood that this Article might be limited to general amendment procedures which would be applied unless otherwise provided in relevant parts of the Convention. It is to be further discussed which provisions should be subject to strict amendment procedure and which might be amended in a simplified way.

(d) Views were expressed that, regardless of the type of procedure to be followed for the adoption of amendments, they shall enter into force for all States Parties at the same time; another view is based on the premise that ratification or acceptance by a State Party is required for an amendment to enter into force in regard to this State.

Possible wording for article XIII

1. Any State Party may, in accordance with the agreed procedure, propose amendments to this Convention.

2. (a) Amendments may be made to any provision of this Convention.

- or alternatively -

2. (a) No amendments may be made to the following provisions of this Convention: Article I, Article IV, paragraph 5 (a), Article V, paragraph 8 (a) ...

(b) The provisions contained in [...] 1/ may be amendment by unanimous agreement of States Parties.

(c) Provisions not mentioned in paragraph 2 (b) may be amended by majority of [...].

(d) Provisions not mentioned in paragraphs 2 (b) and 2 (c) may be amended by simple majority.

1/ It is understood that such provisions should be enumerated.

3. (a) The text of any proposed amendment shall be communicated to the [Depositary] [Director-General of the Technical Secretariat] not less than ... [days, months] prior to a regular session of the Conference of the States Parties and shall be promptly communicated by him to all States Parties.

(b) Proposed amendments shall be dicussed at the nearest regular session of the Conference of the States Parties and may be adopted at its next regular session. This does not preclude the Conference of the States Parties from taking a decision, by a two-thirds majority of the States Parties present and voting, to convene a special session to discuss and adopt the proposed amendments. 1/

4. Adopted amendments shall be subject to acceptance [ratification] by States Parties according to their constitutional processes and shall enter into force for all States Parties upon the deposit of instruments of acceptance [ratification] with the Depositary by:

(a) all States Parties as regards amendments to the provisions listed in paragraph 2 (b) above,

(b) a [qualified] majority of States Parties as regards amendments to provisions not mentioned in paragraph 2 (b) above,

(c) a simple majority of States Parties, as regards other provisions,

(d) original States Parties

- or as an alternative to paragraphs 3 (b) and 4 above -

Amendments shall enter into force for Parties ratifying or acceding to them on the thirtieth day following the deposit of instruments of ratification of accession by a majority of the Parties to the Convention and thereafter for each remaining Party on the thirtieth day following the deposit of its instrument of ratification or accession.

5. The provisions of this Article do not affect the special amendment procedures provided for in relevant parts of this Convention.

1/ It is to be discussed whether sessions of the Conference of the States Parties or Review Conferences are appropriate forums in which to consider amendments to the Convention.

Article XIV: Duration, Withdrawal

Commentary

There seems to be a common understanding that this Convention should be of unlimited duration.

A wide range of opinions was expressed in regard to possible withdrawal of States Parties from the Convention and the procedures thereof.

(a) Views were expressed that the right of withdrawal should not be provided.

(b) Some delegations supported the idea that the right of withdrawal should not be exercised within a fixed, comparatively long period of time.

(c) Several delegations held the view that the withdrawal should depend on certain extraordinary circumstances. In the opinion of some delegations such circumstances might be differentiated according to their urgency and consequently different periods for withdrawal be granted. 1/ In this context a view was expressed that the Organization should be notified of the intention to withdraw and take appropriate steps within its competence to remedy the situation and prevent such a withdrawal.

(d) The opposite view was based on the premise that the right of withdrawal should be granted and be exercised in a very short period of time with few formalities, if any.

(e) The view was expressed that there should be no reference to the right of withdrawal in the CW Convention.

(f) One delegation proposed that this Article should deal only with the question of duration, which would depend on the destruction of all chemical weapons by States Parties.

Possible wording for Article XIV

1. This Convention should be of unlimited duration.

2. (a) States Parties shall not withdraw from this Convention;

- or alternatively -

(b) States Parties shall not withdraw from this Convention within the period of destruction of chemical weapons and chemical weapons production facilities;

- or alternatively -

1/ No specific suggestions in regard of the said periods have been made.

(c) States Parties shall not withdraw from this Convention within ... (other agreed period of time);

- or alternatively -

(d) Any State Party shall, in exercising its national sovereignty, have the right to withdraw from this Convention if, in the opinion of the withdrawing State there have arisen extraordinary circumstances connected with the content of this Convention which affect its supreme interests;

- or alternatively -

(e) Any State Party may withdraw from this Convention at any time;

- or alternatively -

(f) None.

3. (a) In exercising their right of withdrawal subject to paragraph 2 (b), (c), (d), (e), (f) above, States Parties shall give notice to the Depositary, the Security Council of the United Nations and the Executive Council of the Organization. Such notice shall include a statement of the reasons for the decision to withdraw.

(b) The Executive Council of the Organization shall promptly investigate and assess the reasons for the decision to withdraw and take appropriate measures within its competence to remedy the situation, including, inter alia, convening of a special session of the Conference of the States Parties. 1/

4. The withdrawal shall take effect ... [agreed period(s) of time] after the deposit of the notification by the State Party concerned. 2/

- or, as an alternative to paragraphs 3 and 4 above -

In exercising its right of withdrawal subject to paragraph 2 (d) above, a State Party shall give notice to all other Parties to the Convention, to the Depositary, and to the Security Council of the United Nations three months in advance. Such notice shall include a statement of the extraordinary events it regards as having jeopardized its supreme interests.

1/ It is to be discussed whether special provisions regarding the competence of the Executive Council and Conference of the States Parties in cases of purported withdrawal are needed and if so, what would be their content and place in the Convention.

2/ The question of possibly setting several periods for the purpose of different circumstances relating to withdrawal, instead of a single period, requires further consideration.

5. (a) The withdrawal of a State Party from this Convention shall in no way affect the duty of [States Parties] [this State Party] to continue fulfilling the obligations assumed under any relevant rule of international law, particularly the Geneva Protocol of 17 June 1925. 1/

(b) A State Party shall not, by reason of its withdrawal from this Convention, be discharged from its financial [and] [or such] other obligations (not being incompatible with the supreme interests which induced it to withdraw) which accrued while it was a Party to the Convention.

- or, as an alternative to paragraphs 2-5 above -

Every Party to this Convention 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 Parties to the Convention, to the Depositary, and to the Security Council of the United Nations three months in advance. Such notice shall include a statement of the extraordinary events it regards as having jeopardized its supreme interests.

- or alternatively -

Article XIV: Duration

This Convention shall be of a permanent nature and shall remain in force indefinitely, but obligations deriving from the provisions of this Convention will cease, if after 90 days of the end of the period of destruction as stipulated in Article [...], the Conference of the States Parties is not in a position to declare that all chemical weapons have been destroyed and are subsequently banned from all States Parties.

1/ Views were expressed that this provision would not be necessary.

Article XV: Signature, ratification, accession, entry into force

Commentary

There seems to be an understanding that:

1. (a) The Convention shall be open for signature to all States and shall be ratified by signatories;

(b) Non-signatory States shall be entitled to accede to the Convention;

(c) Provisions on the entry into force shall ensure the widest possible adherence of States to the Convention.

2. The preference was expressed for the number of 60 ratifications for the Convention to enter into force.

Note:

In the course of consultations on this Article the status of Annexes to the Convention, as well as of the provisions on reservations have been raised.

1. It is to be further discussed whether a separate article on the status of Annexes is needed.

Possible wording for the provision on the status of Annexes

"Annexes Nos. ... form an integral part of this Convention".

2. Several delegations held the view that neither reservations nor exceptions to the Convention should be provided, while some expressed views that such right might be included with respect to some provisions which were not clearly indicated.

The view was expressed that in regard to reservations, due attention should be paid to interpretative statements.

It is to be discussed whether to place the provision on reservations within the framework of Article XV or to elaborate a separate article for this purpose.

Possible wording for the provisions on reservations

1. No reservations or exceptions, however phrased or named, [including interpretative statements or declarations], may be made to this Convention [unless expressly permitted by other provisions of the Convention].

2. The provision in paragraph 1 above does not preclude a State when signing, ratifying or acceding to this Convention, from making statements or declarations, however phrased or named, provided that such statements or

declarations do not purport to exclude or to modify the legal effect of the provisions of this Convention in their application to that State.

- or alternatively -

This Convention shall not be subject to reservations.

Possible wording for Article XV:

1. Signature.

This Convention shall be open for signature to all States until [its entry into force] [date] [indefinitely] at (venue).

2. Ratification.

This Convention [and its Annexes, which form an integral part thereof] 1/ shall be subject to ratification by signatories according to their constitutional processes.

3. Accession.

Any State which does not sign the Convention [before its entry into force] [date] may accede to it at any time. 2/

4. Deposit of instruments of ratification or accession.

Instruments of ratification and instruments of accession shall be deposited with the [Depositary] [Secretary-General of the United Nations, hereby designated as the Depositary].

5. Entry into force.

(a) This Convention shall enter into force [... days after the date of] [upon] the deposit of the [60th] [40th] instrument of ratification [or accession];

(b) For States whose instruments of ratification or accession are deposited subsequent to the entry into force of this Convention, it shall enter into force on the [...th day following the] date of the deposit of their instruments of ratification or accession. 3/

1/ See paragraph 1 in the Note above.

2/ One delegation expressed a view that accession would not be necessary.

3/ It is to be discussed further how to ensure that all "chemical weapons possessing" and "chemical weapons capable" States be among those States whose ratification would be required for the Convention to enter into force.

Article XVI: Languages, authentic texts, depositary, registration

Commentary

(a) There is a general agreement that the Secretary-General of the United Nations should be designated as the Depositary.

(b) The view was expressed that all functions of the Depositary should be dealt with in one place.

(c) It is also to be further discussed whether to place relevant provisions within the framework of Article XV, XVI or a separate article might be needed.

(d) Provisions for languages, authentic texts and registration as given below, were not objected.

Possible wording for Article XVI

1. 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 hereby designated as the Depositary, who shall send duly certified copies thereof to the Governments of all signatory and acceding States.

2. The Depositary shall promptly inform all signatory and acceding States of the date of each signature, the date of deposit of each instrument of ratification or accession and the date of entry into force of the Convention and of amendments thereto [any notice of withdrawal and of the date when the latter takes effect], [and of the notification specified in Article XIV, para. 3]. 1/

3. This Convention shall be registered by the Depositary in accordance with Article 102 of the Charter of the United Nations.

Done at ...

- or alternatively -

Article XVI: Depositary, Registration

1. Depositary 1/

(a) The Secretary-General of the United Nations is hereby designated as the Depositary of this Convention and shall:

(1) notify all signatory and acceding States of;

(a) the date of each signature, and the date of deposit of each instrument of ratification or accession;

1/ It is to be discussed if other functions might be entrusted to the Depositary with regard to the special needs of the Convention.

(b) (i) any amendment to this Convention proposed by any State Party to the Convention;

(ii) any amendment adopted;

(iii) the date of entry into force of any amendment;

(2) transmit duly certified copies of this Convention to the Governments of all signatory and acceding States.

2. Registration.

This Convention shall be registered by the Depositary pursuant to Article 102 of the Charter of the United Nations.

Article XVII: Languages, Authentic Texts

The original of the Convention with its Annexes, 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.

IN WITNESS WHEREOF the undersigned, being duly authorized thereto by their respective Governments, have signed this Convention.

Done at ...

The questions of the settlement of disputes not related to compliance issues, as well as the placement of the provision for review conferences, were also raised but have not yet been discussed.

CONFERENCE ON DISARMAMENT

CD/889
16 February 1989

Original: ENGLISH

Decision on the Re-establishment of the Ad Hoc Committee on Chemical Weapons

(Adopted at the 487th plenary meeting on 16 February 1989)

The Conference on Disarmament, keeping in mind that the negotiation of a Convention should proceed with a view to its final elaboration at the earliest possible date, in accordance with United Nations General Assembly resolutions 43/74 A and C, and in discharging its responsibility to conduct as a priority task the negotiations on a multilateral convention on the complete and effective prohibition of the development, production and stockpiling of chemical weapons and on their destruction, and to ensure the preparation of the convention, decides to re-establish, in accordance with its rules of procedure, for the duration of its 1989 session, the Ad Hoc Committee to continue the full and complete process of negotiations, developing and working out the convention, except for its final drafting, taking into account all existing proposals and drafts as well as future initiatives with a view to giving the Conference a possibility to achieve an agreement as soon as possible. This agreement, if possible, or a report on the progress of the negotiations, should be recorded in the report which this Ad Hoc Committee will submit to the Conference at the end of the second part of its 1989 session.

CONFERENCE ON DISARMAMENT

CD/890
CD/CW/WP.223
20 February 1989

Original: ENGLISH

H U N G A R Y

Report on the first National Trial Inspection

Preparations for the first Hungarian trial inspection started in mid-October 1988 with exploratory talks in several chemical and pharmaceutical enterprises. While the idea of how to perform a national trial inspection developed, the inspection team also assembled. For reasons of easier communication a facility in Budapest was finally selected. The actual preparation on site was conducted over a four-week period, and the trial inspection on 7 December 1988.

Place: The single purpose facility is one of the several workshops of a factory, which itself is a part of the CHINOIN Pharmaceutical and Chemical Works Ltd. The facility is in a suburb of the Capital, at a distance of about 30 kms from the central offices of the complex.

Facility: It produces a chemical called Benomyl (a fungicide, reg. no. 17804-35-2). For the purpose of the trial inspection one of its precursors was specially designated as a Schedule /2/ chemical.

Chemical: Carbendazim (methyl-benzimidazol-2-yl-carbamate, reg. no. 10605-21-7) locally called ABEM.

Capacity: Yearly production capacity is in the range of 1 to 5 thousand metric tons. Most of it is used locally to produce Benomyl, some 3 per cent is taken to an other workshop of the same factory, and used in the production of another herbicide.

Hypothesis: In selecting the Benomyl workshop and the chemical Carbendazim for the national trial inspection, we followed the assumption that if instead of butylisocyanat-methylisocyanat is coupled to Carbendazim, the resulting chemical would be "methyl 1-/methylcarbomoyl/benzimidazol-2-ylcarbamate" - a supertoxic-lethal chemical on Schedule /1/.

Objectives of the trial inspection: Under the provisions of the Annex to Article VI (2) to verify that:

- the facility is not used to produce the chemical mentioned in the hypothesis above, or any other chemical listed in Schedule /1/;

- the quantity of the chemical Carbendazim, listed in Schedule /2/, is produced, processed and used in conformity with the provisions of the Chemical Weapons Convention;

- the chemical mentioned above is not diverted or used for purposes prohibited by the CW Convention.

Type of on-site inspection:

- First, an initial visit for familiarization purposes, for verifying data of the initial declarations prepared by the factory, and for gathering information necessary for a facility attachment;

- Then, a routine on-site inspection to verify that production is in full conformity with the relevant provisions of the Convention.

Activity at the facility was normal while the trial inspection was being carried out. Production of the declared chemical was both qualitatively and quantitatively as declared.

Care was taken, during preparations as well as during the actual trial inspection, to protect the interests of the factory, in particular industrial and commercial confidentiality. Attention was duly paid to indications by the management concerning the classified nature of certain information. Since the experiment was carried out during actual production care was also taken not to disturb the process.

Intrusiveness, however, was exercised to a sufficient degree to verify that no diversion was possible. Especially meticulous was the auditing of production records for the report year as well as the examination of various records and notes for shorter periods.

Inspection team:

- a representative of the Disarmament Section of the Ministry of Foreign Affairs, with long experience and active involvement in negotiations, headed the team;

- a representative of the Ministry of Trade did the auditing, assisted by a chemical engineer from an other factory;

- a toxicologist from the Ministry of Defense, who acts also as an expert of the Hungarian delegation in Geneva;

- an analytical chemist, chief of research and development at an other chemical factory; and

- a chemical engineer, chief of process development at the head offices of the Chinoin Works, did most of the inspection at the facility itself.

Inspection mandate: It was negotiated and gradually developed in collaboration between the inspection team and the facility manager, a chemical engineer who is also specialized in environment protection.

The team was mandated to

- study the production process and to verify its conformity with the production documentation and the initial declaration;

- study the vessels, pipelines and other process equipments, the platforms, feedstock and product storages, and to verify if they are usable for the production of Schedule /1/ chemicals;

- study security and safety equipments and procedures at the facility and also in the factory, and to verify if super-toxic chemicals may be produced or handled therein;

- define, on the basis of documents and on-site examination, the parameters which must be checked continuously or occasionally in order to verify that the declared chemical is produced in the quantity declared; and to define where to install instruments necessary to register those parameters continuously; and finally, to

establish the kind of preparatory work required from the facility before such instruments could be installed;

- identify the sample-taking points required in order to take samples without disrupting or unnecessarily hampering the production;

- establish the kind of analyses required, and the instruments necessary to perform such analyses; to define the composition of a mobile instrument kit to be carried by the inspection team;

- to establish the kind and amount of documentation, information and data required to be examined (material accounts, inventory movement reports, feedstock accountancy notes, etc.).

Participants from the facility were:

- the facility manager and two of his assistants, and
- the head of the financial and accounting department of the factory, and one of her assistants.

Also present in all phases of the trial inspection was a representative of the Ministry of Industry, a chemical engineer himself, who acted as an official of the "national authority".

Advance notice was given to the facility one week before the trial inspection. At the same time the list of the inspection team was presented. The factory did not raise any objection.

Opening conference lasted about an hour and a half. First the head of the team presented the mandate, and outlined the inspection activities. Then the facility

manager presented the salient points of the initial declaration, with emphasis on current activities. He also explained safety regulations in force at the factory. Finally, he handed out copies of a simplified version of the production process.

Following a short orientation tour in and around the facility, the team was split in two groups.

The first group inspected the whole facility area, starting from feedstock storages, loading platforms, reaction vessels, pipelines, valves, instruments, process platforms, waste outlets, etc. to end-product loading platforms. In the course of this inspection tour several members of the facility personnel were interviewed. As a result of the inspection, two points were identified where the international organization might want to install instruments for continuous monitoring.

Samples were not taken during the inspection, but parameters and sample-taking points were established.

Equipment was not used during the trial inspection, but points were identified for the installation of various types of instruments.

Analysis was not performed during this trial, but the analytical requirements were established. In view of those requirements and the instruments available at the factory, the inspection team does not have to carry with it additional instruments. All the analyses necessary for inspection can be performed on-site.

The second group performed a thorough check of all the relevant records for the period from January to November, starting from feedstock storage records, through inventory movement reports, to end-product loading records. Several sorts of cross-checks were also performed with the help of other types of records, notes and reports. During this part of the inspection, the group established the minimum requirements of information and data.

Closing conference lasted about an hour. The two groups mutually informed each other of their activities and the conclusions they had arrived at. They also established guidelines for the preparation of the inspection reports, and outlined the tasks in the elaboration of the facility attachment.

Main conclusions:

1. The facility is not equipped and cannot be used to produce the chemical mentioned in the hypothesis on page 2, or any other Schedule /1/ chemicals.

2. The declared chemical is produced and processed in full conformity with the initial declaration, and the relevant provisions of the CW Convention.

3. The declared chemical is not diverted or used for purposes prohibited by the Convention.

Other conclusions:

- The facility attachment can be prepared on the basis of the initial declaration, other information and data provided by the factory, and the knowledge gained during the trial inspection.

- The facility manager, the chief bookkeeper, all their assistants, and the facility personnel were most co-operative.

- The team did not encounter any difficulty during the whole course of the inspection.

- Apart from the time spent by facility personnel on the trial inspection, operations at the facility were not hindered, there were no material losses or any other financial implications to the factory.

- The size and composition of the inspection team proved to be satisfactory.

Duration of the national trial inspection:

- Initial visits: 2 days.
- Preliminary activities: 2 days.
- Actual inspection: 1 day.
- Preparation of the report: 2 days.
- Preparation of the facility attachment: about 5-8 days (still to be done in the final version).
- Total: about 15 days.

CONFERENCE ON DISARMAMENT

CD/890/Add.1
CD/CW/WP.223/Add.1
20 March 1989

Original: ENGLISH

H U N G A R Y

Report on the first National Trial Inspection

FACILITY ATTACHMENT

aimed at serving as a guide and aid for inspectors conducting inspections in the future; based on data and information contained in the "initial declaration" prepared by the facility management for the trial inspection conducted on 7 December 1988, and later verified and augmented by the inspection team during the initial visit.

PART I - containing

1. Data and other information necessary to conduct inspections.
2. Regulations, rights and obligations concerning various inspection activities.
3. Procedures of inspection.

PART II - containing

data and other information on the declared product, the production technology and the manufacturing process, not permitted to be removed from the complex for the sake of protecting confidential information and proprietory interests. (Their placement is defined in Part I, point 1.7.)

ANNEXES

1/a-b. Maps showing the geographical location of the complex.
2/a-b. The situation of the facility within the complex.
3. List of analytical instruments available at the Laboratory of the complex.

PART I

1. DATA AND INFORMATION

1.1 Identification of the facility

a/ Identification code: ...

b/ Name of the facility:
Nagytétény Manufacturing Unit of Chinoin
Plant Protecting Agents Workshops
Chemical Facility

c/ Owner of the facility: The State of Hungary

d/ Name of the company operating the facility:
CHINOIN Pharmaceutical and Chemical Works Ltd.

e/ Exact location of the complex: The far end of Nagytétény, one of the industrial suburbs, 20 kms south-west of the centre of Budapest. About 30 kms from the central offices of the company, which is to the north-east of Budapest.
Address: Budapest XXII., Bányalég u. 2.
Postal address: H-1780, Budapest, Pf. 49.

f/ Location of the facility within the complex: Buildings No. 197 and 198. /See Annex 2/a that indicates all the relevant support facilities and subsidiary units./

g/ Facility type: Single purpose facility being part of the complex, operating in a discontinuous /batch/ processing mode.

h/ Areas and buildings to which inspectors have access: Entry through Gate I. Main areas of inspection: Bdgs Nos. 197, 198 as well as 7, 11, 14, 33, 97. Also accessible: Bdgs Nos. 28, 34, 47, 150, 191, 217, 220, 225.

1.2 Short description of the technological process, major equipments and instruments

1.2.1 The chemical, specially designated as a Schedule /2/ chemical for the purpose of the trial inspection, and thus subject to inspection, is called CARBENDAZIME, locally called ABEM /methyl-benzimidazol-2-yl-carbamate, reg. No.: 10605-21-7/.

It is produced in two steps, by way of a discontinuous /intermittent/ batch processing method.

The first step yields the aqueous solution of intermediary product "A" upon reaction of a carbonic acid derivative and a pre-treated alkali inorganic compound, obtained by filtration. The clear solution is stored in an above-ground tank located near the facility, and transferred by pumping into the reaction vessel via a pipeline, in quantities commensurate with assay content. The determined volume, transferred to the reaction vessel, is sampled, assayed and, when deemed necessary, quantitatively adjusted. Following quality control, the component necessary for the ring-closure reaction is added to the solution, where the second chemical reaction takes place, and Carbendazime is formed.

/About 97 per cent of this product, in fact intermediary "B" is further processed in the next reaction vessel. Through a single-step conversion the chemical Benomyl /reg. No. 17804-35-2/ is obtained, filtered off and dried. The rest of Carbendazime is taken to another workshop within the same complex, and used in the production of another herbicide./

1.2.2 Major types of equipment employed:

reaction vessels /enamelled with stirrer/
feed tanks and storage tanks
heat exchangers
transport pumps for fluids
filtering equipments /filter centrifuges and self-discharge disc filters/
fluid bed driers

1.2.3 Instrumentation of the facility is simple, restricted to pressure and temperature measuring instruments and gauges to measure fluid quantities. They are controlled manually, not automated and not programmable for control purposes.

1.2.4 The facility consists of two main sections: a so-called main building, housing all non-production functions and management /offices, laboratories, dressing rooms, small storages/, and a three-level manufacturing hall.

A detailed desription of the technological process and the flowsheet diagrams are provided in Part II.

1.3 Sample-taking points and analysis of samples

1.3.1 Sample-taking points:

- samples of active and excipient materials may be taken in the stores and prior to addition into the reaction vessels;
- samples of intermediary products may be taken from reaction vessels and holding /storage/ tanks.

1.3.2 Location of analysis of samples taken:

- active and excipient materials, as well as end-products may be analysed in the facility laboratory /Bdg 197, First floor/ and in the QC Laboratory of the complex /Bdg 14/;
- intermediary products are analysed in the Central Laboratories /Budapest IV., Tó u. 1-5./.

The list of analytical instruments available at the Laboratory of the complex, with standards and specifications, is found in Annex 3.

1.4 Reference standards

The reference standards to be used for the purpose of on-site analyses of active and excipient materials and of end-products were handed over to the "Organization" in duplicates in the course of the "initial visit" prior to the trial inspection conducted on 7 December 1988. One of each set was locked, together with Part II of this Attachment, in a double-key safe, at a place indicated in Point 1.7, while the second was kept by the "Organization".

The reference standards to be used for the purpose of off-site analyses of intermediary products are to be provided by the "Organization" from the collection of second samples mentioned above.

1.5 Points, instruments and systems of continuous monitoring

The following instruments and equipments are to be installed at points indicated on the principal flow-sheet diagram /Part II, Point 1.2.3/.

1.5.1 Measuring system "M1", consisting of an automatic sampling and analytical unit, Make ... Type ... , to be installed on the calibrated holding tank, as designated by number 7.115, and containing intermediary "A".

1.5.2 Measuring system "M2", a raw material flowmeter, Make ... Type ... , to be installed into the key material transport pipeline.

1.5.3 The central data storage and data processing unit, together with the control command unit, are to be installed in Room ... of Bdg 97, where data from systems M1 and M2 is transmitted by cables.

1.5.4 The simultaneous "open" position of Fill valve "V1" and Discharge valve "V2" on Holding tank "MT" is prevented by the central command module.

1.5.5 The relevant stochiometric and production factors, fed into the memory of the central unit at the time of installation, will make it possible to ascertain the theoretical quantity of the end-product on the basis of data from the two measuring systems. Those factors are contained in Part II, Point 1.4.2.

1.5.6 At the time of installation, the measuring devices, the valves and the central unit should be closed with optical-thread seals. The seals should be photographed for identification. The placement and numbers of the seals should be recorded, and this record as well as the photographs of the seals are to be kept in the safe mentioned in Point 1.7.

The seal on that safe is to be photographed. One copy of the photo is retained by the inspection team, and kept by the "Organization", while the second copy is retained by the safety officer of the complex.

1.6 Material and production records

1.6.1 Warehouse records

- receiving /delivery/ dockets
- material record cards /as per each material/
- material transfer notes
- receiving and dispatch notes for end-products
- end-product record cards

1.6.2 Operating records

- material requisition notes
- stock record cards
- log books /as per batch and each material/
- batch cards /usable for monthly accounts/
- end-product transfer notes
- cards of monthly data on material used, with material usage factors

1.6.3 Central records

- copies of all the records listed above, except for stock record cards and log books
- bills for all the materials /raw materials and end-products/ received and shipped
- computerized tables of material movements and stocks
- computerized tables of material usage factors

The records are available at places listed in Point 1.7 and upon request may be studied by the inspectors in the presence of a qualified staff member designated for this purpose by the complex manager. Records of the previous five years may also be available upon request at the archives of the complex. Documents are retained for five years.

1.7 Contact points

1.7.1 Storage of information about the facility, which is available to the "Organization" but should be kept under lock and key, is provided in a safe with double-key in Room ... of Bdg 97 /management office building/. The following is kept here: Part II of this attachment, photographs mentioned in Point 1.5, reference standards mentioned in Point 1.4, records on the start and stopping of measuring devices.

1.7.2 Complex management: Bdg 7 /Phone: 400/
Facility manager: Bdg 97 /Phone: 304/
Material accountancy: Bdg 11 /Phone: 348/
Warehouses: Bdg 33 /Phone: 254/
QC Laboratory: Bdg 14 /Phone: 376/

2. REGULATIONS, RIGHTS AND OBLIGATIONS

2.1 Sample-taking, handling and transportation of samples

Sample-taking, handling, marking and transportation of samples should be performed according to regulations worked out by the "Organization". Sample-taking should be performed by specially trained facility personnel whenever requested by, and in the presence of the inspectors.

2.2 Analysis of samples

2.2.1 On-site analyses should be performed in the facility laboratory or the QC Laboratory of the complex by specially assigned laboratory personnel in the presence of the inspectors, using analytical methodologies described in the Production Technology Manual (Part II, Points 1.5.1 and 1.5.2).

2.2.2 Samples taken from the reaction vessels (such as solutions, residues, solids) shall not be removed for off-site analysis.

2.2.3 In case the analysis requested by the inspector cannot be performed on-site due to lack of the necessary instrumentation at the complex, the sample should be transported, in the presence of the inspector and the facility sampler, to the Central Laboratories (Budapest IV., Tó u. 1-5.), together with the reference standard from the collection of the "Organization". In that laboratory there is available a GC/MS instrument (Make... Type...).

2.2.4 The analyses to be performed at the request of the inspectors should be restricted to the identification and quantitative determination of the active and excipient materials used, and the end-products produced at the facility, or for the purpose of excluding the presence of other chemicals. The reference standards of chemicals to be excluded, as well as the analytical methods to be employed with the analytical instruments available at the complex are to be supplied by the "Organization".

2.2.5 Off-site analysis can be performed only on active and excipient materials and end-products. The analytical laboratory designated for that purpose is ... (name and full address of the laboratory). Such analyses should be performed between ... and ... following the conclusion of the inspection. In case a representative of the facility wishes to be present when the sample is opened and analysed, this intent should be conveyed to the inspector, and duly recorded in the inspection report. The head of the inspection team should provide the facility representative with an authorization to be present at the analysis, indicating the time when the analysis is scheduled to be performed. The "Organization" should seek to obtain for the facility representative the necessary permission to be present when the designated laboratory performs the off-site analyses.

2.3 Inspection equipment provided by the "Organization"

The inspection team is permitted to use the following equipment provided by the "Organization":
- instant (Polaroid) cameras,
- portable gas chromatographs and
- optical-thread seal inspection devices.

Such equipments shall bear identification tag numbers issued and affixed by the "Organization", statements of ownership, calibration documents and operation manuals. Upon entry into the country, the head of the inspection team should hand over to the representative of the "National Authority" all the documents mentioned above. The latter has the right to verify the identity of those equipments, and also to check them.

2.3.1 The use of instant (Polaroid) cameras is permitted only in the presence of a representative of the facility and within the area to which the inspectors have access. Immediately following development of the photograph, the facility representative affixes to its back a special rubber stamp of the complex, as well as an identification number. Each photograph is to be recorded in a book maintained for that purpose. Such photographs shall not be removed from the site, but deposited, together with the record book, in the safe mentioned in Point 1.7.

2.3.2 The use of portable gas chromatographs is permitted even outside of the area to which the inspectors have access, when the purpose is the identification or exclusion of certain air pollutants.

Prior to use, the facility representative should be provided with a list of retention times stored in the memory of the chromatograph, or used in the determination proper. Upon evaluation of the analytical results, the new data obtained in the process shall be duly wiped from the memory of the instrument. The facility representative has the right to verify it.

2.3.3 The use of optical-thread seal inspection devices is not restricted. The reference photographs are kept in the safe mentioned in Point 1.7. (See also the relevant parts of Point 1.5.3.)

2.4 Data from continuous monitoring

Data obtained from measuring systems "M1" and "M2" are fed into the memory of the central unit, either intermittently or in previously determined time intervals. The base and obtained data may be retrieved from that unit during on-site inspections.

Utilization of data:

- To assess and compare the quantities of the end-product, theoretical versus actual from data obtained by "M1" and "M2".
- Comparison of the quantities of the end-product to actual quantities obtained through book values.

Data printed out by the central unit shall not be copied. Upon evaluation, the print-outs shall be deposited in the safe mentioned in Point 1.7.

2.5 Operation and maintenance of monitoring equipments

The instruments and equipments used for continuous monitoring are operated and maintained by the "Organization". In case faults are detected in their operation, the facility shall immediately notify the "Organization" by telex (Telex No: ...). Such notification should include facility and instrument code numbers.

2.5.1 Periodical maintenance, checks and recharging of the instruments are carried out according to a service plan by the service personnel of the "Organization" at agreed intervals. The facility must allow entry of the service personnel, and make the instruments accessible. The service personnel should be provided with proper identification by the "Organization".

The maintenance and/or rectification of faults shall not interfere with the normal production processes.

2.5.2 Any intervention in the monitoring system is to be recorded in a book maintained for that purpose and kept in the safe mentioned in Point 1.7.

2.6 Advance notification of changes at the facility

The facility is obliged to send previous notice to the "Organization" whenever changes are intended at the facility, in the equipment or in the technological processes, which would effect the advance information, data, regulations or procedures laid down in this attachment.

2.6.1 Notification of such changes shall be effected... days prior to the commencement of any action that might cause such changes. In case such changes are likely to effect the continuous monitoring system, the values of the monitored parameters, the relevant stochiometric and/or production factors in the central unit, notification shall be effected ... days in advance. The notification need to inform only of the character of the imminent changes. The facility, however, shall prepare a complete and detailed list of the changes in the relevant points of this attachment. The modifications should be carried over to each copy of the attachment during the first inspection following the notification.

2.6.2 In case such changes effect the continuous monitoring system as mentioned above, the monitoring devices should be switched off, removed and/or modified only by the service personnel of the "Organization". Any intervention in the monitoring system (such as start, re-start, switch-on or off, removal, modification, replacement, re-calibration, re-programming etc.) is to be recorded in a book maintained for that purpose and kept in the safe mentioned in Point 1.7.

2.7 Specific health and safety rules at the facility

The facility is in the "A" (highest) fire hazard category. Consequently, smoking, the use of open flame and the performance of any action likely to cause sparking are strictly forbidden.

2.7.1 Prior to the commencement of the inspection, the inspectors are obliged to study, or be informed of, the relevant safety regulations in force at the facility and the health hazards inherent in the technological process to be inspected. Inspection is to be conducted in full conformity with all such rules and regulations.

2.7.2 In case the inspection procedure entails the handling of any hazardous material, the facility should provide the inspectors with all the protective clothes and gears necessary.

2.7.3 The facility cannot be held responsible for any injury suffered by the inspector if it is incurred as a consequence of the latter failing to use the required protective clothes or gears.

2.8 Language of records, interpretation

As a general rule, records and documents are in Hungarian. However, the headings of the most frequently needed accounting and operating records are also available in English. The Hungarian "National Authority" and/or the facility should secure the services of properly qualified English language interpreters.

2.9 Number and modalities of inspections

(to be decided later)

3. PROCEDURE OF INSPECTIONS

In general, the following phases are considered necessary in the conduct of routine inspections:

3.1 Opening conference
- information from the inspection team (mandate, inspection plan, etc.)
- information from the facility management (important developments, current activities, etc.)

3.2 Review of the monitoring system (data recovery, servicing, installation, etc.)

3.3 Identification of the relevant equipments

3.4 Identification of the technological processes

3.5 Taking of analytical samples, analyses

3.6 Verification of material accounting records (including other records, notes, etc.)

3.7 Other activities (not defined in advance)

3.8 Closing conference
- information and evaluation from the inspection team
- information and observations from the facility management
- recording changes in the monitoring system or otherwise
- others

PART II (Being in fact an inventory or repertory of what this part of the facility attachment contains. Data and information in Part II cannot be removed from the complex for reasons of confidentiality and protection of proprietory interests.)

1. PRODUCTION TECHNOLOGY MANUAL

1.1 The product

1.1.1 Names of the product

1.1.2 Characteristics of the product (description, properties, toxicity, application, etc.)

1.1.3 Quality and qualification of the product
- quality and testing standards

1.1.4 Other information

1.2 Manufacturing of the product

1.2.1 Raw and excipient materials used

1.2.2 Equipments employed

1.2.3 Description of the procedure
- characterization of the process
- principle flowsheet diagram
- material transport diagram

1.2.4 Description of the manufacturing processes
- preparation of the equipments
- preparation of the raw and excipient materials
- detailed description of the processes
- in-process quality control, methodology

1.2.5 Qualitative and quantitative data of material discharge and waste disposal

1.2.6 Solvent recovery

1.3 Possible dangers, prevention

1.3.1 Labour-safety regulations
1.3.2 Fire-prevention measures
1.3.3 Operational safety regulations
1.3.4 Maintenance

1.4 Production and efficiency data

1.4.1 Production yields
1.4.2 Material balance and material factors
1.4.3 Time consumption and labour requirements
1.4.4 Capacity data

1.5 Appendices

1.5.1 Product quality standards
- requirements
- analytical methods employed

1.5.2 Raw material quality standards
- requirements
- analytical methods employed

1.5.3 Safety technology requirements in handling raw materials, and health hazards data

1.6 Storage

- raw and excipient materials
- end-products

Annex

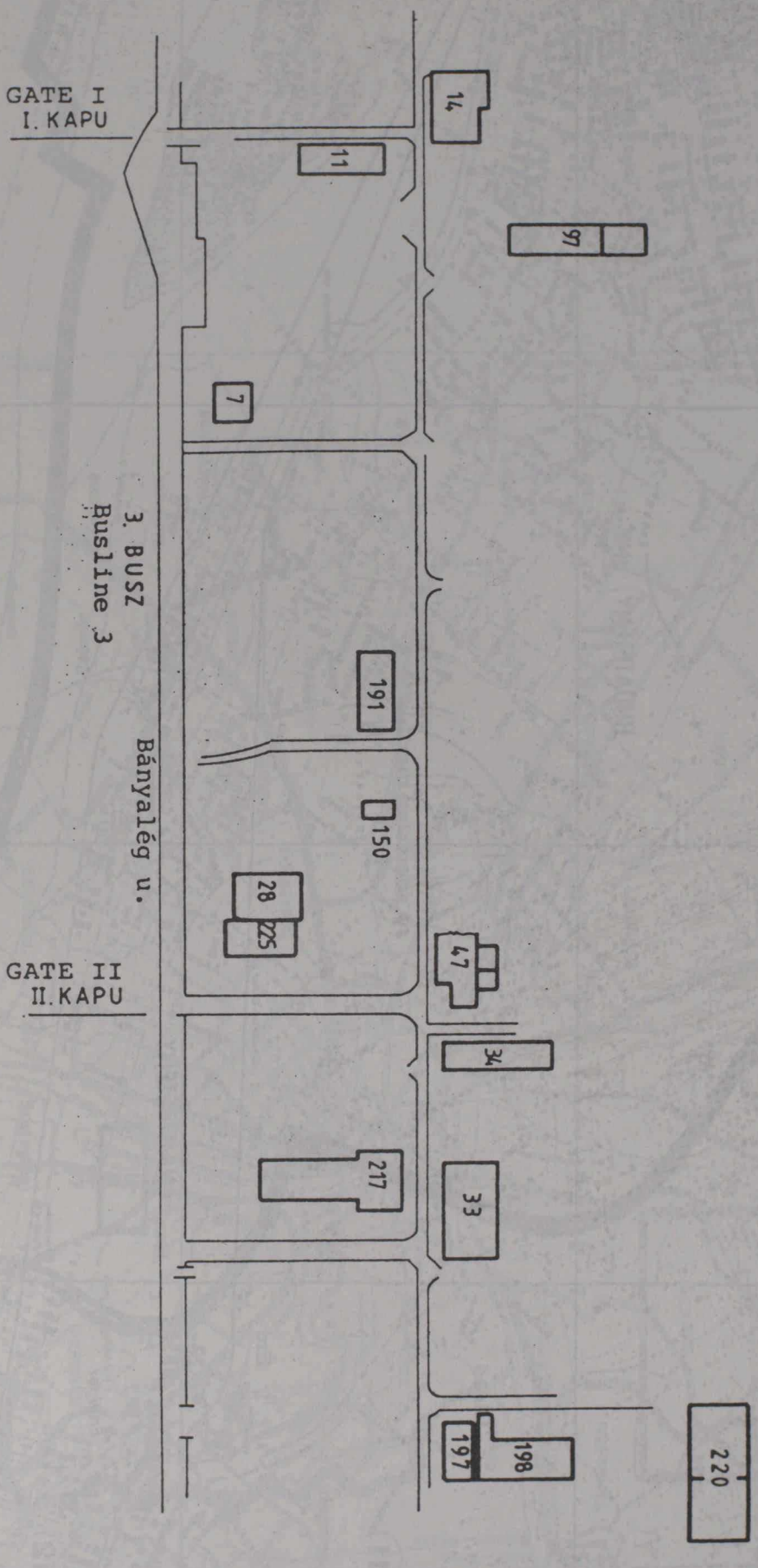
The geographical location of the complex

1/a. sz. melléklet

Annex
1/b. sz, melléklet

Annex 2/a.
szamú melléklet

The facility within the complex



A List of Service Facilities and Subsidiary Units

1/ Formulation Plants
- Powder Formulation Plant (220)
- Formulation Plant No. 1 (34)

2/ Maintenance shop (47)

3/ Energy generating units (150)
- boiler house (28)
- refrigerating facilities (225)
- water treatment (217)

4/ Warehouses (33)

5/ Quality Control Department (14)

6/ Medical surgery (191)

7/ Administration and Billing (11)

Annex 3

Analytical Instruments

available at the Laboratory of the Complex

Perkin-Elmer Series 10 liquid chromatograph (HPLC)
Detector: Perkin-Elmer LC-15 B UV

Perkin-Elmer liquid chromatograph (HPLC)
Detector: Labor - MIM 308 UV

Perkin-Elmer Series 3 B liquid chromatograph (HPLC)
Detector: Perkin-Elmer LC-75 UV

Perkin-Elmer Infrared Spectrophotometer
Model: 398
Perkin-Elmer Infrared Data Station

Perkin-Elmer Sigma 300 gas chromatograph (GC)
Detector: FID + FID

Perkin-Elmer Sigma 3 B gas chromatograph (GC)
Detector. FID + FID

Perkin-Elmer Sigma 3 B gas chromatograph (GC)
Detector: FID

Perkin-Elmer Sigma 10 data base station

Shimadzu GC - 9A
Detector: FID + FID
Shimadzu C-R2AX data base installed onto the capillary column

Perkin-Elmer UV-VIS Spectrophotometer
Model: 240

Shimadzu UV-VIS Spectrophotometer
Model: 240

CONFERENCE ON DISARMAMENT

CD/893
CD/CW/WP/224
24 February 1989

Original: ENGLISH

LETTER DATED 24 FEBRUARY 1989 FROM THE PERMANENT REPRESENTATIVE OF ITALY ADDRESSED TO THE SECRETARY-GENERAL OF THE CONFERENCE ON DISARMAMENT TRANSMITTING AN INTERIM REPORT ON A TRIAL INSPECTION OF TWO ITALIAN CHEMICAL FACILITIES 1/

I have the honour to transmit herewith an interim report on a trial inspection of two Italian chemical facilities.

I should be grateful if you would arrange for this document to be issued and circulated as an official document of the Conference on Disarmament as well as a Working Paper of the Ad Hoc Committee on Chemical Weapons.

Aldo Pugliese
Ambassador
Head of the Permament Mission of Italy
to the Conference on Disarmament

1/ A limited distribution of this document in English only has been made to the members of the Conference on Disarmament. Additional copies are available from the Permanent Mission of Italy at Geneva.

GE.89-60332

INTERNATIONAL FORUM ON

TOTAL BAN OF CHEMICAL WEAPONS: THE VERIFICATION OF NON-PRODUCTION OF CHEMICAL WEAPONS BY THE CIVILIAN CHEMICAL INDUSTRY

II SESSION
ROME, LA FARNESINA
15 - 19 DECEMBER 1988

CHAIRMAN: A. ZICHICHI

UNDER THE SPONSORSHIP OF
• THE ITALIAN MINISTER OF FOREIGN AFFAIRS
• THE ETTORE MAJORANA CENTRE FOR SCIENTIFIC CULTURE

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SCIENTIFIC COMMITTEE

Prof. Antonino ZICHICHI	Chairman
Prof. Christian B. ANFINSEN	Nobel Laureate - Johns Hopkins Univ.,USA
Prof. Derek H.R. BARTON	Nobel Laureate - Texas A&M University, USA
Prof. Melvin CALVIN	Nobel Laureate - Univ. of California, USA
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II

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III

AGENDA

1. Review the May 19-20 Forum.

2. Discuss the objectives of an inspection to verify compliance with a treaty.

   A. Non-production of schedule 1 materials.

   B. Actual or scheduled production of schedule 2 materials as declared.

   C. Over or under production of schedule 2 materials and the reasons for deviation from the declaration.

   D. Excessive storage of schedule 2 materials or equipment capability to produce amounts of schedule 2 materials far in excess of declared production and requirements.

   E. Is the plant a multiproduct multipurpose facility?

   F. To what depth does an inspection have to proceed to satisfy the inspection team that no schedule 1 materials are being made or that no violations of the treaty are occurring.

   G. How can the proprietary technical and business information (intellectual property) of the facility, site, company and national interests of chemical industries not related in any way to chemical weapons or their precursors be protected? This should also take into consideration similar protectionfor the production of the potential precursors which have been and are currently being produced for peaceful purposes only, e.g. agrichemicals, pharmaceuticals etc.

3. Visit an actual plant site.

4. Review the knowledge gained from the visit and pseudoinspection.

5. Recommend areas that need further study, implementation or support to help make a viable treaty. This could also include other areas for inspection such as shipments and transfer points in order to intercept materials shipped to countries that are not signees to a treaty.

IV

REPORT ON THE MULTINATIONAL TRIAL INSPECTION OF TWO ITALIAN CHEMICAL FACILITIES

1. INTRODUCTION

The first session of the International Forum on "Total Ban of Chemical Weapons: the Problem of Verification", was held in Rome, from 19 to 20 May 1988, under the sponsorship of the Italian Minister of Foregn Affairs and the Ettore Majorana Centre for Scientific Culture.

During that session the major aspects related to the basic and the more advanced knowledge in the field of chemical warfare agents were discussed by an International Working Group of scientists, appointed by the International Scientific Committee of the Forum.

The first session of the Forum was concluded by the statement on the essential needs for the solution of the problems related to the achievement of a total verifiable global ban of Chemical Weapons. The Forum pointed out the urgency of:

a) Accelerating the development of verification and monitoring protocols in order to sign a Chemical Weapons Convention, as soon as possible;

b) Wider co-operation between scientists and engineers from all countries to solve the technical problems of verification;

c) Wider international co-operation in the standardization of analytical methods, equipment and procedures for verification;

d) Future monitoring of R&D of toxic chemicals to deter the development of new Chemical Weapons;

e) Maintaining an open list of chemicals which present a danger to the stability of a Chemical Weapons Convention.

The Forum recommended a course of immediate action:

That the Italian Government could make available facilities manufacturing Schedule [2] chemicals in order to evaluate, using a multinational team, the procedures of Article VI of the draft Chemical Weapons Convention.

Following this recommendation, the Italian Government selected two civilian chemical facilities manufacturing chemicals listed in Schedule [2] for a trial inspection to be carried out by a multinational team of scientists, appointed by the International Scientific Committee of the Forum.

The second session of the International Forum on "Total Ban of Chemical Weapons: The Verification of Non-Production of Chemical Weapons by the Civilian Chemical Industry" was convened in Rome, at "La Farnesina", from 15 to 19 December 1988.

2. OBJECTIVES OF THE MULTINATIONAL TRIAL INSPECTION

The purpose of a future multilateral Chemical Weapons Convention is the complete and effective prohibition of the development, production and stockpiling of chemical weapons.

Each State Party, however, has the right to develop, produce and use toxic chemicals and their precursors for purposes not prohibited by the Convention.

As a consequence, a suitable inspection regime should be established for monitoring the production, consumption and use of those chemicals listed, which could either be diverted or could be used for purposes prohibited by the Convention.

During the second session of the International Forum, an inspection procedure, developed by the Italian Working Group of the Forum, in collaboration with the Italian Authorities, was analysed by the Multinational Inspection Team and it was later tested during a Multinational Trial Inspection of the two Italian chemical facilities.

The **main objectives** of the trial inspection were:

1. Verify whether a regime of routine inspections for the civilian chemical industry can be implemented under a Chemical Weapons Convention.

2. Gain knowledge on the problems connected with a routine inspection of chemical facilities

3. Suggest actions for appropriate inspection procedures, which, fully guaranteeing the safeguard of technical and commercial confidentiality, will permit the establishment of an effective verification regime.

3. PROCEDURES FOR THE ON-SITE TRIAL INSPECTION

The specific verification objectives of the on-site trial inspection were the following:

1. Make sure that the two Italian facilities inspected do not produce any chemical listed in Schedule [1].

2. Make sure that the quantities of chemicals produced, processed or consumed, listed in Schedule [2] were coherent with the quantities necessary for purposes not prohibited by the Convention.

3. Make sure that the chemicals listed in Schedule [2] do not undergo any diversion and are not used for purposes prohibited by the Convention.

The trial inspection procedures were discussed and approved by the Multinational Inspection Team, before the visit to the facilities.

On the basis of the last report of the Ad Hoc Committee on Chemical Weapons (CD/874) and of the more recent documentation on the subject, the trial inspection was carried out in the following phases:

1. Acquisition of information on the two facilities and on the products in question, provided by the two companies responsible for the facilities, by means of a "Check List" (Annex I).

2. Predisposal on the basis of the afore-mentioned documentation, of a "Facility Attachment" containing a detailed scheme of procedures for carrying out the inspection. (Annex IIa, IIb).

3. Carrying out of the on-site trial inspection. This was mainly done in order to ascertain the veracity of the data given in point (1.) above, and took place according to the procedures set out in point (2.).

4. TYPE OF FACILITIES INSPECTED

The two Italian chemical facilities (hereinafter referred to as Facility N.1 and Facility N.2), selected by the Italian Government because of their capability to produce some chemical listed in Schedule [2], agreed to accept a trial inspection.

Both were characterized as multipurpose facilities being part of a complex.

The declared activity of the facilities inspected during the year 1988 were the following:

Facility N.1:

a) Processing of a chemical listed in Schedule [2]:
Benzilic Acid ($C_{14}H_{12}O_3$) (CAS RN: 76937)
End-product: Adiphenine Hydrochloride ($C_{20}H_{25}NO_2 \cdot ClH$) (CAS RN: 50420)

b) Processing of the precursor of the declared chemical listed in Schedule [2]:
Benzoin ($C_{14}H_{12}O_2$) (CAS RN: 119539)
End-product: Diphenylhydantoin ($C_{15}H_{12}N_2O_2$) (CAS RN: 57410)

Facility N.2:

a) Production of a chemical listed in Schedule [2]:
Benzilic Acid ($C_{14}H_{12}O_3$) (CAS RN:76937)

b) Production and processing of the precursor of the declared chemical listed in Schedule [2]:
Benzoin ($C_{14}H_{12}O_2$) (CAS RN: 119539)

The actual activity of the two facilities during the visit of the inspection team was the following:

Facility N.1:

Processing of the precursor of the declared chemical listed in schedule [2]: Benzoin.

Facility N.2:

Production of the declared chemical listed in schedule [2]: Benzilic Acid.

5. OPENING CONFERENCE

An opening conference was held in the two facilities inspected where a representative of the management informed the inspection team on the activities of the facilities.

Representatives of the inspection team specified the inspection activities and the services to be provided by the facilities personnel.

Relevant information on the production and use of the declared chemicals were provided by the management of the two facilities. This information included:

a) quantity of raw material acquired in the last 12 months,

b) quantity of end-product produced in the last 12 months,

c) buyers and destination of the end-products,

d) feedstock accountancy.

Facility N.1 provided this information for all the declared chemicals, either produced or processed, whereas Facility N.2 provided the relevant information only for the declared chemical listed in Schedule [2] (Benzilic Acid).

6. INSPECTION OF THE EQUIPMENT AND SAMPLE-TAKING

The process platforms, the feedstock and end-products storages of the two facilities were examined in detail by the inspection team. In particular a careful examination was performed on the reaction vessels, process equipment and measurement points. Photographic documentation of the equipment was allowed to be taken in both facilities.

In facility N.1 some of the staff were interviewed.

In both facilities the inspection was greatly facilitated by the presence of the management.

The capacity of the facilities for the specified annual production was noted by the team.

The inspection team decided to perform off-site analyses, even in the case of Facility N.1, where on-site analysis could be done.

In the process equipment of Facility N.1 and N.2 the sample-taking was performed by the staff at the measurements points indicated in the Facility Attachment.

In the feedstock storage of Facility N.1 samples were taken by the personnel at the request of the inspection team, on a random basis.

For each sample point one sample was retained at the facilities, one was retained by the team and one sent for analysis.

The management of Facility N.2 was open to a partial modification of the sample by an agreed treatment on-site before the off-site analysis in order to avoid loss of technical information.

The inspection team supervised the sample-taking. One inspector transported the samples to an off-site laboratory, indicated by the inspection team, where the analyses were performed only for the presence of the declared chemicals.

7. CONFIDENTIALITY PROTECTION

The presence of representatives of the Italian Government, accompanying the inspection team, ensured the non-divulgation of the confidential information supplied by the two companies.

Whereas the management of Facility N.1 was fully open to reply to any request from the inspection team, there was much concern about the know-how of the chemical procedure and the commercial information to be provided by the management of Facility N.2; in their case chemical processes involve known procedures enabling the rapid identification of the products.

8. RESULTS OF THE ANALYSES

The samples taken during the inspection to the two facilities have been analysed at the Organic Chemistry Laboratory of the Chemistry Department of the University of Calabria, Italy.

The analyses were performed after an initial check by TLC, in order to ascertain the degree of purity of the samples. Mixtures of solutions were previously purified by acidification, filtration and chromotographic seperation to obtain compounds to be analysed by IR, NMR and MS spectroscopic methods.

Analytical procedures and structural assignements were performed using advanced instrumentation:

- Perkin-Elmer 1330 Spectrometer for the IR spectra;
- Bruker 80 MHz Spectrometer for the NMR spectra;
- VG ZAB 2F Spectrometer for the FAB and EI spectra.

Major components of mixtures and pure samples were always identified and found of molecular structures as declared.

The detailed results follow:

1) SAMPLE: DIPHENYLHYDANTOIN (Facility no. 1)

MOLECULAR FORMULA: $C_{15}H_{12}N_2O_2$

MOLECULAR WEIGHT: 252.27

A) SOLUBILITY TEST: Insoluble in water; soluble in hot ethanol, in acetone, in dioxan and ethyl; low solubility in cold ethanol, in chloroform and in ether.

B) CHEMICAL AND INSTRUMENTAL ANALYSIS OF THE EXAMINED SAMPLES:

1) Centrifuge sample (ID 1003)

White solid, fine powder which gives the following solubility tests:

i) Insoluble in water;
ii) Low solubility in ether, in cold ethanol and in chloroform;
iii) Soluble in acetone, dioxan, hot ethanol and ethyl acetate (100 gr. of the sample is dissolved in 70 ml of ethyl acetate with a 0,26 gr residue).

TLC, glass with gel silica F 254 (merck) thick 0,25 mm, of the sample dissolved in acetone, using the eluent mixture hexane/dioxan 70:30 v/v gives only one tintense spot. The sample was identified with the usual spectrum in KBr (ratio 1:100) is identical to the spectrum of standard.

The NMR spectrum in deutero aceton can be interpreted on the basis of the structure of the molecule.

The EI spectrum at 70 eV shows the molecular peak (m/z 252).

2) Sample at end reaction (A 1010)

25 ml of water solution at pH = 11.5 are filtered under vacuum to obtain a white solid (~0.8 gr) that after drying gives the following solubility test:

i) Insoluble in aceton, in ethyl acetate, in ether and in chloroform;
ii) Soluble in ethanol;
iii) Very soluble in water.

TLC of the product in ethanol, using the eluent mixture chloroform/isopropyl alcohol/NH_4OH conc. 45:45:10 v/v/v gives only one spot.

The IR spectrum of the solid obtained in KBr (ratio 1:100) is consistent with the expected molecular structure.

0.5 gr of product are dissolved in 40 ml of water solution and added H_2SO_4 2M (~ 20 ml) to complete precipitation of a white solid, filtered and dried on P_2O_5 under vacuum. The product obtained (~ 0.3 gr) resulted to be insoluble in water and soluble in acetone and ethyl acetate.

TLC of the product in acetone, using the mixture hexane/dioxan 70:30 v/v with the reference standard (ID 1003) gives two spots with the same Rf.

The IR, NMR and MS spectra are identical with some impurities, similar to those of sample centrifuge (ID 1003).

3) Sample before filtration (S 1023)

25 ml of light green coloured water solution at pH = 11 are filtered. The solution obtained is distilled under vacuum. The solid is dried at 105°C.

The TLC of the product in ethanol, using the eluent mixture chloroform/isopropyl alcohol/NH_4OH conc. 45:45:10 v/v/v and as reference the solid from the sample at the end of reaction (a 1010) gives two spots with the same Rf. The product is dissolved in water and acidified with H_2SO_4 2M. The product obtained, dried, gives the same IR, NMR and MS spectra of those of sample centrifuge (ID 1003).

4) Sample after acidification (S 1005)

25 ml water solution at pH - 5 are filtered under vacuum. The dried solid (~ 0.6 gr) is insoluble in water and soluble in aceton and acetate ethyl.

TLC of the product in aceton, using the eluent mixture hexane/dioxan 10:30 v/v and as reference the sample centrifuge (ID 1003) gives two spots with the same Rf.

The IR, NMR and MS spectra of the product were identical to those of sample centrifuge (ID 1003).

2) SAMPLE: FLAVOSSATO . HCl (Warehouse - Facility no. 1)

MOLECULAR FORMULA: $C_{24}H_{25}NO_4$. HCL

MOLECULAR WEIGHT: 427,94

MELTING POINT: 230°C - 235°C

A) SOLUBILITY TEST: Soluble in chloroform, low solubility in ethanol and methanol; very low solubility in cold water; soluble in hot water.

B) CHEMICAL AND INSTRUMENTAL ANALYSIS OF THE EXAMINED SAMPLE:

White solid, fine powder TLC, glass with gel silica F 364 (Merck) thick 0,25 mm, of the sample dissolved in chloroform with the eluent mixture isopropyl alcohol/ethyl acetate/NH_4OH conc. 40:100:0,5 v/v/v gives a set of spots which the more intense has Rf-0.70 and corresponds to the sample examined. The other spots are present at low %. The sample was identified with spectroscopic technics: IR, NMR and MS.

The IR spectrum was performed in KBr (ratio 1:100) and is conforme with the molecule functional groups.

The NMR spectrum of the sample in $CDCI_3$ can be interpreted on the basis of the molecule structure.

The FAB spectrum, XENON, 9,5 K eV and glycerol matrix, gives a m/z 392: peak which evidences the hydrochloride form of the salt.

SAMPLE: OMOVERATROILOMOVETRILAMINA (warehouse - Facility no. 1)

SYNONYMOUS:	Omobis
MOLECULAR FORMULA:	$C_{20}H_{25}O_5N$
MOLECULAR WEIGHT:	395,45
MELTING POINT:	124°C - 127°C

A) SOLUBILITY TEST: Very soluble in chloroform and in acetic acid; low solubility in ethanol; insoluble in water.

B) CHEMICAL AND INSTRUMENTAL ANALYSIS OF THE EXAMINED EXAMPLE: White solid, fine powder. TLC, glass with gel silica F 254 (merck) thick 0,25 mm, of the sample dissolved in chloroform/acetone 85:14 v/v gives only one spot. Identification of the sample with spectroscopic technics: IR, NMR and MS.
The IR spectrum was performed in KBr (ratio 1:100) and evidences the presence of different functional groups in the sample's molecule.
The NMR spectrum dissolved in CDC13 can be interpreted on the basis of the molecule structure.
The MS spectrum at 70 eV shows a molecular peak M^+ m/z 359.

SAMPLE: BENZILIC ACID (Facility no. 2)

MOLECULAR FORMULA: $C_{14}H_{12}O_3$

MOLECULAR WEIGHT: 228,25

MELTING POINT: 148°C - 151°C

A) SOLUBILITY TEST: Soluble in ethanol and diethyl ether; low solubility in water, benzene and chloroform.

B) CHEMICAL AND INSTRUMENTAL ANALYSIS OF THE EXAMINED samples:

1) Reference sample:

White solid, fine powder:

i) Soluble in ether and ethanol

ii) Low solubility in water, benzene and chloroform.

TLC, glass with gel silica F 254 (merck) thick 0,25 mm, of the sample dissolved in ether, using the eluent mixture toluene/acetate ethyl/acetic acid 90:9:1 v/v/v gives three spots. Identification of the sample is performed with spectroscopic technics: IR, NMR and MS.
The IR spectrum in KBr (ratio 1:100) is identical to reference spectrum.
The NMR spectrum in deutero acetone gives only aromatic protons.
The EI spectrum at 70 eV does not show the molecular peak M^+ , 228 m/z but the peak M-45 $^+$ at m/z 183, which is characteristic for the carbosilic acids.

2) Solution sample from plant 2 - end product

25 ml of water solution concentrated at pH = 5.5 are filtered under vacuum. A white solid (~ 0.65 gr) was dried and results to be of low solubility in water and chloroform but soluble in ether and ethanol.
TLC of the product in ether using the eluent mixture toluene/acetate ethyl/acetic acid 90:9:1 v/v/v with reference of the standard sample gives two spots with the same Rf.
The IR, NMR and MS spectra of the product obtained are identical as those of the standard sample.

3) Sample from plant 2 - 1st reactor

25 ml. of yellow/orange water solution at pH - 11 was filtered and acidified with H_2SO_4 2M to complete precipitation of a white solid. The precipitate is filtered and dried under vacuum. An identical white solid on TLC (toluene/acetate ethyl/HN_3 conc. 90:9:1 v/v/v) is obtained from precipitate and solution.

ANNEX I

V

MODEL OF CHECK-LIST

ANNEX I

CHECK LIST

The present Check List Model has been drawn up on the basis of:

- "Model of Agreement....." (page 125 of the CD/874)
- "Annex to Article VI(2) (page 79 of the CD/874)
- "EKEUS" Document

1. IDENTIFICATION OF THE FACILITY

a. Plant code identification (if available)
b. Name of the Facility
c. Owner of the Facility
d. Name of the company or enterprise managing the Facility
e. Location of the facility
f. Determination of the specific areas and sites which will be made accessible to the inspection team

2. INFORMATION CONCERNING THE FACILITY

2.1. Type of Facility

- dedicated (single purpose) part of a large complex
- dedicated (single purpose)
- multipurpose
- pilot plant
- laboratory

2.2. Main line of production of the facility

2.3. Which of the following activities are performed with regard to the declared chemicals:

a. Production:
- type of process (continuous or batch)
- type of equipment
- technology used
- particulars of the engineering process

b. Use with conversion into another product:
- description of the conversion process
- particulars of the engineering process
- final product

c. Use without conversion into another product:
- description of the process
- particulars of the engineering process
- concentration of the final product

2.4. Data on waste treatment:
- disposal and/or storage
- waste treatment technology
- recycling

2.5. Data on safety and health measures

2.6. Data on clean-up procedures and general overhauls

2.7. Data on feedstocks used in the production or processing of declared chemicals

2.8. Maps and plans of the facility:

a. Buildings and functions
b. Pipework
c. Roads
d. Fences
e. Mains electricity
f. Water points
g. Diagrams indicating the relevant material flow

2.9. Possibility for the facility to be readily used for the production of a chemical listed in Schedule [1] or of another chemical listed in Schedule [2].

2.10. The productive capacity for the declared chemicals (expressed in metric tons/year and calculated according to the method proposed in CD/874-pages 119-121).

3. INFORMATION REGARDING THE DECLARED CHEMICAL

3.1. Chemical name - Common or trade name used by the facility - structural formula - code number (Chemical Abstracts Service Register Number) (if assigned).

3.2. Total amount produced, consumed, imported and exported in the previous calendar year.

3.3. The purpose(s) for the production or the use of the declared chemicals.

ANNEX II

VI

FACILITY ATTACHMENT

(FACILITY N.1)

1.INTRODUCTION

1.1. On the basis of the preliminary information supplied in reply to the "Check-List" (Annex III), prepared according to the guidelines set out by the Conference on Disarmament (Annex I), Facility N.1 is a "multipurpose" facility which, in addition to Benzilic Acid, chemical listed in Schedule [2], produces "Diphenylhydantoin", an active principle used by the pharmaceutical industry and derived from the same raw material (Benzoin) used for obtaining Benzilic Acid.

1.2. Furthermore, at present the company has a stock of 7554 kilograms of Benzilic Acid for the production of "Adiphenine Hydrochloride", an active principle used by the pharmaceutical industry.

1.3. The company states that, since 1984, it has stopped the production of benzilic acid, and that it has no intention of producing or selling it.

1.4. The trial inspection to Facility N.1 could therefore be considered as a routine inspection, with the twofold objective of:

a) ascertaining that the facility does not produce compounds listed in Schedule [1] or [2],

b) ensuring that the stored benzilic acid is not diverted or used for purposes prohibited by the Convention.

ANNEX II

2.TRIAL INSPECTION

The inspection of the above facility could thus be phased as follows:

1. Immediately upon arrival, the inspection team makes an orientation tour of the chemical facility.

2. The inspection team meets the facility management, and provides it with all documents which will enable it to verify the following:

a) correspondence between the amount of raw material (Benzoin) acquired in the last 12 months and the amount of the finished product (Diphenylhydantoin);

b) correspondence between the amount of Benzylic Acid stored in the last 12 months and the amount of the finished product (Adiphenine Hydrochloride);

c) the units where these products are processed;

d) the buyers and the destinations of the final products.

3. On the basis of the information thus gathered, the inspectors will plan the inspection in the facility units where chemicals listed in Schedules [1] and [2] might be produced or used for purposes prohibited by the Convention.

4. In particular, the inspection in units under point (2.) above will be aimed at verifying :

a) the correspondence between the facility production capacity and the declared yearly production;

b) the possible existence of safety devices exceeding the security requirements of the declared production;

c) the possible presence of equipment which might indicate that the facility is producing undeclared chemical compounds;

5. Samples will be taken as follows (three samples each time) :

a) at the starting point of the production process ;

b) at the reactor where a solution of Sodium Hydrate and Benzoin is loaded;

c) at the tank where the product is precipitated through acidification;

d) at the unit where the product is centrifugated and washed;

e) at the storehouse, in order to verify that the information supplied on the amount of Benzilic Acid actually contained in the storehouse is correct;

6. The inspectors may decide to inspect facility units not declared as relevant for the production of certain chemical compounds.

ANNEX II

7. The inspectors may decide to inspect areas where chemical compounds are prepared for shipping.

8. The final report shall state whether or not the information supplied and the production purposes preliminarly declared by Facility N.1 are correct.

9. All the information provided by Facility n.1 in the course of the inspection is to be considered strictly confidential.

VII

CHECK-LIST

(FACILITY N.1)

ANNEX III

1. IDENTIFICATION OF THE FACILITY

Data omitted for confidentiality protection

2. INFORMATION CONCERNING THE FACILITY

2.1. Type of Facility

- Part of a complex
- Multipurpose

2.2. Main line of production of the facility

- Production of Dantoins, which are active principles for pharmaceutical use.

2.3. Activities performed

a. Production of Benzilic Acid

- The process is of the discontinuous type, equipped with batch apparatus.
- The technology used is of the type in the production of "fine chemicals" with "unitary operations" such as: synthesis reaction, crystallization, centrifugation and drying.

- Description of the process (Fig.1)

Phase 1: • A solution of sodium bromate is loaded in A 1001.
A solution of sodium hydrate and the benzoin are loaded in A 1010.

•In A 1010 by straining the solution stored in A 1001 one obtains the oxidization and the benzilic transposition.

Phase 2: •The reaction mass is discharged in S1023 and from here in S 1027, where carbon and acid are added so that neutralization occurs.

•The mass is then filtered and sent to S 1002 or S 1005.

Phase 3 : •In S 1002 or in S 1005 the product is precipitated through acidification.

Phase 4: •The product is then centrifugated and washed in ID 1004 or ID 1003, discharging the product into small containers which are then sent to the dryers.

List of the equipment.

A 1001 : 800 lt. stainless steel moving reactor.
A 1010 : 3'000 lt. stainless steel moving reactor.
S 1002 : 3'000 lt. stainless steel moving container.
S 10025 : 12'000 lt. stainless steel moving container.
ID1003/1004 : Stainless steel centrifugal machines with removable basket, diameter 1250 or 1500.

b. Production of Diphenylhydantoin

Use of the same raw material (Benzoin) as for the production of Benzilic Acid to produce Diphenylhydantoin, with the same unitary operations and the same equipment.

Description of the process (Fig.1):

Phase 1: •The sodium bromate and sodium hydrate solution are prepared in A 1001.

•A1010 is loaded with benzoin and urea, once the stabilized temperature is reached, the solution is strained and the benzilic transposition or the condensation with urea occurs.

Phase 2: •The reaction mass is discharged in S1023 and carbon is added.

Phase 3: •The mass is then filtered and sent to S 1005.
Phase 4: •Precipitation is achieved with sulphuric acid.
Phase 5: •Centrifugation is done in ID 1003

List of the equipment.

A 1001 :	800 lt. stainless steel moving reactor. A 1010
A 1010 :	3'000 lt. stainless steel moving reactor.
S 1002 :	3'000 lt. stainless steel moving container.
S 10025 :	12'000 lt. stainless steel moving container.
ID1003 :	Centrifugal machine.
PP 1003 :	Filter press machine.

2.4. Data on waste treatment

- The solid residue (carbon) is dumped in discharges of the 2B type, as, in virtue of the DPR 915 (law decree), it is classified as special.
- The liquid effluents of the work process are sent via the drainage system to the water treatment biological plant.

2.5. Data on safety and health measures

- The facility is equipped with safety valves on the reactors, and a system of smoke aspiration and disposal.

- The electrical supply system is of the ADPE type.
- The staff which is employed at the plant undergoes periodical medical checks in compliance to sanitary laws.
- Visits are in relation to the activity of the establishment (production of chemicals through synthesis) and are not specifically related to the products in question.

2.6. Data on clean-up procedures and general overhauls

The facility is subject to the normal maintenance and periodical visits foreseen by the law (ISPESL, USL) for pressure vessels and centrifugal machines.

2.7. Data on feedstocks used in the production or processing of declared chemicals

- The raw material which is used for the production of the Benzilic Acid and of the Diphenylhydantoin is Benzoin (see the enclosed Material Safety Data Sheet).
The quantity at present in our stores is of the order of 5'500 kg.

2.8. Maps and plans of the facility

Omitted for confidentiality protection.

2.9. The facility cannot easily be used for the production of chemicals listed in Schedule [1] or other chemicals listed in schedule [2].

2.10. Productive capacity for Benzilic Acid (expressed in metric tons/year):
- Applying the formula :
[(quant. prod) / (hours of prod.)] x const x number of units

the result obtained is :

(0.610 / 12) x 5160 x 1 = 262 tons/year

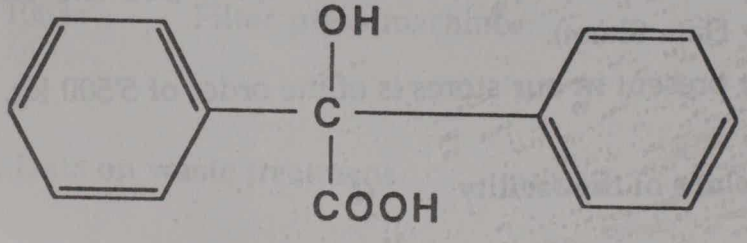
where :

0.610	=	tons per batch
12	=	hours taken for the production of 1 batch
5160	=	hours of production in one year
1	=	number of units.

3. INFORMATION REGARDING THE DECLARED CHEMICAL

3.1.- Chemical name : Alpha-Hydroxydiphenylacetic Acid.
(2,2-Diphenyl-2-hydroxyacetic Acid) -

- Commercial name : Benzilic Acid.
- CAS Number : 76937
- Structural formula :



3.2. During the year 1987 there was no production, usage, import or export of Benzilic Acid. There are 7554 kg of the product stored.

3.3. The Benzilic Acid stored is used for the production of Adiphenine Hydro-chloride. In the past, up to 1984, the Benzilic Acid produced was sold in Italy as well as abroad. Production, usage or sale of benzilic acid during the coming year are not foreseen.

VIII

FACILITY ATTACHMENT

(FACILITY N.2)

ANNEX IV

1.INTRODUCTION

1.1. On the basis of the preliminary information supplied in reply to the "Check-List" (Annex V), prepared according to the guidelines set out by the Conference on Disarmament (Annex I), Facility N.2 is a "multipurpose" facility producing Benzilic Acid, chemical listed in Schedule [2].

1.2. Small quantities of said chemical are used in the production of Diphenylacetic Acid, while most of it is sold both abroad (80%) and in Italy (20%). The facility produces 2 to 10 tons of Benzilic Acid per year.

1.3. The trial inspection in the Facility N.2 will take place while the production of benzylic-acid is in process.

1.4. Such an inspection could therefore be considered as a routine inspection, mainly aimed at verifying the preliminary information supplied by the Company on the Benzilic Acid production, and ascertaining in particular that:

a) the amount of Benzilic Acid produced is equal to the amounts necessary to serve purposes not prohibited by the Convention

b) the Benzilic Acid is not diverted or used to serve purposes prohibited by the Convention.

ANNEX IV

2.TRIAL INSPECTION

The inspection of the above facility could thus be phased as follows:

1. The inspection team meets the facility management, and provides it with all documents which will enable it to verify the following:

a) correspondence between the amount of raw material (Benzile) produced in the last 12 months and the amount of the finished product (Benzilic Acid);

b) correspondence between the amount of Benzilic Acid produced in the last 12 months and the amount of the same product which was reprocessed, exported or sold on the domestic market;

c) the units where the Benzilic Acid is processed;

d) the purchasers and users of the Benzilic Acid produced;

2. On the basis of the information thus gathered, the inspectors will plan the inspection in the facility units where Benzilic Acid is produced, in order to check the amounts produced, the absence of possible diversions in the production or use for purposes prohibited by the Convention;

3. In particular, the inspection in units under point (2.) above will be aimed at verifying the following:

a) the correspondence between the facility production capacity and the declared yearly production;

b) the possible existence of safety devices exceeding the security requirements of the declared production;

c) the possible presence of equipment which might indicate that the facility is producing undeclared chemical compounds;

4. Samples will be taken as follows (three samples each time) :

a) at the starting point of the production process ;

b) at the final point of the production process ;

c) at the storehouse, in order to verify that the information supplied on the amount of Benzilic Acid actually contained in the storehouse is correct;

5. The inspectors may decide to inspect facility units not declared as relevant for the Benzilic Acid production;

6. The inspectors may decide to inspect units involved in the shipment of Benzilic Acid;

7. The final report shall state whether or not the information supplied and the production purposes preliminarly declared by Facility N.2 are correct.

8. All the information provided by Facility N.2 in the course of the inspection is to be considered strictly confidential.

IX

CHECK-LIST

(FACILITY N.2)

ANNEX V

1. IDENTIFICATION OF THE FACILITY

Data omitted for confidentiality protection

2. INFORMATION CONCERNING THE FACILITY

2.1. Type of Facility

- Part of a complex
- Multipurpose

2.2. Main line of production of the facility

- Intermediaries for the chemical and pharmaceutical industries

2.3. Activities performed

a. Production of Benzilic Acid

- Type of process: discontinuous
- Type of equipment: reactor - centrifugal rectification column
- Technology used: oxidation reaction, neutralization transportation
- Particular of the process: transposition in an alkaline environment of the benzyl into sodium benzylate, neutralization and precipitation with H_2SO_4.

2.4. Data on waste treatment

The liquid effluents of the work process are sent to the purifying system of the establishment.

2.5. Data on safety and health measures

Normal measures taken for chemical processes presenting low-medium levels of danger.

2.6. Data on clean-up procedures and general overhauls

Routine maintenance. There is no general overhauling or programmed maintenance carried out.

2.7. Data on feedstocks used in the production or processing of declared chemicals

Benzyl of our own production: 30 tons per month

2.8. Maps and plans of the facility

Omitted for confidentiality protection

2.9. The facility can only be used for the chemical listed in Schedule [2] : 2,2-diphenyl-2-hydroxylacetic acid

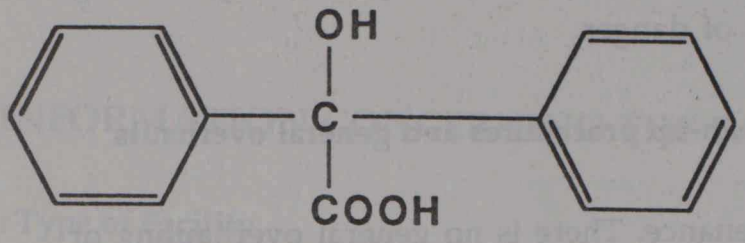
2.10. Productive capacity for Benzilic Acid:
- 10 tons per year on an average.

3. INFORMATION REGARDING THE DECLARED CHEMICAL

3.1.- Chemical name : Alpha-Hydroxydiphenylacetic Acid.
(2,2-Diphenyl-2-hydroxyacetic Acid) -
- Commercial name : Benzilic Acid.

ANNEX V

- CAS Number : 76937
- Structural formula :



3.2. Total quantity produced :

- The production is variable between 2 and 10 tons per year destined totally for sale : 80 % for export and 20 % for the internal market.

Quantity imported - Nil

3.3. Only a few hundred kilos of Benzilic Acid have been used for the test production of diphenylacetic acid, which was then sold.

(Data omitted for confidentiality protection)

- Forecast for the coming year: 10 Tons.

X

CONCLUSIONS OF THE SECOND SESSION OF THE INTERNATIONAL FORUM

PREMISE

This document deals only with technical and scientific aspects of the problem posed to the Forum "Total Ban of Chemical Weapons: the problems of Verification" and is not intended to deal with nor consider the political or diplomatic aspects of the problem.

The Conclusions are drafted in versions A and B.

Version *A* has been signed by A. Zichichi, M. Dardo, J.C. Eccles, M. Fetizon, Gu Yi Jian, R.F. Hudson, N. Kbir-Ariguib, V. Obratzov, V. Pescov, C. Ponnamperuma, K.M.B. Siegbahn, N. Uccella, G.P. Velo.

Version *B* has been signed by all participants.

Here are the Conclusions.

A

CONCLUSIONS OF THE SECOND SESSION OF THE INTERNATIONAL FORUM

1 - <u>The Inspections.</u>

- For the first time two Italian Chemical Plants were opened to an International Group of Scientists.

- The Chemical Plants allowed pictures to be taken and samples chosen at random by members of the International Group:
  Scientists from the USSR, China, the Third World and the USA chose four samples of Chemical compounds. Each sample was divided in three parts. They will be investigated in order to see if the Chemical Compound corresponds to what it was declared to be. The analysis will be performed in a Laboratory chosen by the Scientific Committee of the Forum; another analysis will be made by the Chemical Plant. In case of controversies the third sample will be further analysed by a third independent laboratory chosen by the International Scientific Committee.

- The method of inspection experienced was a valid one. The result was that inspections are indeed possible and could be very efficient given full co-operation and sufficient resources. They should be an important deterrent against the production of forbidden products.

- The inspection list should be restricted to those items that are essential for the production of the forbidden Chemical Compounds.

- Direct monitoring of production and direct monitoring of the alleged <u>NON</u>- production should be imposed on the Chemical Plants.

- An inspection team should have real-time monitoring capability.

2- The problem of Data

Data have been given by the two Plants visited and others can be added, if special guarantees regarding proprietory information can be provided by the Government. The same type of answer might be expected when other Chemical Plants in other Countries will be asked to provide Data.

3- The problem of a Special Laboratory and an Information Centre to be established.

- A Laboratory and an Information Centre under the Control and the Sponsorship of the International Scientific Committee of the Forum, should be established.

  Its purpose is to implement the programme which will be formulated by the International Scientific Committee. The Laboratory should have three main branches:

  - Chemical
  - Physical
  - Pharmacological and Toxicological

4- The problem of Public Awareness

The Public should be fully informed of the danger of a Chemical Holocaust.

- A simple Edition of the Proceedings of the 1st Session of the International Forum should be published.

- An International Conference with all Chemical Societies of the world participating.

All these actions should be under the sponsorship of the International Scientific Committee

- A program of Civil Protection should be implemented.

CONCLUSIONS OF THE SECOND SESSION OF THE INTERNATIONAL FORUM

1 - The Plant Visit.

- For the first time two Italian Chemical Plants were opened to an International Group of Scientists.

- The Chemical Plants allowed pictures to be taken and samples chosen at random by members of the International Group:
  Scientists from the USSR, China, several European countries, the Third World and the USA chose four model samples of Chemical compounds for analyses.

- The visit indicates that inspections are feasible and represent an important deterrent against Chemical Plants that produce materials in violation of a Treaty. Protocols and hardware must be established for inspections.

- Inspections should be restricted to those items that are related to or on Schedule 1 and 2.

- An inspection team should have real-time monitoring capability.

2- **The problem of Data**

The Plants provided limited Data and indicated they could give more data under guarantees to be specified later. Their position highlights the difficulty of protecting confidential information.

3- **Establishment of a Special Laboratory and an Information Centre.**

- A Laboratory under the oversight of an International Scientific Committee, should be established, whose purpose is to implement international programmes which focus on monitoring the Treaty. These programmes should be coordinated with efforts currently underway at other laboratories in several countries.

4- **The Problem of Public Awareness**

- An International Scientific Committee should seek to promote awareness of the danger of proliferation of chemical weapons by organizing:

1. International Conferences of world-wide experts convened to generate further technical support for monitoring the Ban.

2. A program of required Civil Protection in concert with state governments until a convention is in effect.

CD/894
CD/CW/WP.225
28 February 1989

ENGLISH
Original: RUSSIAN

CONFERENCE ON DISARMAMENT

LETTER DATED 27 FEBRUARY 1989 FROM THE REPRESENTATIVE OF THE UNION OF SOVIET SOCIALIST REPUBLICS ADDRESSED TO THE PRESIDENT OF THE CONFERENCE ON DISARMAMENT TRANSMITTING THE TEXT OF THE REPORT ON THE NATIONAL TRIAL INSPECTION CARRIED OUT IN THE USSR TO TEST PROCEDURES FOR THE SYSTEMATIC VERIFICATION OF THE NON-PRODUCTION OF CHEMICAL WEAPONS IN INDUSTRY

I have the honour to submit the text of the report on the national trial inspection carried out in the USSR to test procedures for the systematic verification of the non-production of chemical weapons in industry.

I should be grateful if you could make the necessary arrangements to have the text of this report distributed as an official document of the Conference on Disarmament and of the Ad hoc Committee on Chemical Weapons.

(Signed) Y. NAZARKIN
Ambassador,
USSR Representative to the
Conference on Disarmament

UNION OF SOVIET SOCIALIST REPUBLICS

Report on the national trial inspection carried out in the USSR

Introduction

One of the most important problems being discussed at the present time during negotiations on the elaboration of a convention on the general and complete prohibition and destruction of stockpiles of chemical weapons and production facilities is that of ensuring effective international verification of the non-production of chemical weapons in industry.

In order to expedite work on the convention and to determine whether the proposed verification provisions it contains provide the necessary assurance that civil facilities are used only for purposes that are not prohibited, the Soviet Union took the initiative of conducting a trial inspection to test procedures for the systematic verification of the non-production of chemical weapons in industry. This initiative was supported in the Conference on Disarmament and document CD/CW/WP.213 was prepared as a result of consultations which were held in September 1988. The proposals it contains were used in the elaboration of a scenario with a view to conducting a national trial inspection in the USSR.

This document presents the results of this national trial inspection that was carried out in September-December 1988 at a selected facility in accordance with the provisions of the annex to article VI [2]. The presentation used corresponds in general to that of document CD/CW/WP.213.

A. General approach

1. Objectives of the national trial inspection

The objectives of the national trial inspection were the same as those described in document CD/CW/WP.213. However, as the enterprise in question does not process or use the chemicals it produces, the question of monitoring such processes did not arise.

2. Provisions of the draft convention under which the trial inspection took place: Annex to article VI [2]

A facility producing certain N,N-dialkylaminoethan-2-ols was selected for inspection purposes. The chemicals in question are included in the section of schedule [2] listing compounds that are to be discussed further.

3. Types of on-site inspection carried out

(a) Initial visit for familiarization purposes to verify initial declarations and collect information for the preparation of the "Agreement concerning a facility ...";

(b) Routine on-site inspection.

4. Advance information available to the inspection team

(a) At the time of the initial visit:

Initial declaration concerning the facility in respect of the production of N,N-dialkylaminoethan-2-ols (attachment No. 1);

(b) Notification of proposed production of N,N-dialkylaminoethan-2-ols at that facility in 1989 (attachment No. 2).

The data given in attachments Nos. 1 and 2 on chemical production in 1988 and planned output for 1989 are actual figures.

At the time of the routine on-site inspection:

In addition to the information used during the initial visit, the inspection team had at its disposal the "Agreement on verification arrangements for a facility producing N,N-dialkylaminoethan-2-ols", which was drawn up in the course of the initial visit (attachment No. 3).

5. Type of facility to be inspected

Multipurpose facility 1/ for the production of N,N-dialkylaminoethan-2-ols listed in schedule [2] as to be discussed further.

6. Type of declared activity at the facility

Production of N,N-dialkylaminoethan-2-ols during the financial year. The national trial inspection took place when the facility was in operation.

7. Actual activity at the facility

Actual activity at the facility at the time of the inspection was in accordance with the initial declaration.

With a view to testing the effectiveness of the monitoring system using inspection instruments and procedures, the following possible violations of the convention's provisions were envisaged and studied from a theoretical standpoint:

(a) Production of an undeclared schedule [2] chemical;

(b) The quantity of schedule [2] chemicals produced is inconsistent with the declared needs for permitted uses;

(c) The process path is less than optimal for the production of the declared schedule [2] chemicals, includes superfluous equipment;

1/ By multipurpose facility is meant a facility that can produce a number of products in the class of alkylaminoethan-2-ols.

(d) The volume of production is inconsistent with the declared capacity of the facility;

(e) Presence of an installation identical in terms of process path and equipment with the declared installation for the production of schedule [2] chemicals.

B. Detailed approach

The following, unless otherwise indicated, refers both to the initial visit as well as to routine on-site inspection.

1. The inspection mandate

Mandates for the initial visit and the routine on-site inspection (attachments Nos. 4 and 5) were drawn up in order to define the powers and functions of the inspection team.

2. Composition of the inspection team

The initial visit and the routine on-site inspection were both carried out by the same team of inspectors comprising:

A specialist in monitoring (team leader);

A specialist in chemical technology;

- A specialist in monitoring and measuring instruments and automation;

- A specialist in physical and chemical methods of analysis.

3. Inspection equipment

A list of the instruments required for purposes of the inspection was drawn up during the initial visit:

Flow meters;

Samplers;

Gas chromatographs for sample analysis.

The flow meters and gas chromatographs were provided by the facility. The samplers were of the standard type and made in the USSR. The equipment was assembled at monitoring points on the process path selected during the initial visit. The monitoring equipment was installed, adjusted and calibrated by the staff of the facility during a 24-hour period in the course of a scheduled break in production after the inspectors had completed their initial visit.

The situation created by these measures at the beginning of the routine inspection was as if the facility had actually been placed under systematic international control.

4. Activities prior to the arrival of the inspection team on-site

The management of the facility was notified 10 days in advance of the date of the initial visit and three days before the routine on-site inspection. (This advance notice was necessary so that the arrangements described in the following paragraph could be made for the stay of the inspectors in Dzerzhinsk. Such advance notice will be unnecessary when the convention enters into force.)

5. Advance preparations on-site

The management of the facility made arrangements to provide the inspection team with lodging, meals, work space, transport and medical care prior to their arrival.

Apart from the designation of persons responsible for maintaining contact, no practical advance preparations were made at the facility.

6. Escort and points of contact arrangements

The following group of representatives of the facility was designated for this purpose:

Shop foreman, head of escort;

A member of the production department;

The shop technologist;

A member of the monitoring and measuring instruments and automation unit;

A member of the facility's laboratory - a specialist in physical and chemical analysis methods.

The inspectors had talks with representatives of the facility during the initial visit and the routine on-site inspection.

A telephone line was kept free to allow contact with senior officials of the Ministry of the Chemical Industry of the USSR.

7. Other participants

The national trial inspection was conducted under the direction of a group of specialists from the Ministry of the Chemical Industry of the USSR.

Representatives of the Academy of Sciences of the USSR, the Ministry of Foreign Affairs of the USSR and the Ministry of Defence of the USSR participated as observers in the routine on-site inspection.

8. Duration of the initial visit and the routine on-site inspection

Initial visit: five days, including two days for the preparation of the draft "Agreement on verification arrangements for a facility producing N,N-dialkylaminoethan-2-ols".

Routine inspection: actual inspection - one day;

preparation of report - one day.

9. Measures to protect confidential information

No special measures were taken to protect confidential information since the inspectors, members of the monitoring team and observers were persons who are under a duty to comply with the relevant provisions of Soviet legislation. The degree of confidentiality of the information made available to the inspectors in connection with the performance of their duties was indicated by the management of the facility.

10. Opening conference

The opening conference, chaired by the Chief Engineer of the enterprise, that took place after the inspection team arrived at the facility was devoted to the following matters:

Statement by the inspection team leader concerning the purposes of the inspection and the services that might be required by the inspectors;

Information provided by the management concerning the facility and safety regulations within its precinct;

Agreement on inspection procedures.

11. Types of records needed and/or audited

Material flow diagram in respect of N,N-dialkylaminoethan-2-ol production.

Feedstock records of the materials and technical supplies department.

Accounting records indicating the amount of feedstock used and the volume of finished products.

Records of the sales department on deliveries of end products and consumers.

12. Plant orientation tour

A plant orientation tour took place only during the initial visit. The facility was checked over during the subsequent inspection.

13. Inspection of areas and facility equipment

(a) During initial visit:

The various parts of the facility were inspected in detail (two production areas, including the premises used for the storage of feedstock and end products, the facility's control room, the administration building and the laboratory).

The features of the equipment and the configuration of the facility were studied during examination of the process path. This information was used to select key points for the monitoring of the production process.

The monitoring points for measuring feedstock flow and end products were situated on:

The reaction vessel raw material feed line - two points;

The outlet from the reaction vessel - one point;

Lines feeding the end product into containers for storage - two points.

Monitoring points for sampling the final product are situated on:

The outlet from the reaction vessel - one point;

Lines feeding the product into containers for storage - two points.

The specific location of the key monitoring points is indicated on the main flow diagram (to be retained at the facility).

(b) During routine on-site inspection:

The inspection team performed its functions on the basis of the inspection mandate and the "Agreement on verification arrangements ...". Various members of the staff of the facility were questioned.

14. Inspection of operation procedures

The inspectors checked the process equipment to ensure that no changes had been made, no connections had been added and that basic elements had not been replaced; they also checked the seals on the monitoring and measuring instruments and samplers and verified the instrument readings stored in the computer memory and compared them with the facility's records.

As the monitoring equipment was installed in December 1988, data on actual production of N,N-dialkylaminoethan-2-ols for 1988 were checked using the facility's books. In the course of the second (international) stage of the experiment, such data will be checked by monitoring equipment installed at the facility.

Particular attention was paid during the inspection to possibilities of the production of schedule [1] chemicals at the facility. An analysis of the production process and process equipment revealed that such possibilities were non-existent.

15. Sampling and sample-taking procedures

During the initial visit, samples were taken and analysed to verify the chemical structure of the declared chemicals. These samples were taken under the supervision of one of the inspectors by the staff of the facility in the warehouse where finished products were stored.

Control samples were taken by means of an automatic device at the request of the inspectors during the routine on-site inspection. For this purpose, a special instruction was included in the automatic sampling program.

16. Handling of samples

The sample taken during the initial visit was taken to the facility's laboratory in the company of an inspector, who was present when it was analysed.

After the facility had been placed under systematic international control and throughout the period preceding the routine inspection, samples were taken on a random basis, hermetically sealed and stored in a sealed container. The entire sampling, sealing and storage system was automatic. When the inspectors arrived at the facility, the storage container was opened in their presence and two samples removed.

17. Analysis of samples

The samples taken during the initial visit were analysed on-site (at the facility's laboratory) by representatives of the facility in the presence of one of the inspectors.

The samples taken automatically during the period preceding the routine inspection were analysed in a similar fashion in the course of the inspection (at the request of the inspectors).

18. Type(s) of analyses

Samples were analysed on-site only with a view to monitoring the presence of declared chemicals because the facility's laboratory lacks the technical equipment required to determine the presence (absence) of other chemicals listed in the relevant schedules of the convention.

19. Documentation of the inspection

19.1. Initial visit

(a) Inspection team's report to the technical secretariat on the outcome of the initial visit (attachment No. 6);

(b) Draft "Agreement on verification arrangements ..." (attachment No. 3).

19.2. Routine on-site inspection

Inspection team's report to the technical secretariat on the outcome of the inspection (attachment No. 7).

Annex to draft "Agreement on verification arrangments ...". Schematics:

Layout diagram of the "Sintez" production combine;

Schematic arrangements for systematic monitoring of the chemical production unit;

Schematic of the systematic monitoring of N,N-dialkylaminoethan-2-ol production;

Basic material flow diagram at the facility;

Facility's N,N-dialkylaminoethan-2-ol production plan;

Layout of the N,N-dialkylaminoethan-2-ol production unit;

Basic material flow and process flow diagram of N,N-dialkylaminoethan-2-ol production whose removal from the facility is authorized - with a view to illustrating the comprehensive nature of future agreements of this kind. Once the convention enters into force, such diagrams should be integral parts of the "Agreement on verification arrangements ...", although they will be kept at the facility. The results of sample analyses will also be kept at the facility.

20. Evaluation by inspectors

The data supplied by the facility's management provided an adequate basis for the verification of the initial declaration, the preparation of the draft "Agreement on verification arrangments ...", and the performance of the inspection team's functions.

Representatives of the facility who accompanied the team of inspectors assisted them as necessary by providing documents and explanations.

A great deal of work was done by the representatives of the facility in installing, adjusting and calibrating the monitoring and measuring equipment following the initial visit.

21. Closing conference

No special closing conference was held because virtually all problems were resolved in the course of the inspection and the preparation of the reports on its results.

22. Anomalies, disputes and complications

Possible anomalies (five cases) were modelled artificially in order to check the effectiveness of the monitoring system, determine procedures for detecting anomalies, find possible ways of resolving disputes between the

management of the facility and the inspection team and enable the inspection team to reach appropriate conclusions and proposals (attachment No. 8).

23. Report of the inspection team

Report on the outcome of the initial visit (attachment No. 6).

Report on the outcome of the routine inspection (attachment No. 7).

The reports were drawn up at the facility.

24. Impact of the inspection on facility operations

In order to minimize production losses (in physical terms and in value terms), the monitoring and measuring equipment and the sampling equipment was assembled during a scheduled break in production. The inspection visits had no adverse effects on facility operations.

The cost of preparing and installing the verification system at the facility was 270,000 roubles. The period of trial operation required to adjust the system properly was determined to be six months.

C. Conclusions

This trial inspection demonstrated the practical applicability of the provisions of the annex to article VI [2] of the draft convention.

1. The inspection mandate

The mandate drawn up in the course of the trial inspection strictly defines the powers of the inspection team and in general makes it possible to achieve the general purpose of routine on-site inspections of facilities in respect of the production of schedule [2] chemicals, and also minimizes the possibility of disputes. The careful preparation of the "Agreement on verification arrangements ..." serves the same purpose.

2. Composition of the inspection team

The numerical and occupational composition of the inspection team that was formed was found to be the best for routine inspection purposes. The question of including technical staff in the team was not broached.

3. Inspection equipment

Inspection monitoring and measuring equipment, whose technical specifications correspond to the purposes and objectives of verification in each specific case and which is intended to monitor not only the volume of output but also the type of chemicals produced, is available at the facility. The inspection team can bring along a measurement standard to verify and calibrate this equipment before it makes its inspection.

The experiment demonstrated that, for verification purposes, the monitoring equipment at the facility should be started up at an earlier date -

approximately three months before the results of the trial inspection are to be collated. The specifications of such equipment should be identical for all participating States.

4. Activities prior to the arrival of the inspection team

5. Advance preparations on-site

Selection by the facility's management of the escort and official responsible for maintaining contact.

6. Escort and points of contact arrangements

Presence of persons escorting the inspection team found to be necessary and useful.

7. Other participants

8. Duration of inspection and initial visit respectively

(a) The initial visit took five days. The time was used mainly for the necessary orientation tour of the facility and for careful preparation of the "Agreement on verification arrangements ...". The possible lengthening of the initial visit by one or two days, depending on the characteristics of the facility, is not excluded.

(b) Most probably, one to three days are needed for a routine inspection. Its duration will largely depend on the quality of preparation of the "Agreement on verification arrangements ...".

9. Measures to protect confidential information

Despite the fact that those taking part in the experiment were all Soviet citizens familiar with the relevant provisions of State legislation in force, the management of the facility drew their attention, in the course of the inspection, to the level of confidentiality of various data. The possible volume and levels of confidentiality of data were determined in a preliminary manner. The elaboration of relevant provisions in negotiations on régimes of confidentiality of information is also a possibility.

10. Opening conference

The Conference took less than an hour.

11. Types of records needed and/or audited

A carefully prepared "Agreement on verification arrangements ...", indicating the types of records, constitutes the basis for an inspection team's achievement of the purposes of routine inspections.

12. Plant orientation tour

An orientation tour seems necessary in connection with the initial visit of a facility. Such tours may also be organized, as required, during the subsequent routine inspections.

13. Inspection of areas and facility equipment

Each subsequent inspection would be expedited and its effectiveness increased by the presence at the facility of detailed photo-documentation of the technological set-up, and by the fixing of seals during previous inspections not only on monitoring and measuring instruments but also on key components of equipment.

14. Inspection of operation procedures

Once monitoring and measuring and sample-taking devices had been introduced into the production process, no difficulties arose in the verification of specific quantities of the materials being processed.

15-17. Sampling and sample-taking procedures, handling of samples

The use of sample-taking devices, operating automatically, in accordance with a pre-set programme (known to the Technical Secretariat but not to the administration and personnel of the facility) with subsequent hermetic protection of the samples and their accumulation in containers fixed with seals, serves to ensure the effectiveness of monitoring in the period between routine inspections.

18. Analysis of samples

Measurement standards should be provided for the possible calibration and fine-tuning of the instruments used for analyses.

19. Documentation

In many cases the set of data obtained on some aspect of the inspection was of a highly confidential character, although the data taken separately would have varying degrees of confidentiality. Therefore all types of documentation used or processed in the course of the inspection should be treated as confidential.

20. Evaluation by inspectors

21. Closing conference

22. Anomalies, disputes and complications

23. Report of the inspection team

It was considered useful to have a standard report form.

Where no violations of the provisions of the convention are found, the report of the inspection team on the results of its inspection may be brief, for example, in the form of replies to questions to be clarified by the inspectors under their inspection mandate.

Of course, where, in the opinion of the inspection team, any violations of the provisions of the convention are found, a more detailed report on the results of the inspection must be drawn up. It should include the part of the information confirming the detected violations, including confidential information. This report should be submitted to the Technical Secretariat.

The other part of the information relating to such a report and possessing a higher degree of confidentiality is kept at the facility together with a copy of the report.

24. Impact of the inspection on facility operations

A routine inspection carried out in the course of the experiment, under conditions where the facility was in fact already undergoing systematic monitoring, did not interfere with its production activities, although a number of persons from the facility's management and technical personnel were for a while diverted from the performance of their normal duties.

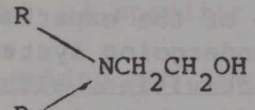
Attachment No. 1

INITIAL DECLARATION CONCERNING A FACILITY PRODUCING
N,N-DIALKYLAMINOETHAN-2-OLS

("Sintez" Production Association, Dzerzhinsk, Gorky region, USSR)

1. Chemical name, common or trade name used by the facility, structural formula and Chemical Abstracts Service Registry No.:

N,N-dialkylaminoethan-2-ols, dialkylaminoethanols



R = CH_3 (100-37-8)

R = C_2H_5 (108-01-0)

2. Total amount produced, consumed, imported and exported in the previous calendar year:

787.5 tonnes were produced in 1988.

There were no exports.

3. Purposes for which the key precursor chemical is produced, consumed or processed:

(a) Conversion on-site (specify product type):

There is no on-site conversion.

(b) Sale or transfer to other domestic industry (specify final product type):

All of the facility's output is sent to user enterprises situated outside the facility.

In 1988, a total of 787.5 tonnes of N,N-dialkylaminoethan-2-ols were utilized by 34 user enterprises for the manufacture of pharmaceuticals, emulsifiers, shoe polish, household chemical products, paints, thermal insulation, polyurethane foams, reagents, monomers for organic-glass manufacturing, wall panels, and for use in synthetic yarn production technology.

(c) Export of a key precursor (specify which country):

There were no exports.

(d) Other:

N,N-dialkylaminoethan-2-ols were produced at one unit in one shop.

FACILITY

1. Name of the facility and of the owner, company, or enterprise operating the facility:

Shop No. 8 of the "Sintez" Production Association, Ministry of Chemical Industry of the USSR.

2. Exact location of the facility (including the address, location of the complex, location of the facility within the complex including the specific building and structure number, if any):

City of Dzerzhinsk, Gorky region, "Sintez" Production Association, Site No. 2, situated 8.5 km east of the centre of the city. The installation adjoins building No. 36 of shop No. 8.

3. Whether the facility is dedicated to producing or processing the listed key precursor or is multi-purpose:

The facility is multi-purpose (in this case a multi-purpose facility is taken to mean a facility at which a number of alkylaminoethan-2-ols can be produced) and is intended for the production of N,N-dialkylaminoethan-2-ols, which are listed in schedule [2] for further discussion.

4. Main orientation (purpose) of the facility:

The main orientation is the production of N,N-dimethyl(ethyl)-aminoethan-2-ols.

5. Whether the facility can readily be used to produce a schedule [1] chemical or another schedule [2] chemical. Relevant information should be provided, when applicable:

The unit produces chemicals of the N,N-dialkylaminoethan-2-ols class and cannot be readily used to produce any schedule [1] chemical or other schedule [2] chemicals.

6. Production capacity for the declared schedule [2] chemical(s):

The total production capacity of the unit synthesizing N,N-dialkylaminoethan-2-ols amounts to approximately 1,000 tonnes per year.

7. Which of the following activities are performed with regard to the chemicals:

(a) Production:

N,N-dialkylaminoethan-2-ols are produced.

(b) Processing with conversion into another chemical:

There is no such processing.

(c) Processing without chemical conversion:

There is no such processing.

8. Whether at any time during the previous calendar year declared key precursors were stored on-site in quantities greater than [...] [tonnes]:

N,N-dialkylaminoethan-2-ols were not stored at the facility; they were sent to consumers as they were produced.

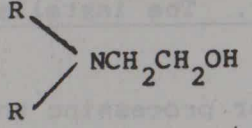
Attachment No. 2

NOTIFICATION
concerning intended production of
N,N-dialkylaminoethan-2-ols in 1989

("Sintez" Production Association, Dzerzhinsk, Gorky region, USSR)

1. Chemical name, common or trade name used by the facility, structural formula and Chemical Abstracts Service Registry No.:

N,N-dialkylaminoethan-2-ols, dialkylaminoethanols



R = CH_3 (100-37-8)

R = C_2H_5 (108-01-0)

2. Total amount to be produced, consumed, imported and exported in 1989:

It is planned to produce 965 tonnes in 1989.

No exports or imports are anticipated.

3. Purposes for which the key precursor chemical will be produced, consumed or processed:

(a) Conversion on-site (specify product type):

No on-site conversion is planned.

(b) Sale or transfer to other domestic industry:

All of the facility's output will be sent to user enterprises situated outside the facility.

The plan for 1989 provides for the utilization of 965 tonnes of N,N-dialkylaminoethan-2-ols by 34 user enterprises for the manufacture of pharmaceuticals, emulsifiers, shoe polish, household chemical products, paints, thermal insulation, polyurethane foams, reagents, monomers for organic-glass manufacturing, wall panels, and for use in synthetic yarn production technology

(c) Export of a key precursor (specify which country):

No exports are anticipated.

Facility to be used for production

1. Name of the facility and of the owner, company, or enterprise operating the facility:

Shop No. 8 of the "Sintez" Production Association, Ministry of Chemical Industry of the USSR.

2. Exact location of the facility (including the address, location of the complex, location of the facility within the complex including the specific building and structure number, if any):

City of Dzerzhinsk, Gorky region, "Sintez" Production Association, Site No. 2, situated 8.5 km east of the centre of the city. The installation adjoins building No. 36 of shop No. 8.

3. Whether the facility is dedicated to producing or processing the listed key precursor or is multi-purpose:

The facility is multi-purpose (in this case a multi-purpose facility is taken to mean a facility at which a number of alkylaminoethan-2-ols can be produced) and is intended for the production of N,N-dialkylaminoethan-2-ols, which are listed in schedule [2] for further discussion.

4. Main orientation (purpose) of the facility:

The main orientation is the production of N,N-dimethyl(ethyl)-aminoethan-2-ols.

5. Whether the facility can readily be used to produce a schedule [1] chemical or another schedule [2] chemical. Relevant information should be provided, when applicable:

The unit produces chemicals of the N,N-dialkylaminoethan-2-ols class and cannot be readily used to produce any schedule [1] chemical or other schedule [2] chemicals.

6. Production capacity for the declared schedule [2] chemicals:

The total production capacity of the unit synthesizing N,N-dialkylaminoethan-2-ols amounts to approximately 1,000 tonnes per year.

7. Which of the following activities are to be performed with regard to the chemicals:

(a) Production:

It is intended to produce N,N-dialkylaminoethan-2-ols.

(b) Processing with conversion into another chemical:

Not intended.

(c) Processing without chemical conversion:

Not intended.

8. Whether at any time during 1989 it is intended to store declared key precursors on-site in quantities greater than [...] [tonnes]:

It is not planned to store N,N-dialkylaminoethan-2-ols at the facility; they will be sent to users as they are produced.

Attachment No. 3

Agreement on verification arrangements for a facility producing N,N-dialkylaminoethan-2-ols

1. Identification of the facility

(a) Facility identification code: (will be assigned by the Technical Secretariat)

(b) Name of the facility: Shop No. 8

(c) Owner of the facility: Ministry of Chemical Industry of the USSR

(d) Name of the company or enterprise operating the facility: "Sintez" Production Association, Dzerzhinsk, Gorky region, USSR

(e) Exact location of the facility: The "Sintez" Production Association is located east of the city of Dzerzhinsk in the Gorky region and occupies two sites 13.0 and 8.5 km east of the centre of the city of Dzerzhinsk. The sites are not physically connected (fig. 1).

The unit producing N,N-dialkylaminoethan-2-ols is located on the second site of the "Sintez" Production Association, next to building No. 36 (fig. 2).

Location of relevant support facilities: within the complex of the production association: e.g. research and technical services, laboratories, medical centres, waste treatment plants (figs. 3 and 4).

The following are the support facilities for the production of N,N-dialkylaminoethan-2-ols:

Diethylamine warehouse - building No. 123;

Ethylene oxide warehouse - building No. 121;

Finished products warehouse - building No. 75;

Shop laboratory - building No. 36;

Liquid waste incinerators - building No. 156.

There are no other research and technical services at the "Sintez" Production Association connected with the production in question.

A medical centre serving the entire complex is situated in building No. 99 on Site No. 2.

(f) Determination of the area(s) and place(s)/site(s) to which inspectors shall have access:

For carrying out the work of the inspection team, the inspectors shall be entitled to access to the main facility producing N,N-dialkylaminoethan-2-ols and to all supporting facilities, namely:

Building No. 36 - shop administration, shop laboratory, and the unit producing the above products;

Diethylamine warehouse - building No. 123;

Ethylene oxide warehouse - building No. 121;

Finished products warehouse - building No. 75;

Liquid waste incinerators - building No. 156;

Cafeteria;

Medical centre - building No. 99;

Administration of "Sintez" P.A. - Site No. 1.

2. Information on the facility

(a) Data on the production process:

The unit at the facility is designed for, and used for, the production of a number of N,N-dialkylaminoethan-2-ols;

Type of process: continuous synthesis and batch separation;

Type of equipment: standard, as described in catalogues of equipment used in the USSR;

Technology employed; interaction of ethylene oxide with excess dialkylamine in liquid phase under pressure;

Process engineering particulars: measuring instruments, ideal-displacement reactor, rectification.

(b, c) Data on processing without chemical conversion (process engineering particulars and end-product).

Data on processing with conversion into another chemical (description of the conversion process, process engineering particulars and end-product):

There is no on-site conversion. The products are sent to user enterprises located outside the facility.

(d) Data on waste treatment:

Distillation wastes after rectification are not kept at the production unit and are despatched, as they accumulate, to the incinerators in building No. 156.

(e) Data on safety and health measures at the facility:

All work at the facility is performed in accordance with the safety rules prescribed in the USSR for substances of this class. No special health measures are applied in the production of N,N-dialkylaminoethan-2-ols.

While working at the facility, the inspectors should be informed of the safety rules and required to sign a statement to that effect.

(f) Data on clean-up procedures and general overhauls:

Preventive maintenance - for seven days once a year.

General overhaul - in accordance with a schedule (kept at the facility) depending on the type of equipment.

(g) Data on feedstocks used in the production or processing of declared chemicals (type and capacity of storage):

Dialkylamines and ethylene oxide are stored in 10-50 m^3 steel containers.

(h) Maps and plans of the facility:

Layout diagram of "Sintez" P.A. (fig. 1)

Layout diagram of unit producing dialkylaminoethanols (fig. 2) at "Sintez" P.A.

Diagram of the principal material flows at dialkylaminoethanol production facility (fig. 3)

Plan of the dialkylaminoethanol production facility (fig. 4)

Schematic of the material flows in production of dialkylaminoethanols (fig. 5)

Schematic of arrangements for systematic monitoring of chemical plants (fig. 6)

Schematic of arrangements for systematic monitoring of production of dialkylaminoethanols (fig. 7).

2.1. Storage of information

The information mentioned in 2 (a)-(g) above, except for that in 2 (f), shall be kept in the Technical Secretariat at the degree of confidentiality established for such information.

The information mentioned in 2 (h) shall be kept at the facility by the management under lock and key. If needed, this information may be placed at the disposal of the head of the inspection team and the specialist in chemical technology.

3. Number and modalities of inspections

Four routine inspections per year seem necessary and sufficient. Specific dates for making the inspections shall not be planned in advance.

4. Verification measures and identification of the specific area(s) and place(s) of the facility to be inspected

(a) Identification of the relationship between feedstocks and the quantity of end-products:

Analysis of records, monitoring of the consumption of initial feedstocks and of the quantity of resulting end-products, with the help of installed monitoring equipment.

(b) Identification of key points for measurement (KMP) and sample-taking (STP) (figs. 6 and 7):

The key measurement points shall be situated on the lines supplying the feedstocks to the reactor (2 points), the line of leading the product out of the reactor (1 point) and the lines feeding the finished product into the bulk containers (2 points).

The key points for taking samples from the flows of finished product shall be situated on the line leading the product out of the reactor (1 point) and the lines feeding the finished product into the bulk containers (2 points). At these points automatic sample-taking devices shall be installed, operating in accordance with a computerized random-sampling programme. The samples taken shall automatically pass into a container which has been fixed with seals by the inspectors. The specific locations of the key points for measurement and sample-taking are indicated on the schematic of the process path (which shall be kept at the facility).

(c) Identification of methods for continuous monitoring and surveillance:

The quantities of feedstocks and of end-products shall be continuously monitored with the help of permanently functioning flowmeters installed at the KMPs.

The composition of the reaction mixture shall be periodically checked by analysis of the samples taken by the automatic devices installed at the STPs.

The accumulation of the data gathered at the KMPs and the control of the sampling devices installed at the STPs shall be effected with the help of computers and be protected from outside interference.

5. Inspection activities

5.1. Mode of routine inspection

A detailed plan for carrying out inspections shall be drawn up at the opening conference.

5.2. Indication of the scope of the inspection effort in agreed areas under ordinary circumstances

(a) Examination of relevant records:

The inspectors shall be entitled to acquaint themselves with the types of records indicated in 2 (f), 2 (h), 7.1 and 7.2 (a), in accordance with their orientation as indicated in the inspection mandate.

(b) Identification of relevant plant equipment:

Study of the process path to determine whether the installed equipment is consistent with the purposes and volumes of production.

(c) Validation of measuring equipment:

Verification of the measuring equipment at the facility:

Spot-check of the accuracy of measuring instruments, if necessary using independent measurement standards (by agreement with the management).

(d) Taking samples and their analysis on-site:

This shall be done by employees of the facility in the presence of an inspector, using the facility's equipment.

(e) Verification of the inventory of feedstocks and finished products drawn up by the operator of the facility, against the quantities actually present at the time of inspection.

(f) Observation of the movement of materials, to verify consistency with that existing at the time of the initial visit.

(g) Installation, servicing and inspection of surveillance and monitoring instruments belonging to the Technical Secretariat.

5.3. Specific arrangements for the use of special equipment

Extraction of the data accumulated since the preceding visit.

Verification and recalibration of monitoring equipment (if necessary).

Fixing of seals to instruments and installation of devices preventing interference with the operation of monitoring equipment.

6. Provisions governing sample-taking, on-site analyses of samples and on-site analysis equipment

Samples shall be taken with the help of automatic sample-taking devices installed at the agreed points (STPs) in the process path.

The sample-taking schedule (programme) during the period between inspections shall be determined by the inspectors.

The samples taken prior to the arrival of the inspectors shall be kept in containers which ensure their integrity.

The samples shall be analysed by the personnel of the facility in the presence of the inspectors in accordance with agreed standard methods (gas-liquid chromatography, chromatograph "TsvET-500, No. ...").

7. Records

7.1. Types of records

The records to be examined shall be determined after the initial visit and shall include the following:

(a) Accounting records:

Feedstock records (quantity in store, quantity used in the process and quantity received for storage);

End-product records (quantity of output, quantity delivered to users, users);

Records concerning off-specification end-products (quantity, date of production, quantity destroyed and date of destruction).

(b) Operating records:

Process flow schematic;

Quantity of wastes resulting from the process and index of feedstock used per unit of finished product;

Logs of the operators of the facility;

Recorded readings of the measuring instruments at the facility;

Results of analyses;

Safety instructions.

(c) Calibration records.

7.2. Location and language of records

(a) Copies of the documentation describing the basic features of the process, the configuration of the facility and its principal equipment at the time of the initial vist shall be kept in a safe allocated to the Technical Secretariat at the facility.

(b) Accounting, operating and monitoring records dealing with day-to-day production activities shall be kept at the facility, ready to be made available to the inspection team not later than one hour after its arrival at the facility.

(c) All records retained at the facility are kept in the language of the host party.

7.3. Access to records

Only leader of the inspection team shall have access to the totality of the records referred to in 7.2 above. Other members of the inspection team shall have access to the particular records that are relevant to their specialization as indicated in the mandate.

7.4. Retention period of records

The records referred to in 7.2 (a) shall be kept at the facility throughout the entire time that the facility is under international control;

The records referred to in 7.2 (b) shall be kept at the facility for one and a half years.

8. Services to be provided by the facility

During the stay of the team of inspectors in the area of the facility, it shall provide them with transport, personal protective equipment available at the facility (if necessary), working space at the facility, qualified personnel and agreed types of instruments for analysis of samples, communications with the Technical Secretariat and the national control authority, and qualified medical care (if necessary).

9. Specific facility health and safety rules and regulations to be observed by inspectors

In the course of their activities, the inspectors shall observe the safety rules and regulations adopted at the facility. At the beginning of each visit they shall be required to acquaint themselves with the safety rules and regulations and sign a statement to that effect.

10. Changes, revision and updating of advance information to be provided at the facility

Additional information as agreed with the management shall be prepared for the next trip of the inspectors to the facility.

11. Interpretation services

Where necessary, the management shall provide the inspection team with interpreters, whose services shall be remunerated at the expense of the Technical Secretariat.

Attachment No. 4

MANDATE FOR THE INITIAL VISIT TO A FACILITY PRODUCING SCHEDULE [2] CHEMICALS

1. Title and number of the decision by the Technical Secretariat on the grounds of which the initial visit to the facility in question is to be made.

2. Composition of the inspection team:

A specialist in monitoring (team leader)

A specialist in chemical engineering

A specialist in monitoring and measuring instruments and automation

A specialist in physical and chemical methods of analysis.

3. Duration of the initial visit: 3-5 days.

4. Purpose of the initial visit:

To verify information provided concerning the facility to be inspected;

To study the process-flow diagram and the material-flow diagram prepared by the facility's management and to define the key monitoring points and the methods and technical means for monitoring.

5. Elaboration on the basis of the specific characteristics of the facility in question of proposals concerning the number, intensity, duration, timing and mode of international systematic inspections.

6. Elaboration of a draft agreement on international systematic monitoring of the facility in question.

7. Preparation and submission to the Technical Secretariat of a report on the results of the initial visit to the facility and transmission of a copy of that report to the representative of the receiving State.

Attachment No. 5

MANDATE FOR THE CONDUCT OF AN INTERNATIONAL SYSTEMATIC INSPECTION OF A FACILITY PRODUCING SCHEDULE [2] CHEMICALS

1. Title and number of the decision of the Technical Secretariat on the grounds of which the inspection of the facility is to be made.

2. Composition of the inspection team:

A specialist in monitoring

A specialist in chemical engineering

A specialist in monitoring and measuring instruments and automation

A specialist in physical and chemical methods of analysis.

3. Duration of the inspection: 1-3 days.

4. Purpose of the inspection:

To verify that:

The facility is not being used to produce any schedule [1] chemical;

The quantities of schedule [2] chemicals produced at the facility are consistent with the advance notification concerning the facility;

The schedule [2] chemicals produced at the facility are not being diverted or used for purposes prohibited by the convention.

5. Conduct of an inspection of a scope consistent with the agreement concerning the facility.

6. Conduct, as necessary, of additional investigations at the facility in order to elucidate matters having given rise to doubt concerning the fullness and objectivity of the information received concerning the facility's activities.

7. Preparation and submission to the Technical Secretariat of a report on the results of the inspection and transmission of a copy of that report to the representative of the receiving State.

Attachment No. 6

REPORT

of an inspection team (team code) to the Technical Secretariat on the results of an initial visit

1. Facility: Gorky region, city of Dzerzhinsk, "Sintez" production association, shop No. 8, identification code ... .

2. Chemicals listed in schedule [2] produced at the facility: N,N-dialkylaminoethan-2-ols.

3. In accordance with mandate No. ... dated ... from the Technical Secretariat, an inspection team comprising:

A specialist in monitoring (team leader)

A specialist in chemical engineering

A specialist in monitoring and measuring instruments and automation

A specialist in physical and chemical methods of analysis

carried out the initial visit to the facility producing schedule [2] chemicals that has the identification code ... .

4. In the course of the initial visit, verification was made of the accuracy of the information submitted concerning the facility in the Initial Declaration (title, number and date of the official document).

The inspection team found the actual situation at the facility to be consistent with the information submitted in the Initial Declaration. There are no differences in the assessment of the consistency of the initial declarations with the actual situation between the inspection team on the one hand and the representatives of the National Committee and the facility's management on the other.

5. Following study of the process-flow diagram and the material-flow diagram (which are kept under lock and key at the facility) and examination of them on-site, the key monitoring points (total number: five) and the methods and technical means for monitoring (automatic sample-taking, the storage of samples and on-site analysis during the regular visit to the facility, continuous measurement of material flows, and automatic locking of all the monitored parameters in the memory of a computer that operates automatically and is protected against outside interference) were defined. The specifications of the monitoring and measuring equipment proposed by the facility are consistent with the aims and requirements of international systematic monitoring; by agreement with the facility's management, this equipment will be installed on (date). Following the installation of the equipment, a further visit should be made to the facility to initiate monitoring.

In view of the characteristics of the facility and the technical characteristics of the monitoring equipment to be installed, four on-site inspections should be carried out at the facility per year.

6. The requisite information on the facility and proposals for initiating systematic international monitoring are set out in the draft agreement concerning the facility (attached).

7. A copy of the present report has been transmitted to the representative of the receiving State.

Leader of the inspection team:

Members of the inspection team:

Attachment No. 7

REPORT

of an inspection team to the Technical Secretariat on the results of an international systematic inspection of a facility for the production of schedule [2] chemicals

1. Facility: USSR, Gorky region, city of Dzerzhinsk, "Sintez" production association, shop No. 8, identification code ... .

2. In accordance with mandate No. ... dated ... from the Technical Secretariat, an inspection team comprising:

A specialist in monitoring (team leader)

A specialist in chemical engineering

A specialist in monitoring and measuring instruments and automation

A specialist in physical and chemical methods of analysis

carried out an inspection of the facility producing schedule [2] chemicals that has the identification code ... .

3. The scope of the inspection was consistent with the agreement concerning the facility. As a result of the inspection, it was found that:

The facility is not being used to produce any schedule [1] chemical;

The quantities of schedule [2] chemicals produced at the facility are consistent with the advance notification concerning the facility;

The schedule [2] chemicals produced at the facility are not being diverted or used at the enterprise in question for purposes prohibited by the convention;

The convention is not being breached in any way.

4. The monitoring and measuring inspection instruments have been certified and calibrated and are ready for further use in accordance with the agreement concerning the facility.

5. A copy of the present report has been transmitted to the representative of the receiving State.

Leader of the inspection team:

Members of the inspection team:

Attachment No. 8

POSSIBLE INSTANCES OF DISCREPANCY BETWEEN THE ACTUAL SITUATION AND EARLIER DECLARATIONS CONCERNING A FACILITY

(Studied from a theoretical standpoint)

Facts that may be uncovered during an inspection	Procedures whereby the discrepancy was revealed	Inspection team's findings and action	Possible explanations by the facility's management	Inspection team's proposals
1	2	3	4	5
1. Production of schedule [2] chemicals	1. Analysis of samples downstream of the reaction vessel and the separator 2. Analysis of the accounting records for feedstocks and end-products	Breach of article VI of the convention as regards declaration of the production of schedule [2] chemicals. Immediate notification to the Technical Secretariat	1. Emergence of users not provided for in the production plan 2. Presentation to the inspectors of the orders from the unplanned-for users and of the accounting records concerning quantity, users and permitted purposes of use	Conduct "ad hoc" inspections at enterprises using these chemicals and establish an appropriate monitoring system on the initiative of an international organ
2. The quantity of schedule [2] chemicals produced is inconsistent with the declared needs for permitted uses	1. Analysis of the readings of the instruments monitoring flows of feedstocks and end-products 2. Analysis of the accounting records for feedstocks and end-products 3. Analysis of the order and delivery documents	Breach of article VI of the convention as regards advance notifications. Immediate notification to the Technical Secretariat	1. Emergence of an unplanned-for demand for permitted purposes 2. Presentation of the documents relating to users' orders for additional deliveries of chemicals in connection with the unplanned-for increase in demand	Conduct inspections at user enterprises, with precise determination of the balance of production and use of schedule [2] chemicals for permitted purposes
3. The process path is less than optimal for the production of the declared schedule [2] chemicals, includes superfluous equipment	On-site analysis of the production technology and process path	The facility constitutes a risk in view of the possibility of use of its equipment for purposes prohibited by the convention. The inspection team substantiates this finding by specific examples Transmission to the Technical Secretariat of the findings and evidence from the inspection and of the explanations by the facility's representatives	Substantiation of the need for all the existing items of equipment for the production process in question	Examine the need for change in the arrangements for monitoring the facility and for corresponding amendments in the agreement concerning the facility

Attachment No. 8 (contd.)

1	2	3	4	5
4. The volume of production is inconsistent with the the declared capacity of the facility: the declared capacity substantially exceeds the amount of product actually produced	1. Comparative analysis of the declarations and the accounting records at the facility concerning the quantity of product produced and confirmation of this quantity from the readings of the instruments for monitoring flows of feedstocks and product 2. On-site analysis of the process path	The presence of excess capacity for production of schedule [2] chemicals gives rise to misgivings in view of the possibility of use of that capacity for prohibited purposes	Presentation of the future demand and of the plans for meeting it within the permitted purposes	Request the receiving State to provide information on plans for the use of the excess capacity
5. Presence of an installation identical in terms of process path and equipment with the declared installation for the production of schedule [2] chemicals	Visual inspection of the declared facility	There is undeclared capacity for the production of schedule [2] chemicals	Substantiation of the designation of the installation for the production of chemicals not listed in the schedules in in the convention	Include in the agreement concerning the facility a rider providing for the establishment of sample-taking monitoring systems at the undeclared installation

Layout diagram of the "Sintez" production association

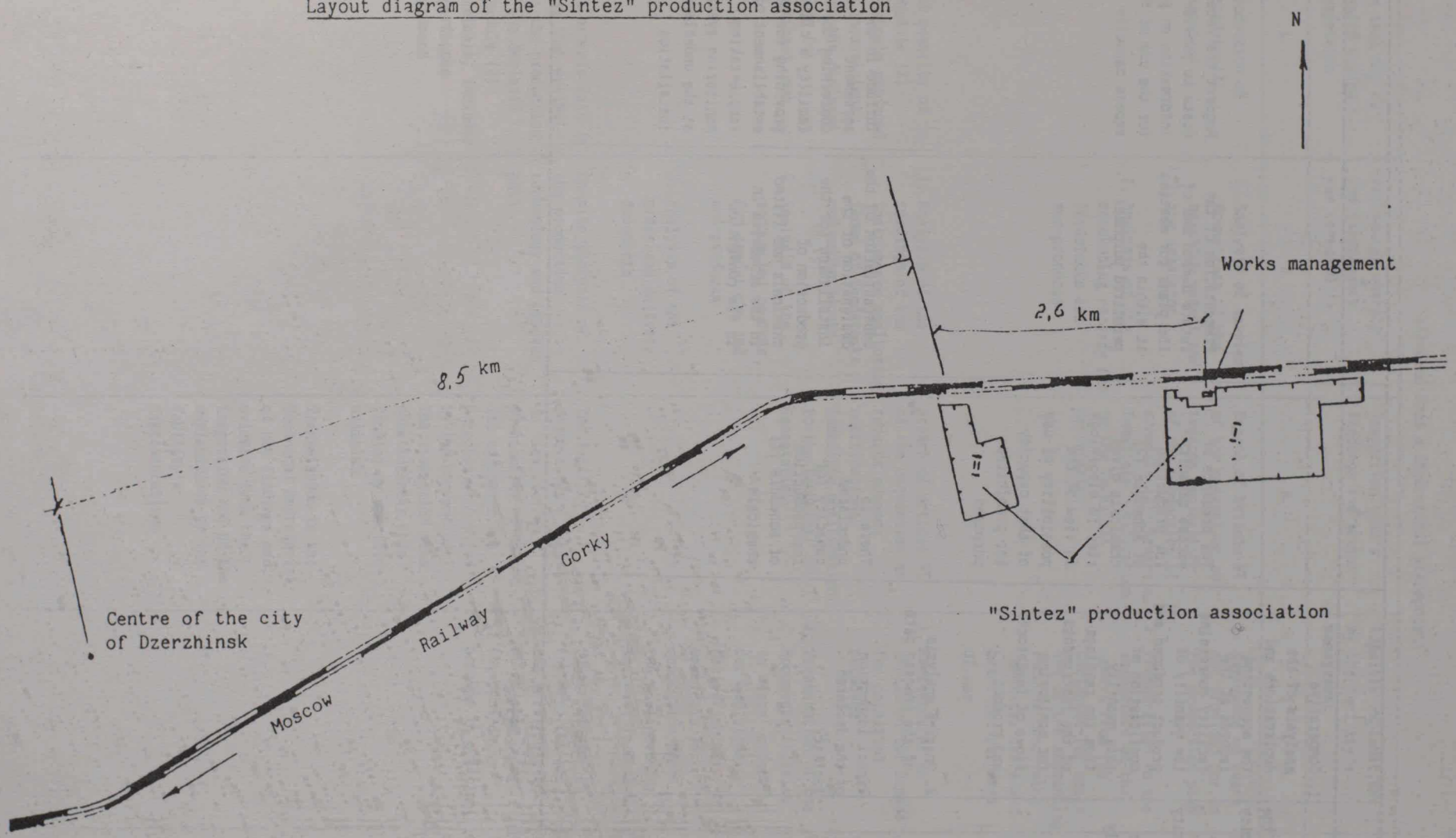


Figure 1

Layout diagram of the dialkylaminoethanol production unit at the "Sintez" production association

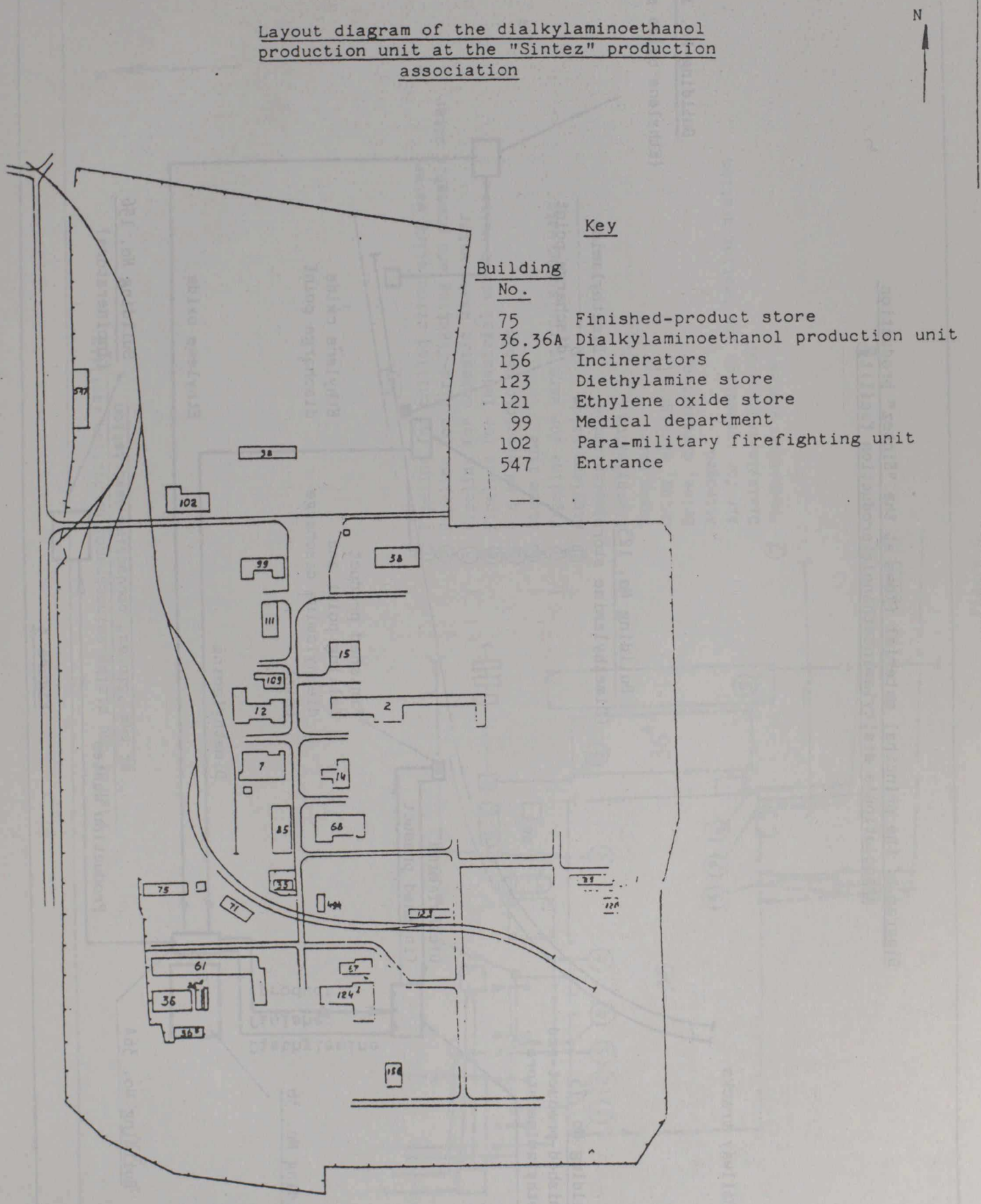


Figure 2

Diagram of the principal material flows at the "Sintez" production association's dialkylaminoethanols production facility

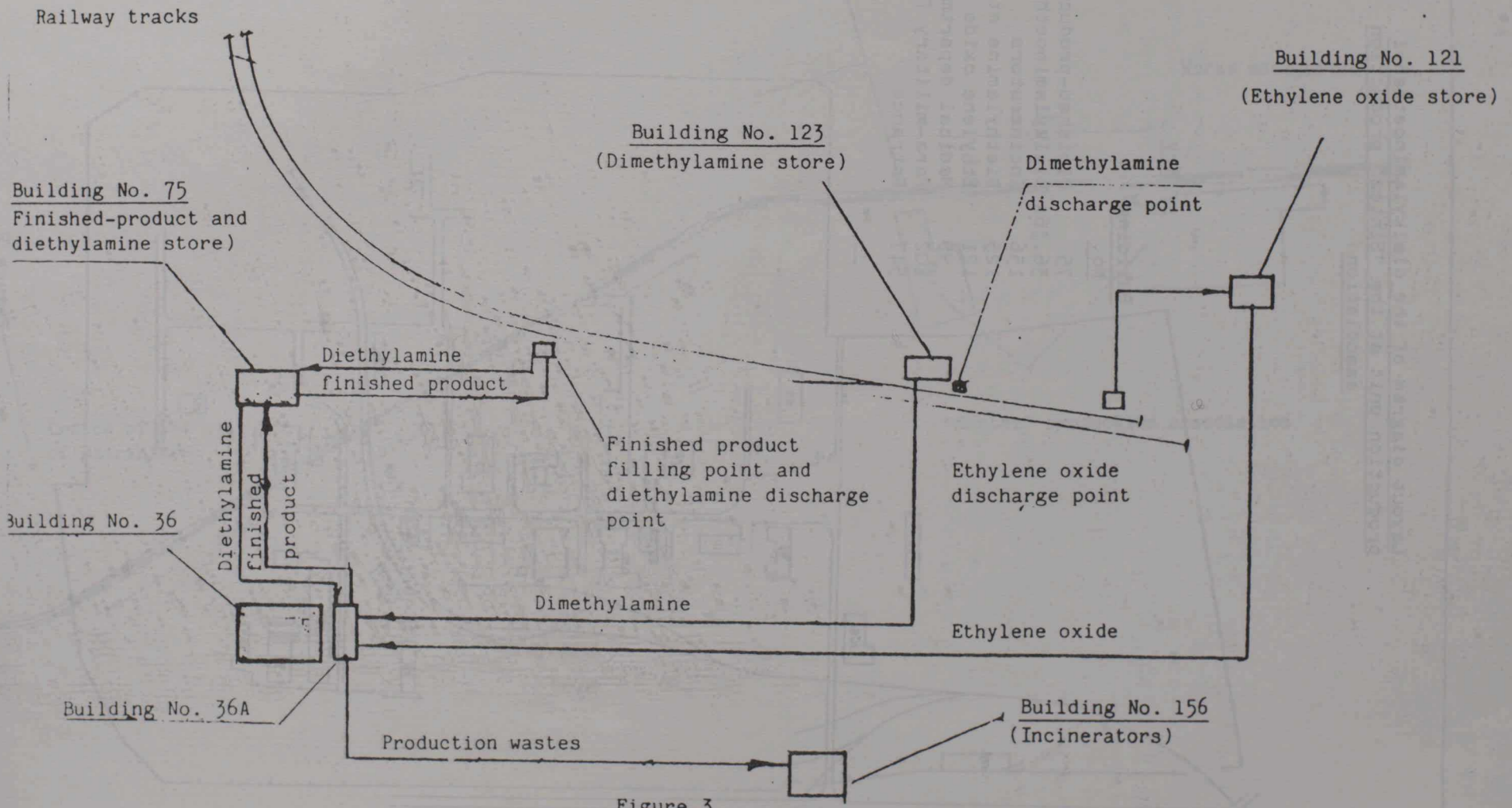
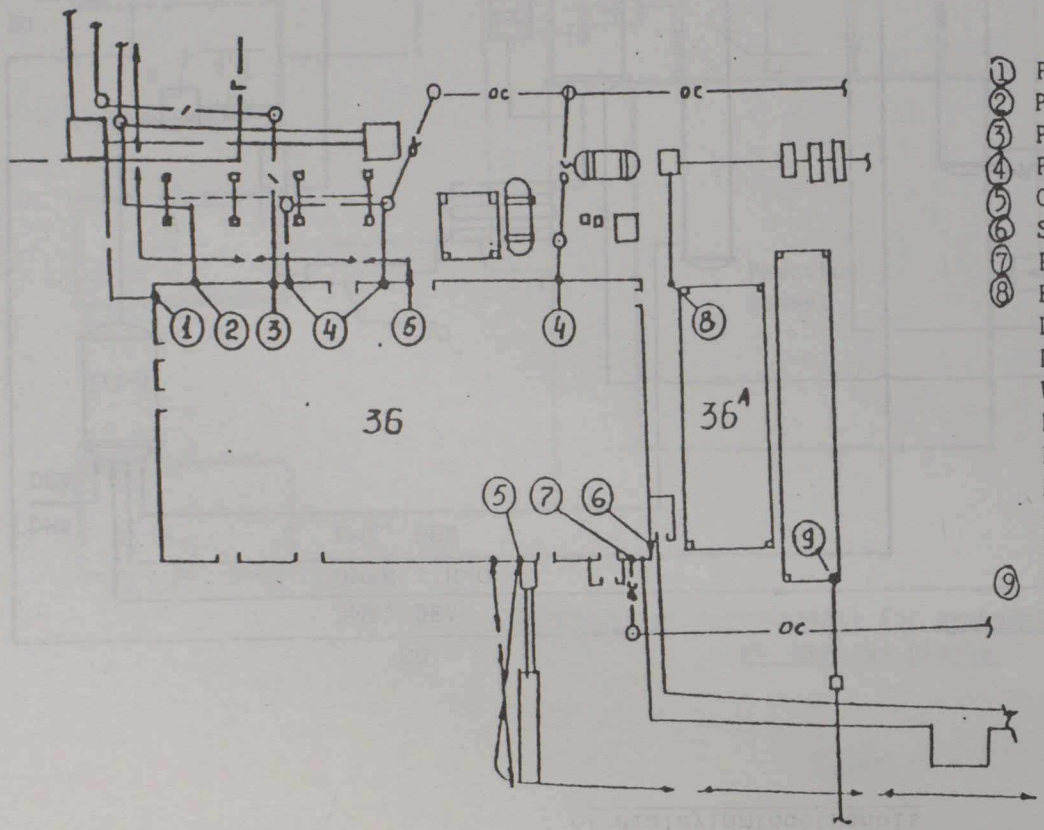


Figure 3

Plan of the dialkylaminoethanol production facility
at the "Sintez" production association



Key

1. Pipeline for chilled circulating water
2. Pipeline for fire-fighting and domestic water
3. Pipeline for domestic waste water
4. Pipeline for industrial waste water
5. 0.4 kW electric cable
6. Steam line
7. Pipeline for warm circulating water
8. Ethylene oxide
   Dimethylamine
   Diethylamine
   Waste water
   Brine, straight
   Brine, circulating
   Nitrogen
   Air for inspection and testing station
   Dialkylaminoethanol
9. Production wastes

Figure 4

Process-flow schematic and material-flow diagram for the production of dialkylaminoethanols

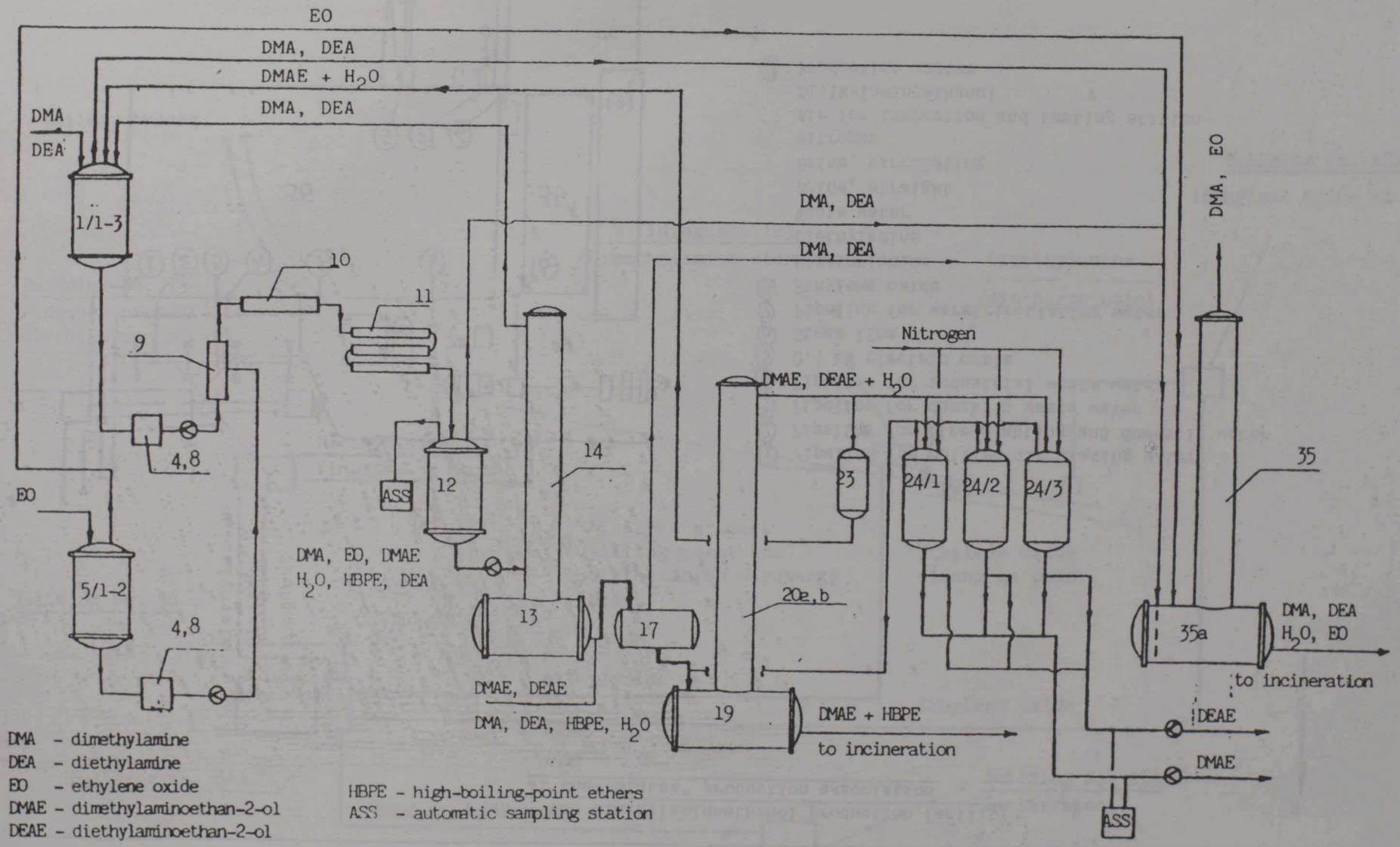
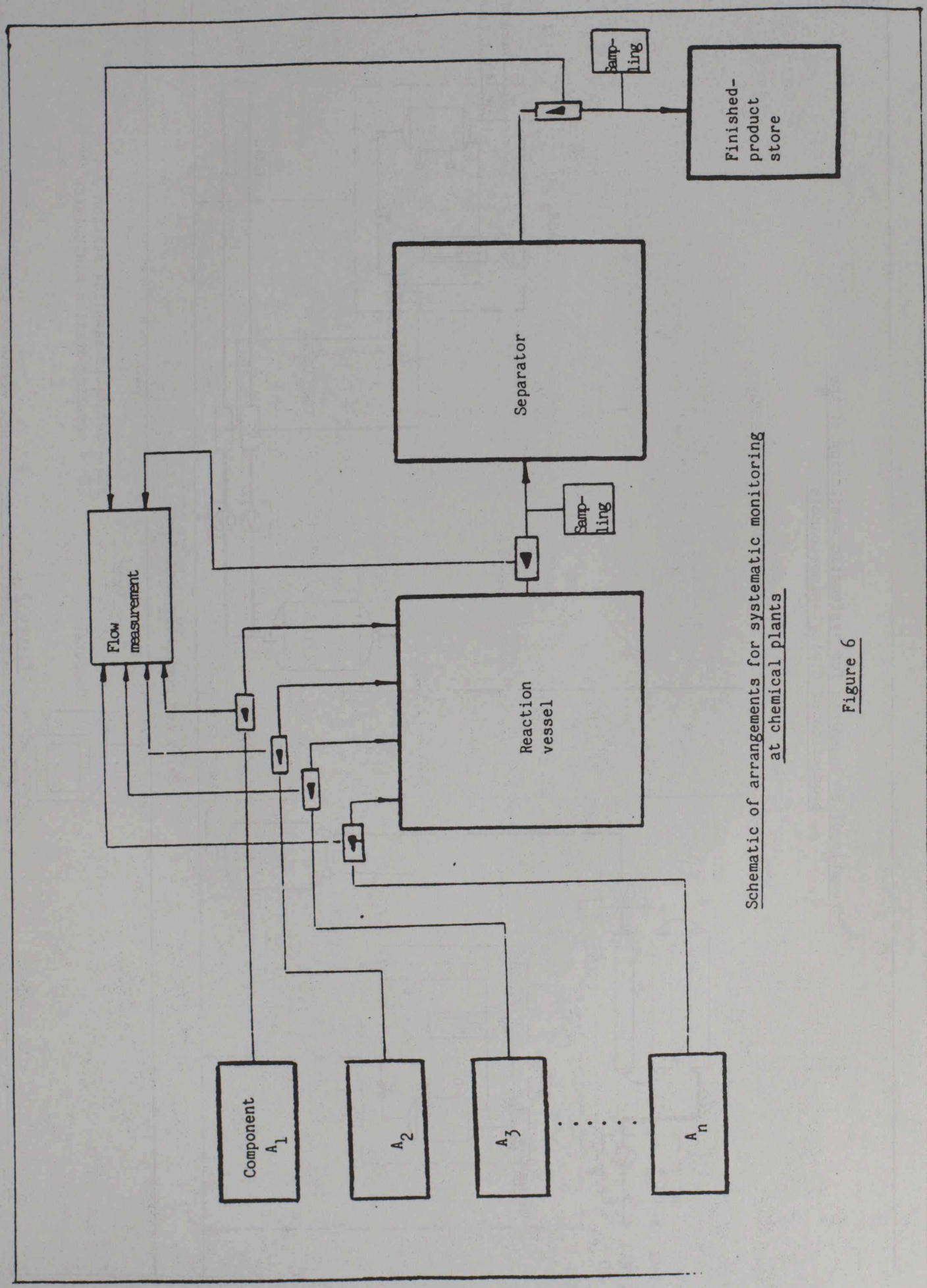


Figure 5



Schematic of arrangements for systematic monitoring at chemical plants

Figure 6

Schematic of arrangements for systematic monitoring of the production of dialkylaminoethanols

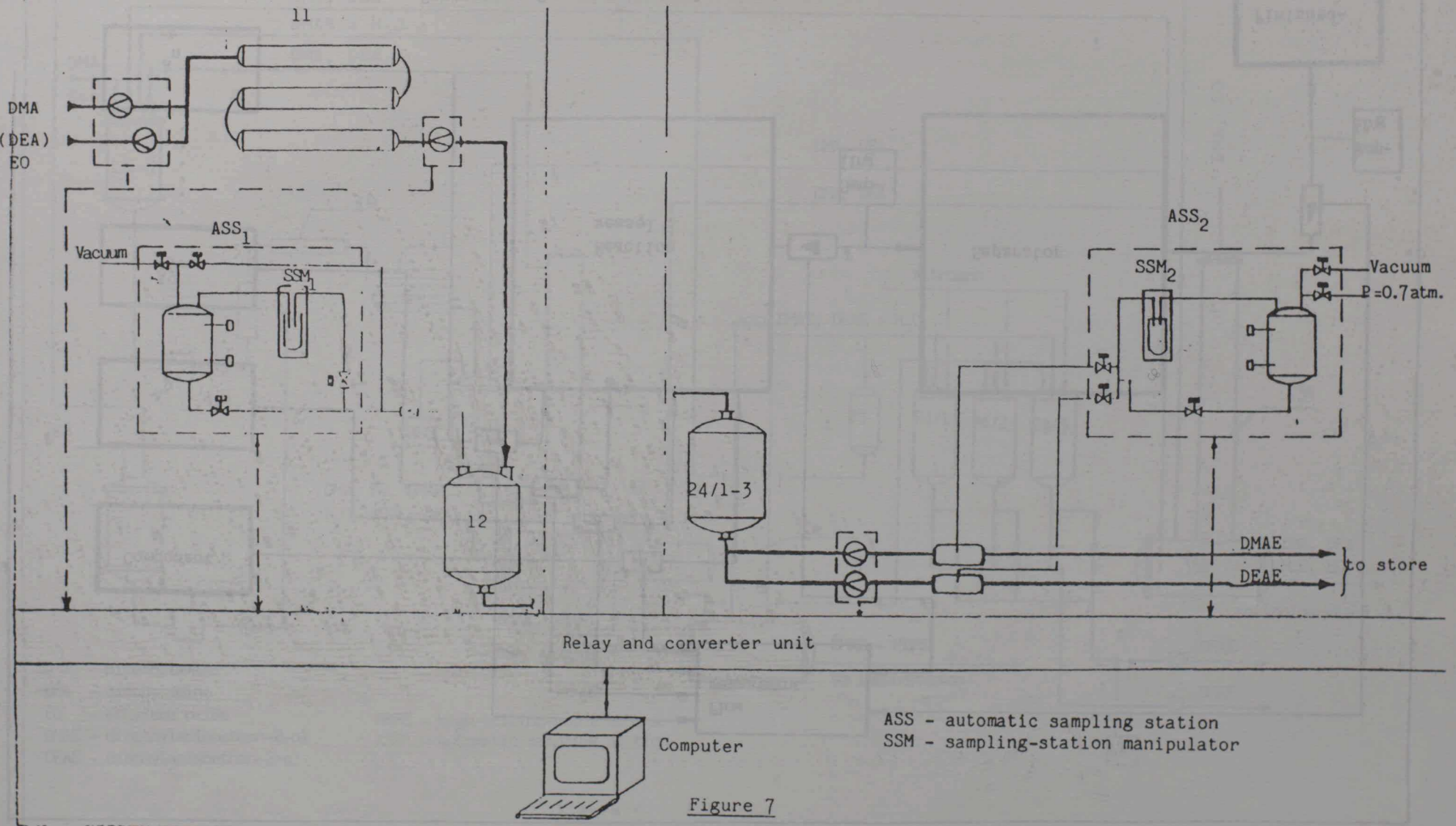


Figure 7

CONFERENCE ON DISARMAMENT

CD/895/Rev.1
CD/CW/WP.226/Rev.1

21 March 1989

Original: ENGLISH

BRAZIL

National Trial Inspection

Technical Report

The enclosed technical report presents the experiment carried out at "Química da Bahia S.A.", Salvador, within the context of the "trial inspections programme" sponsored by the Ad Hoc Committee on Chemical Weapons of the Conference on Disarmament with a view to assessing the efficacy of the procedures on verification set out in the Draft Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and their Destruction.

The inspection at "Química da Bahia S.A." was performed by a group of qualified experts, appointed and supervised by Dr. Otto Peroni - Director of "Nordeste Química S.A." and technical adviser to the Brazilian delegation to the Conference on Disarmament - and was based upon the guidelines set out in Working Paper CD/CW/WP.213, prepared by the Chairman of the Open-ended Consultations on National Trial Inspections, Ambassador Rolf Ekéus of Sweden, as a pattern for the various national experiments.

The Brazilian participation in the "trial inspections programme" testifies to our commitment to the urgent conclusion of a comprehensive and verifiable Chemical Weapons Convention, on a universal and non-discriminatory basis.

Technical Report

Theme: "Trial inspection" in accordance with document CD/831

(Special report of the Ad Hoc Committee on Chemical Weapons to the Conference on Disarmament)

CONTENTS

Technical Report

Theme: "Trial inspection" in accordance with document CD/831

(Special report of the Ad Hoc Committee on Chemical Weapons to the Conference on Disarmament)

01. Introduction

Among the several mechanisms under consideration for the control of the production of chemical weapons are included periodical inspections of installations capable of producing chemical weapons or their precursors.

Considering the great difficulty of such inspections with regard to civilian industry, mainly due to the confidentiality of technical and commercial informations involved, it was decided that the trial inspections should be carried out with the aim of permitting an evaluation of the actual level of the difficulties involved.

The present report broaches on the inspection in Brazil of a facility which, although not producing chemical substances under the dispositions of the International Convention, entails sufficient similarities to allow for a reasonable simulation of the intended situation and the visualization of the problems involved in such inspections.

The facility in question, owned by Química da Bahia S.A., is located at the Camaçari Petrochemical Complex. It is a multipurpose plant, operating on a batch system, to produce amines used as intermediate in the manufacture of pesticides, pharmaceutical and synthetic rubbers.

A team of inspectors was provided by COPENE - Petroquímica do Nordeste S.A., another company in the Camaçari Complex, constituted by a chemical engineer (co-ordinator), a process engineer, two mechanical engineers, an electronic engineer (instrumentation) and an analytical chemist.

The collection of information was aimed at allowing the inspectors to make a material balance during the inspection period, as well as one during the total period of the MIPA production run. The material balances, in addition to the chemical analysis of some selected samples, plus the examination of the safety regulations, should have been sufficient to achieve the three final objectives of the inspection.

02. Objectives

To carry out a "Simulated Inspection" at the QUIMICA DA BAHIA S.A. during the process of production of MIPA: (Monoisopropylamine) on the basis of the following premises:

- Considering: That although MIPA does not possess the properties required for its being assigned to the lists of controlled products,

for the purpose of this simulation it shall be listed in Schedule 2 (a key precursor for the production of chemical weapons - see p. 82, appendix I of the CD/831 report).

To verify: That there is no production or processing of products in Schedule I.

That the actual production of MIPA is in accordance with the initial declaration of the Enterprise (Annex 01).

That the product in question is not being diverted towards activities forbidden by the Convention.

03. Inspectors

Gilberto Fonseca de Jesus:	Chemical Engineer (Co-ordinator)
Fred Albergaria Nunes Pitanga:	Chemical Engineer
Anselmo Antônio Freitas Campos:	Chemist
Osvaldo Andrade Souza:	Mechanical Engineer
Moacyr Trés da Costa Doria:	Electrical Engineer
Antônio Carlos Ferreira de Moura Bastos:	Mechanical Engineer

04. Chronology

The work undertaken basically incorporated the following schedule of activities during the period of 30 November to 9 December 1988:

(a) Appointment of the Co-ordinator of the team of inspectors.

(b) Composition of the team of inspectors.

(c) First meeting of the team.

(d) Discussion and establishment of an agreement for the implementation of the inspection (see Annex 03)

(e) Establishment of the itinerary for the inspection (Annex 04).

(f) Acquisition of the "Initial Declaration" from the QUIMICA DA BAHIA S.A. (see Annex 01).

(g) Preliminary visit to the QUIMICA DA BAHIA S.A.

(h) Signing of a secrecy agreement by each inspector (Addendum ...).

(i) Realization of the inspection.

4.1 Preliminary visit

Participants: The entire team of inspectors

Date: 5 December 1988

Time: From 10.30 a.m. until 4.30 p.m.

Site: QUIMICA DA BAHIA S.A.

Activities:

(a) Meeting with the production manager (Engineer Jose Alberto Leite):

- introduction of inspectors
- definition of criteria related to the confidentiality (signature by the inspectors of the standard term of confidentiality in accordance with Addendum ...)
- definition of the date of inspection
- request for copies of the following documents
  - description of the process (including fluxograms and P&I's)
  - reserves and movement during the present MIPA production
  - chemical analysis charts
  - general layout of the facility
  - Industrial Safety Programme
  - Industrial Hygiene Programme
  - Environmental Programme
  - Programme of Quality Guarantee

(b) Description of the MIPA production process by Engineer Jose Alberto Leite.

(c) Visit to the industrial area and laboratory.

(d) Complementary meeting with the Processing Engineer of QUIMICA DA BAHIA S.A. (Carlos Alberto).

4.2 Inspection

Participants: The entire team of inspectors

Date: 6 December 1988

Time: From 9.15 a.m. until 4.20 p.m.

Place: QUIMICA DA BAHIA S.A.
Rua Nafta, No. 717-Pólo Petroquimico
42-810 - CAMACARI - BAHIA

Activities:

(a) Preliminary meeting with:

Production Manager	Engineer Jose Alberto Leite
Head of Operations	Engineer Carlos Merxed Joao
Processing Engineer	Engineer Carlos Alberto

- Presentation by the Co-ordinator of the schedule to be followed during the inspection

- Signing of the terms of confidentiality by all team members.

(b) Inspection:

- At the processing centre, storage facilities, control centre, laboratory and electrical substation (Gilberto, Anselmo, Ferreira and Moacyr from 9.30-11.00).

- At the processing centre, storage facilities, control centre and supply centre (Osvaldo and Fred from 10.00-12.00).

- At the laboratory (Anselmo from 11.00-11.30).

- At the industrial safety co-ordination (Gilberto from 11.30-12.20 and from 14.00-15.40).

- At the accounting centre (Fred from 15.00-15.30).

(c) Complementary technical meeting with Engineer Carlos Alberto (Osvaldo and Fred from 13.00-15.00).

(d) Final meeting with Production Manager.

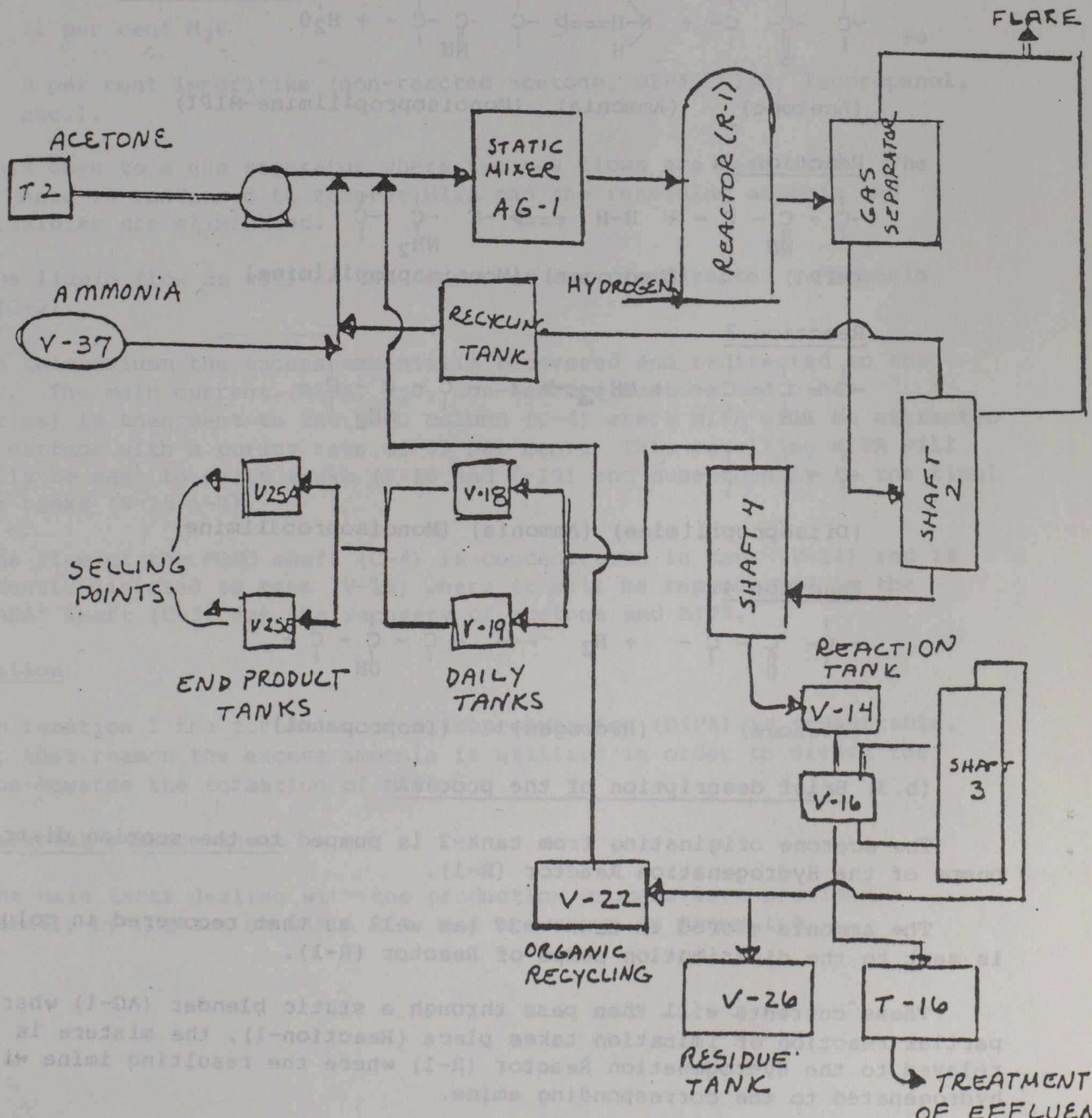
05. Verification report

5.1 Process

QUIMICA DA BAHIA S.A. represents a multi-purpose industrial complex capable of producing from 8,000 to 10,000 tons of alkylamines annually (among of which Monoisopropylamine (MIPA))

An abridged description of the process of obtaining MIPA is presented below:

(a) Basic Flowgram



(b) Production of MIPA

(b.1) Raw materials

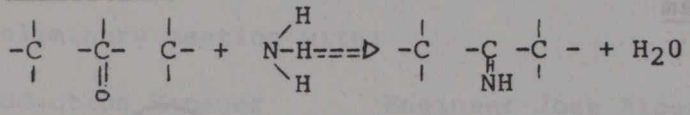
. Acetone (Rhodia Paulinea/SP)

. Ammonia (Nitrofértil/BA)

. Hydrogen (CQR/BA)

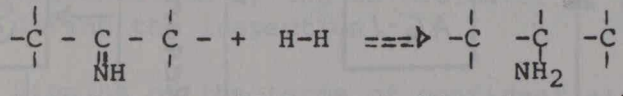
(b.2) Chemical reactions

Reaction 1:



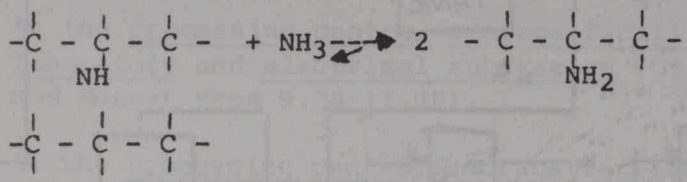
(Acetone) (Ammonia) (Monoisopropilimine-MIPI)

Reaction 2:



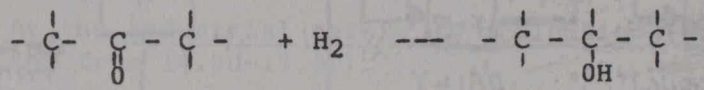
(MIPI) (Hydrogen) (Monoisopropilimine)

Reaction 3



(Diisopropilimine) (Ammonia) (Monoisopropilimine)

Reaction 4:



(Acetone) (Hydrogen) (Isopropanol)

(b.3) Brief description of the process

The acetone originating from tank-2 is pumped to the suction distributing pumps of the Hydrogenation Reactor (R-1).

The ammonia stored in tank V-37 (as well as that recovered in column C-2) is sent to the distribution pumps of Reactor (R-1).

These currents will then pass through a static blender (AG-1) where a partial reaction of imination takes place (Reaction-1), the mixture is then relayed to the Hydrogenation Reactor (R-1) where the resulting imine will be hydrogenated to the corresponding amine.

In this reactor the remaining acetone from the process is also iminized and further hydrogenized.

The reactor is equipped with a central mixer containing two mixing blades, internal cooling coils for the exothermic reaction and a refrigeration chamber.

The reaction is catalysed by means of a filtering system, which prevents the dragging of the catalyser.

The outlet flow of the reactor is constituted of approximately:

- 70 per cent MIPA
- 21 per cent H_2O
- 9 per cent impurities (non-reacted acetone, DIPI, DIPA, Isopropanol, etc.).

This goes to a gas separator where two new flows are generated. The vapour phase is condensed to recover MIPA and the remaining ammonia and incondensibles are eliminated.

The liquid flow as well as the condensed one are directed to ammonia shaft (C-2).

In this column the excess ammonia is recovered and redirected to the reactor. The main current (MIPA, H_2O, non-reacted acetone and other impurities) is then sent to the MONO column (C-4) where MIPA will be extracted at the surface with a purity rate of 99 per cent. This resulting MIPA will initially be sent to daily tanks (V-18 and V-19) and subsequently to the final product tanks (V-25 A-B).

The flow of the MONO shaft (C-4) is concentrated in tank (V-14) and is subsequently directed to tank (V-16) where it will be reprocessed in the "BATELADA" shaft (C-3) for the recovery of acetone and MIPA.

Observation

In reaction 3 the formation of Diisopropylamine (DIPA) is undesirable, and for that reason the excess ammonia is utilized in order to divert the reaction towards the formation of MIPA.

5.2 Material balance sheet

The main facts dealing with the production process were provided subsequently by QUIMICA DA BAHIA S.A. and are shown in Annex 1.A.

(a) Balance sheet for the entire process

Duration of the process - 27 November until 7 December 1988.

Acetone:

- initial stock ..... zero
- receipt ..... 345.98 t
- end reserve ..... zero
- use ..... 345.98 t

MIPA:

· initial stock ..... 145.4 t
  tank V-25 A ..... 9.6 t
  tank V-25 B ..... 135.8 t
· final stock ..... 401.7 t
  tank V-25 A ..... 151.3 t
  tank V-25 B ..... 203.8 t
  tank V-18 ..... 24.5 t
  tank V-19 ..... 22.1 t
· utilized ..... 81.65 t
· production ..... 337.95 t

Observations

I. The stoichiometric ratio Acetone/MIPA is 0.983; we could count on a production of 351.96 t of MIPA for a prompt utilization of 345.98 t of Acetone.

II. The difference between the esteguimetric ratio and the actual amount produced (351.96 -337.95) = 14.01 t, a loss of 4 per cent, can be explained by the following waste points:

Place	Equivalent in Acetone (t)	(%)
1. Organic waste */	7.08	2.0
2. Transportation (supplier) **/	2.05	0.6
3. Impurities in the Acetone ***/	2.00	0.6
4. Residue in waste water CETREL	1.00	0.3
5. Others	1.88	0.5
Total	14.01	4.0

*/ As indicated in Annex 1.A.

**/ Difference between the suppliers invoice and that of the company.

***/ Obtained through chemical analysis.

(b) Balance sheet pertaining to the inspection period

During the inspection it was possible to obtain indications which led to the following balance:

Acetone:

- initial stock in tank 2 ..... 47.1 t
- final stock in tank 2 ..... 12.0 t
- received ..... zero
- variation (intermediary vessels) ..... -0.2 t
- use ..... 35.3 t

MIPA:

. initial stock ..... 401.0 t

V-25 A ..... 205.5 t

V-25 B ..... 178.1 t

V-18 ..... 0.8 t

V-19 ..... 16.6 t

- final stock ..... 415.6 t
  - V-25 A ..... 181.7 t
  - V-25 B ..... 203.8 t
  - V-18 ..... 24.8 t
  - V-19 ..... 5.3 t
- drawn-offs ..... 24.0 t
- production ..... 38.6 t

Observations

I. The fact that the production of MIPA was found to be superior to the "stoichiometric" value (1.017 x 35.3 = 35.9 t) indicates that it is incorrect.

Such a mistake is basically justified by:

(a) The difficulty in measuring correctly the Acetone tank due to the high volatility of the product.

(b) Uncertainties in the measurements of the intermediate vessels and of the final product.

(c) Characteristics inherent to the process (batch operation of column 3, leading to significant variations in the plant's inventory).

II. The verification of the existing files at the plant on the movement of products, evidence shown in the field of available reserves as well as the evaluation of the chemical analysis, were considered by the team as sufficient to assure the veracity of the mentioned balance sheet.

III. No evidence whatsoever was found regarding alignments which could allow for diversions of currents for other purposes.

IV. It can be proved that the effluent liquids generated are duly sent to CETREL according to the available systems at this Petrochemical Complex.

5.3 Industrial safety

In this area it can be proved that a reasonable availability of norms and instructions have been elaborated and only require, in some cases, to be made compatible with the present reality of "QUIMICA DA BAHIA S.A.".

06. Conclusions

6.1 In a general sense it was possible to conclude that:

(a) The possibility of fabrication or processing of any of the products listed on Schedule I of document CD/831 was not verified.

(b) On the basis of the analysis of the process and balances, it can be asserted that the actual production of MIPA is in accordance with the "Initial Declaration" presented by "QUIMICA DA BAHIA S.A." (see Annex 1 and 1.A).

(c) No diversion of the produced MIPA for activities banned by the Convention was detected.

6.2 However, it is worth mentioning some relevant aspects:

(a) During the process of the production of MIPA, some Diisopropylamine (DIPA) is produced, which could lead to the obtention of the following products:

- N,N = Diisopropylaminoethyl-2-chloride
- N,N = Diisopropylaminoethan-2-ol
- N,N = Diisopropylaminoethan-2-thiol,

which are listed in Schedule 2.

(b) Regarding DIPA it can be said that:

The quantity produced is very limited (= 0.2 per cent) and efforts exerted to maximize its production by using a lesser amount of ammonia lead to a greater formation of isopropanol which leads us to believe that the production of DIPA through this process is not viable.

In each process approximately 8 t of concentrated organic wastes, containing 5 per cent (in weight) of DIPA, are obtained and sold periodically as fuel for brickyards.

(c) Since it involves a multi-purpose unit one can conclude that, if so desired, it would not be difficult to produce products other than those listed in the "Initial Declaration". However, it is worth stressing that no indication of such production was detected.

6.3 The main difficulties found by the team were:

(a) Lack of time: because the MIPA campaign was anticipated not all of the stages foreseen in the inspection itinerary were completed (Annex 04); this also prevented the team of inspectors from elaborating an adequate planning programme prior to the inspection. (Note: that the preliminary visit was made on the 5th and the inspection on the 6th.)

(b) The lack of access to the actual detailed material balance sheet made by "QUIMICA DA BAHIA S.A." did not make possible a detailed analysis of the process, which could be necessary in the case of a discrepancy of results.

(c) The fact that it was not possible to have available some written complementary data (as set out in Annex 03) hindered the elaboration of this report.

(d) The inexperience of the team of inspectors for the implementation of tasks of this nature.

6.4 Bearing in mind the conditions under which this trial inspection was conducted, one may conclude that much more accurate results could have been obtained had a skilled team been used and more time made available to plan and carry out the work.

Annex 1

Initial Declaration

1. Company

1.1 Name:

Química da Bahia Industria e Comercio S.A.

1.2 Address:

Rua Nafta, 717
Pólo Petroquímico de Camaçari
Camaçari - Bahia - 42,810

1.3 Telephone: (071) 832. 2044

1.4 Telex: (71) 3334

1.5 CGC: 51.744.803/0001-91

1.6 State Register: 21.518.959

1.7 Stockholders:

NORQUISA: 50 per cent

OXITENO: 50 per cent

1.8 Management:

Luiz Fernando Rolim - Managing Director
Arthur Soares Cabido - Commercial Director
Alberto Cunha Balaguer Filho - Administrative and Financial Director

2. Objectives

The production and commercialization of alkylamines.

3. Plant specifications

Multi-purpose unit

4. Production capacity

Total annual capacity: 8,000-10,000 t of alkylamines.

5. Commercial products

Monoethylamine (MEA)

Monoethylamine 70 per cent (MEA 70 per cent)

Diethylamine (DEA)

Triethylamine (TEA)

Monoisopropylamine (MIPA)

Monoisopropylamine 70 per cent (MIPA 70 per cent)

Monociclohexylamine (MCHA)

Diciclohexylamine (DCHA)

Di-n-propylamine (DPA)

Diisobutylamine (DIBA)

6. Uses

Agricultural defensives

Pharmaceutical products

Rubber industry

Assorted other uses

7. Production of MIPA in 1988

Campaigns	Dates	Production
(A) Carried out		
MIPA 09	10 - 25 February	450.7
MIPA 10	6 March - 27 April	191.7
MIPA 11	24 June - 3 July	338.6
MIPA 12	27 July - 12 August	489.9
MIPA 13	24 September - 3 November	304.5
Total		1 775.4
(B) To be carried out		
MIPA 14	27 November - 7 December	335.0

Observation:

The MIPA 14 production process is already under way. The period of this process and its corresponding production is indicated in the above chart, the expected amounts will be confirmed at the end of the process.

Annex 1.A.

Data referring to the MIPA production process

1. Product

Monoisopropylamine (MIPA)

(CH_{22}), CH NH_2

2. General facts about the product

See Annex 1

3. Specifications

Selection	Unit	Amount	Method
MIPA	% in weight	99.0% minimum	gaseous chromatography
DIPA	% in weight	0.2% maximum	gaseous chromatography
Isopropanol	% in weight	0.1% maximum	gaseous chromatography
H_2O	% in weight	0.3% maximum	coulometria

4. Duration of the production process

27 November - 7 December 1988

5. Reserves and movement of Acetone

Ei = zero

Received = 345.98 t

Ef = zero

Consumed = 345.98 t

6. Reserves and movement of the product MIPA

Ei	1	V-25 A	9.6 t
		V-25 B	135.8 t
		Total	145.4 t
El	-	V-25 A -	151.3
		V-25 B -	203.8
		V-18 -	24.5
		V-19 -	22.1
		Total	401.7 t
Utilized		-	81.65
Production		-	337.95 t

7. Effluents

7.1 CETREL (State Company for Effluent Disposal)

The residue water from the campaign is flushed through the organic system pipes for treatment at CETREL.

7.2 Concentrated organic wastes

These wastes are stored in V-26 together with the wastes from the other production processes of "QUIMICA DA BAHIA" and sold periodically as fuel.

Quantity produced - 8.0 t

Composition (per cent in weight)

H_2O	-	12.0
MIPA	-	7.0
ACl	-	18.0
IPQH	-	47.0
DIPA	-	5.0
DIPI	-	8.0
Others	-	3.0

Safety regulations

Transportation of hazardous materials

Monoisopropylamine (MIPA)

A product produced by QUIMICA DA BAHIA from the raw materials acetone, ammonia and hydrogen. It is produced through a reaction process and, in its liquid phase, is used to produce herbicides and fungicides.

Characteristics

- Molecular weight	99.11
- Density	D.69
- Boiling point	33°C
- Fusion point	101.2°C
- Vapour pressure	18.98 [100°C]
- Viscosity	0.360 ap [23°C]
- Refraction index	1.374 [23°C]
- Colour	hueless

Combustibility

Highly corrosive and infissible

Health risks

The vapours and solutions have highly irritating reactions to:

Skin:	May cause necrosis
Eyes:	Tearing, conjunctivitis and damage to the cornea
Inhalation:	May cause dizziness and choking

Safety equipment

The handling of this product (MIPA) must be done under strict and specific safety conditions, not only concerning the persons handling MIPA but also the environment. The equipment should be made of PVC and defined as follows:

- hood
- trousers
- jacket
- gloves
- boots

Eyes: Goggles, cover-all type (double vision)
Breathing: The use of a mask with protective filters is mandatory.

Precautions

Avoid all and every type of contact with the product.

Annex 2

Agreement for trial inspection in accordance with the terms of the International Convention on Chemical Weapons

Considering that the Brazilian Government, under the terms of the International Convention on Chemical Weapons, is interested that a trial inspection of a chemical facility which can be likened to an installation capable of producing chemical products which could be precursors for chemical weapons be carried out.

Considering that the alkylamine plant owned by QUIMICA DA BAHIA INDUSTRIA E COMERCIO S.A., though not actually producing such precursors, has been considered an installation suitable for such an inspection;

Considering that QUIMICA DA BAHIA has agreed to co-operate in this inspection in order to lend support to the Brazilian Government;

Considering that COPENE - Petroquimica do Nordeste S.A. - has agreed to lend a team of inspectors for the carrying out of the trial inspection;

The undersigned parties established the present agreement to carry out a trial inspection of the alkylamine plant located in Camaçari, Bahia, under the following conditions:

1. Installation

The alkylamine plant of QUIMICA DA BAHIA INDUSTRIA E COMERCIO S.A. located at Rua Nafta 717- Pólo Petroquímico of Camaçari, Bahia, Brazil.

It refers to a multi-purpose unit located at the above-mentioned address equipped with all the necessary support facilities.

2. Information to be provided

2.1 Project data

(a) Description of process

(b) Yield of process (utilization of raw materials)

(c) Treatment and destination of effluents

(d) Procedures for safety and hygiene

(e) Procedures for halting and cleansing

(f) Situation plants and interconnections to the utilities and raw materials.

3. Documentation

All the information transmitted during the inspection shall be considered confidential and directed solely to the programme which constitutes the object of the present agreement. No documents or copies shall be provided to the inspectors. No photographs shall be permitted.

4. Area of inspection

All areas pertaining to the plant shall be the object of inspection. Measurement points and the obtention samples shall be defined by common agreement prior to the inspection.

5. Inspection itinerary

The itinerary of the procedures for the inspection shall be agreed upon in a preliminary meeting, by common agreement between the parties.

6. Security

The inspection group shall be previously instructed as to the plant's security procedures and should strictly observe them during the inspection, any intervention, including the obtention of samples, shall always be submitted to the Plant Operation Supervisor and shall be authorized or not according to the prevailing criteria.

7. Confidentiality

All information transmitted during the inspection shall be kept under strict secrecy under the individual responsibility of the inspectors - in accordance with an agreement of confidentiality individually signed - and under the responsibility of the International Authority, represented in this case by the Co-ordinator of the inspection group.

8. Management of documents

All corrobatory documents of data and information provided during the inspection shall be kept by Química da Bahia, for a period of not less than six months following the date of the inspection.

Camaçari, 6 December 1988

Annex 3

Trial inspection

1. Company

Química da Bahia Industria e Comercio S.A.

2. Product

MIPA (hypothetically Schedule 2) - MONOISOPROPILIMINE

3. Objectives

(a) To certify that there is no production and processing of products on Schedule 1.

(b) To certify that the actual production is in accordance with the initial declaration of "QUIMICA DA BAHIA S.A."

(c) To certify that the product in question is not being diverted to activities not allowed by the Convention.

4. Composition of the inspection team

01 Co-ordinator

01 Processing Engineer

01 Mechanical Engineer

01 Instrumentation Engineer

01 Chemical Analyst.

5. Procedure

5.1 To obtain initial declaration from "QUIMICA DA BAHIA S.A.".

5.2 To prepare a mandate for inspection which specifies the objectives, rights and limitations of the inspectors.

5.3 To notify "QUIMICA DA BAHIA S.A.".

5.4 To sign the agreement with "QUIMICA DA BAHIA S.A." on the basis of the format set out in CD/831, page 112.

5.5 Preliminary visit for the purpose of familiarization, 5 December 1988.

5.6 To programme the inspection:

- date;

- duration;

- procedure;

- documents and necessary information;

- necessary equipment;

- samples;

- transportation and analysis of samples;

- adequate measures to protect confidential information, such as:

  · inspectors qualifications;
  · restricted access to certain areas;
  · restricted circulation of documents;
  · terms of confidentiality.

5.7 To effectuate the inspection (6 December 1988):

- Preparatory meeting at the site with a representative of "QUIMICA DA BAHIA S.A.".

- Gathering of data, measurements and necessary samples;

- Transportation and/or analysis of samples;

- Closing meeting with QUIMICA DA BAHIA's representative.

5.8. To prepare inspection report.

5.9 Government representative.

Annex 4

ADDENDUM (...)

SECRECY AGREEMENT

I, the undersigned, representing ..... taking into consideration that I have been given access to the installations, raw materials, and secret and confidential information belonging to QUIMICA DA BAHIA INDUSTRIA E COMERCIO S.A., located at Rua Nafta, No. 717, Pólo Petroquímico de Camaçari, Bahia, Brazil, agree to keep confidential all information I acquire referring to equipment, systems, apparatus, procedures, methods and production and research projects related to QUIMICA DA BAHIA activities, including, but not limited to, products and materials, specification and projects, manufacturing process, physical layout, quality control methods and research instruments, unless such information:

(a) has been to my knowledge before being acquired from QUIMICA DA BAHIA and I can demonstrate this fact by written documents;

(b) at the time it is acquired, I can demonstrate it to be public knowledge, or that after being acquired, I can demonstrate it to be published, or made public, by any other means, and not by my fault, and, in this case, only to the extent it has become public knowledge;

(c) is issued at the time of its acquisition or, later on, in a published patent, subject, however, to the requirements of this patent and, in this case, only to the extent it is published;

(d) is received from third parties, provided, however, that this information has not been obtained illegally from third parties directly from QUIMICA DA BAHIA.

I certify that I have been informed that, according to company policy, such information should not be made public, unless authorized, and, furthermore, I agree not to use or publish any of this information without the written consent of QUIMICA DA BAHIA. I further agree to take all reasonable precautions necessary to keep such information secret and confidential.

I notify and agree that I shall not use such secret and confidential information for my own purposes or for third parties and shall not make public (except in those situations hereover mentioned), nor shall I sell, partially or integrally, any of this secret and confidential information. I shall take all reasonable precautions required to keep this information secret and confidential and to ensure that all employees or agents linked to my company, who have participated in evaluation of this confidential material, shall similarly be bound to the terms of this Agreement.

.....	.....
INSPECTION TEAM CO-ORDINATOR	QUIMICA DA BAHIA IND. E COMERCIO S.A.

CONFERENCE ON DISARMAMENT

CD/897
8 March 1989

Original: ENGLISH

LETTER DATED 7 MARCH 1989 ADDRESSED TO THE SECRETARY-GENERAL OF THE CONFERENCE ON DISARMAMENT FROM THE PERMANENT REPRESENTATIVE OF AUSTRALIA TRANSMITTING THE TEXT OF A PRESS RELEASE ISSUED BY THE AUSTRALIAN MINISTER FOR FOREIGN AFFAIRS AND TRADE, SENATOR GARETH EVANS, ON 7 MARCH 1989

I have the honour to transmit to you the text of a press release issued by the Australian Minister for Foreign Affairs and Trade, Senator Gareth Evans, on 7 March 1989 announcing that Australia will host a major international Chemical Weapons Conference aimed at bringing together Governments and representatives of the international chemical industry to discuss the growing problem of the international trade in feedstocks, plant and equipment which are to be used for chemical weapons purposes.

I would be grateful if you could arrange to have the text circulated as an official document of the Conference on Disarmament.

(Signed): David H. Reese

PRESS RELEASE ISSUED BY THE AUSTRALIAN FOREIGN MINISTER
SENATOR GARETH EVANS ON 7 MARCH 1989

The Minister for Foreign Affairs and Trade, Senator Gareth Evans, announced today that Australia will host a major international Chemical Weapons Conference later this year.

The Conference will bring together Governments and representatives of the international chemical industry to discuss the growing problem of the international trade in feedstocks, plant and equipment which are to be used for chemical weapons purposes.

The initiative follows discussions between Australian and United States officials, and between Senator Evans and the United States Secretary of State, Mr. James Baker, about how best to build on the momentum generated by the Paris Conference on Chemical Weapons in January.

This initiative is being announced simultaneously by Mr. Baker in Vienna today to the Meeting of Foreign Ministers of countries participating in the talks on conventional forces in Europe.

The date of the Conference, and details relating to participation in it, are still to be finalized.

Senator Evans said that for some time Australia had been actively developing measures to address the problem of the spread of chemical weapons. Since 1985, Australia had brought together representatives of industrial nations which export certain relevant chemicals to ensure that their industries were not associated even inadvertently with the production of chemical weapons. This Group, which met regularly in Paris, had now become known as the Australia Group.

In June 1988, Prime Minister Hawke announced the launching of a regional initiative to work co-operatively with our neighbours to prevent the spread of these horrific weapons to our region and, following a recent programme of regional visits by an Australian officials team, a regional seminar is being planned for later this year (with preliminary talks being held last week with Foreign Minister Alatas on the possibility of Indonesia co-hosting it).

Australia is a leading participant in the negotiations in the Conference on Disarmament for a chemical weapons convention which will ban chemical weapons globally for all time.

Austraia has had productive dialogue with other Governments and the chemical industry for some time, including as leader of the Australia Group, on how best to advance the objective of preventing the spread of chemical weapons while not impeding the legitimate activities of the civil chemical industry. One clear lesson from these discussions had been the need to work closely with the chemical industry.

Senatcr Evans praised the collaboration of the Australian industry and its peak councils for their willingness to work with the Government to achieve practical solutions and said that the proposed Conference - designed to bring together Governments and chemical industry representatives in a joint problem-solving dialogue - would benefit from that background of close relations in the host country.

CONFERENCE ON DISARMAMENT

CD/899
CD/CW/WP.227
10 March 1989

Original: ENGLISH

LETTER DATED 10 MARCH 1989 ADDRESSED TO THE PRESIDENT OF THE CONFERENCE ON DISARMAMENT FROM THE PERMANENT REPRESENTATIVE OF THE GERMAN DEMOCRATIC REPUBLIC TRANSMITTING THE TEXT OF A WORKING PAPER ENTITLED "REPORT ON THE NATIONAL TRIAL INSPECTION OF THE GERMAN DEMOCRATIC REPUBLIC UNDERTAKEN IN A FACILITY OF THE CHEMICAL INDUSTRY"

On behalf of the German Democratic Republic I have the honour to submit to you for circulation the enclosed text of a working paper, entitled Report on the National Trial Inspection of the German Democratic Republic undertaken in a facility of the chemical industry, on item 4 of the agenda of the Conference on Disarmament.

(Signed) Peter DIETZE
Ambassador

German Democratic Republic

Working Paper

Report on the National Trial Inspection of the German Democratic Republic undertaken in a facility of the chemical industry

Introduction

In implementing the initiative of the Ad hoc Committee on Chemical Weapons to undertake trial inspections in facilities of the chemical industry in order to expedite work on the draft Convention on Chemical Weapons, in particular with regard to verification pursuant to Article VI as well as proceeding from the recommendations contained in document CD/CW/WP.213 the German Democratic Republic undertook a trial inspection in an industrial plant in autumn 1988. It was carried out in a pharmaceutical multi-purpose facility (MPF), on a production unit of the pharmaceutical enterprise Dresden (Arzneimittelwerk Dresden, AWD) which processes a substance listed in Schedule [2] under "To be discussed further" (Dimethylaminoethanol DMAE). The substance is converted into Meclophenoxate hydrochloride (MCPH) which is used as a medicament in the treatment of metabolic disorders and as CNS stimulant. The medicament is registered under the trade name Cerutil in the German Democratic Republic. The following report is a short description of the work carried out and contains first conclusions.

A. General approach

1. Objectives of the National Trial Inspection

The objectives of the National Trial Inspection were those set forth in CD/CW/WP.213.

2. Provisions in the Draft Convention under which the inspection took place

The Annex to Article VI [2].

3. Types of on-site inspections

An initial visit (actually it was a sequence of several visits with intermediate evaluations) followed by a routine inspection.

4. Advance information

(a) Declaration

In accordance with the provisions of the Draft Convention as contained in the Annex to Article VI [2] and in the Model for an agreement relating to facilities producing, processing, or consuming chemicals listed in Schedule [2] and taking into account the established practice at the facility inspected to adjust the material import plan during the year depending on the actual production requirements, the following declarations and notifications were prepared by the facility:

- Advance notifications of processing DMAE in the CY (calendar year) 1988, including data on planned imports, actual and planned for CY 1988 DMAE stock, and planned MCPH production;

- Notification of plan adjustments for DMAE imports during CY 1988;

- Advance notifications of inventory changes;

- Declaration of facility data required for designing the verification approach and negotiating the facility agreement (different types of maps, technological schemes, equipment lists, etc.).

To the extent that these declarations and notifications exceeded the current requirements of the Draft Convention, the rationale for providing them was to enable material balance verification.

(b) Agreement on inspection procedures

During the "initial visit" period a facility agreement was negotiated and a document outlining the detailed verification approach was elaborated. The facility agreement was considered a legal document negotiated between the Technical Secretariat (TS), the German Democratic Republic National Authority (NA) and the facility management and designed to regulate the activities which may be carried out during on-site inspections. The verification approach document, however, was considered a TS internal document, based on the declarations provided by the facility and the verification aim. That document provided the specific technical verification approach for the facility. It is in fact a combination of the facility-specific verification concept and a scheme for the inspection team how to carry out routine on-site inspections and subsequent evaluations of inspection results.

5. Type of facility inspected

The plant inspected is a 10-year old pharmaceutical multi-purpose facility being part of a larger pharmaceutical production complex (pharmaceutical enterprise, Dresden).

6. Type of declared activity at the facility

Conversion of a Schedule-[2]-chemical (DMAE) into another substance (MCPH) which is a non-scheduled chemical, i.e. "processing with conversion into another chemical".

7. Actual activity at the facility at the time of the inspection

The DMAE line was in recrystallization mode. This time was chosen deliberately to enable material balance verification. The rest of the plant continued its production.

B. Detailed approach

1. Inspection mandate

In accordance with the Annex to Article VI [2] of the Draft Convention the following aim for the trial inspection was formulated:

The objective of the inspection was to verify that:

(i) The declared facility was not used for producing any chemical listed in Schedule [1];

(ii) The quantity of the Schedule-[2]-chemical DMAE processed was consistent with needs for purposes not prohibited by the Convention.

(iii) The chemical (DMAE) listed in Schedule [2] was not diverted or used for purposes prohibited by the Convention.

Two technical principles were investigated: material balance verification (MBV) and anomaly detection (AD). In the case of MBV, a narrow inspection mandate was formulated and successfully applied, based on the facility agreement and the verification approach. For AD, it was difficult to formulate a tight inspection mandate.

2. Composition of the inspection team

The inspection team for the "initial visit" consisted of:

- An analytical chemist (Dr. rer. nat., Academy of Sciences);
- A chemist (Dr. sc. nat., Academy of Sciences);
- A chemical process engineer (Dr. Engineer, pharmaceutical enterprise, Dresden/AWD);
- A facility inspector (Engineer, Ministry of Chemical Industry);
- An accountant (Financial economist, pharmaceutical enterprise, Dresden/AWD).

The inspection team for the routine inspection consisted of:

- An analytical chemist (Dr. rer. nat., Academy of Sciences);
- A chemist (Dr. sc. nat., Academy of Sciences).

3. Inspection equipment

Inspection equipment was furnished by the inspected facility.

4. Activities prior to the arrival of the inspection team on site

The respective procedures contained in the Draft Convention were not tested. The facility was notified in advance of the inspection date. This resulted particularly from the fact that material balance verification, and inventory verification in particular, can only be performed at specific points in the production cycle. Moreover, an unannounced verification of stocks was tested. The notification was made within 24 hours without mentioning the purpose of the inspection.

5. Advance preparations on site

A work-room was provided for the inspection team where the complete documentation (facility plans, maps, etc.) for the preparation of the facility agreement as well as the declaration and notification of the facility were kept. The room was used for the talks on the preparation and evaluation of the inspection.

6. Escort and points of contact arrangements

During the entire inspection the inspection team was escorted by a "representative of the National Authority" (simulated) as well as one or more representatives of the inspected facility. The aforesaid work-room was the point of contact.

7. Other participants

The inspection was prepared and carried out by a group of experts from the Academy of Sciences and the pharmaceutical enterprise, Dresden. A limited number of representatives from other governmental agencies participated as observers.

8. Duration of inspection and "initial visit"

The initial visit included four one-day visits to the facility and several weeks for the analysis and study of basic documents (facility plans, etc.) to prepare the verification concept and negotiate the facility agreement.

The routine verification lasted for two days and the elaboration of the inspection report took one day.

9. Measures to protect confidential information

Confidential information necessary for the preparation of the verification approach, for the facility agreement and the routine inspection was marked accordingly. All members of the inspection team were staff members of German Democratic Republic governmental agencies and were subject to valid domestic secrecy regulations.

10. Opening conference

During the opening conference the head of the inspection team explained the purpose of the inspection on the basis of the mandate and the facility agreement. The operator of the facility provided information on the current

inventory of the DMAE substance subject to verification and on the facility's operating state at the point of time. This declaration referred to the AWD's two material balance areas stipulated in the facility agreement and, in the second part of the declaration, to the MPF's total activities. The first MBA includes the AWD's chemicals store, and the accounting and data processing sections and the second MBA covers the processing line with conversion of DMAE into MCPH. For each MBA, inventory lists were prepared. The material balance period, MBP, was fixed to one calendar year.

11. Types of records audited

Different types of records were audited for the two MBAs:

MBA 1:

- Dispochart of the department of supply and sale;
- Material inventory chart of the chemical storehouse;
- Computer records of material stocks;
- Material request forms;
- Contracts and accounts for supply of DMAE;

MBA 2:

- Operating records of production unit;
- Records of DMAE inventory change;
- Records of MCPH output and distribution;
- Records on the discharge (concentration and volume) of separator liquid and of mother liquor into waste water streams;
- Copies of material request forms;
- Inventory records according to inventory lists.

12. Plant orientation tour

The orientation tour encompassed the facility and the surrounding area (the entire site of the AWD). It formed part of the initial visit.

13. Inspection of areas and facility equipment

The experiment included the inspection of:

- The whole production unit (MPF), including tanks for storage of chemicals, suspended feed tanks, reaction vessels and specific equipment for treatment of reaction products (centrifuges, filters, distillate receivers, drying ovens, intermediate stores for final products, supply lines, etc.);

- Air outlet and waste water lines;

- Chemical storehouse.

Procedures of inspection included inventory controls by direct measurements, enumeration of normed tanks, verification of records as well as sampling and analyses for confirmation of data in the material balance declaration and of non-production of Schedule-[1]-chemicals. At the same time the operating state and the production régime were compared with the declarations pertaining to the verification approach and the facility agreement. Moreover, interviews were held with plant workers.

14. Inspection of the operation procedures

When designing the verification approach and the facility agreement, special importance was attached to finding out whether there was a facility-specific risk regarding the capability for the production of chemicals listed in Schedule [1] on account of special safety precautions and gadgets as well as technical equipment in the facility.

15. Sampling and sample-taking procedures

Sample-taking was performed by facility personnel whenever requested by an inspector. The points of sample-taking were selected in the following manner:

(i) For the material balance verification on the basis of the inventory lists;

(ii) For the rest of the MPF (anomaly detection) by way of selection on the part of the head of the inspection team on the basis of the declaration made by the facility's operator on the current condition of the facility.

Requests for sample-taking were made in such a way that there was no interference with the noraml process operations. However, in principle, all parts of the facility, reactors, etc., were open to access by the inspection team.

16. Handling of samples

The inspector supervised both sample-taking and the handling of samples. The inspector marked the samples and protected them from access by unauthorized persons.

17. Analysis of samples

Samples were analysed on the spot. To confirm the results, additional analyses were performed at an independent stationary laboratory outside the inspected facility upon completion of the inspection.

18. Types of analyses

(i) For the purpose of material balance verification qualitative and quantitative determinations of DMAE and MCPH were performed.

(ii) For the purpose of anomaly detection the absence of substances listed in Schedule [1] was verified (negative test).

19. Documentation of the inspection

All data verified during the inspection were registered in verification books of the inspectors. Records of the analyses performed were kept. Upon completion of the inspection these data left the inspected facility and were taken, together with the declarations and notifications of the plant, as a basis for the elaboration of the final inspection report.

20. Evaluation by the inspector

When evaluating the results of the inspection, the head of the inspection team has taken into consideration the following aspects:

- Exactness and completeness of the documentation submitted by the operator of the facility (declaration, notification, declaration by the operator of the facility at the opening conference);

- Readiness of the facility for co-operation.

21. Closing conference

At the closing conference the provisional results of the inspection were explained. In particular, the data provided by the operator of the facility concerning the balancing of DMAE were confirmed and the results of the analyses were made known.

22. Anomalies, disputes and complications

During the inspection of the chemicals store one anomaly was detected (disparity between stock card index and actual stock in barrels). However, the anomaly was resolved during the inspection.

23. Report of the inspection team

The report of the inspection team included:

- An account of actual inspection activities;

- Data on the size of the non-accountable quantity (material unaccounted for, MUF), of DMAE;

- Data on measurements and analyses performed and on their results.

The inspection records and the declarations provided by the operator of the facility have been attached as enclosures to the report.

24. Impact of the inspection on facility operations

No considerable impact on facility operations has been caused by the routine inspection. However, some adjustments in facility accountancy practice as well as in the operating régime at the facility became necessary to make facility operations suitable for verification.

25. Other problems

C. Specific aspects, conclusions

1. The inspection mandate

At the inspection the rolling text of the chemical weapons draft convention was taken as a basis for the wording of the verification aim; no difficulties have occurred. With regard to the rights of the inspectors as established in the facility agreement no narrow mandate, which would unnecessarily limit the inspection team's room to move, has been agreed upon. Efforts were aimed at avoiding any undue interference with facility operations. The requirements contained in the rolling text of the draft chemical weapons convention with regard to minimum impact on the State and plant inspected and regarding the use of least intrusive verification measures were used as principles in designing the verification approach. Thus in the inspection no practical problems occurred in meeting these requirements.

2. Composition of the inspection team

The size and composition of the inspection team was adequate for carrying out the routine inspection. The choosing of an inspection team leader proved its worth.

The composition of the team which had been entrusted with designing the verification approach and negotiating the facility agreement in the period of the initial visit more or less matched requirements. The participation of a process engineer and a financial economist with accountancy experience proved essential.

3. Inspection equipment

For the quantitative examinations for the material balance verification, instruments of the operator of the facility have been used. Measuring was supervised by an inspector. In case of international routine inspections within the framework of a convention, either the use of independent instruments or the calibration of the plant's instruments by an inspector would be advisable.

The method of gas chromatography was used for the negative verification of chemicals listed in Schedule [1], while the system of retention index standard substances, which had been introduced by Finland, was used for preselecting suspicious samples. After that, analyses for purposes of confirmation were carried out by mass spectometry. Analytical instruments of the AWD were used. It is advisable, however, that in case of routine inspections within the framework of a convention the inspection team should have its own portable gas chromatograph or a similar device and, if necessary, should have access to an independent reference laboratory.

4. Activities prior to the arrival of the inspection team on the site

The arrangements under the rolling text of the Convention proved practicable for carrying out inspection measures for the detection of anomalies and for material balance verification in MBA I. As experience from the National Trial Inspection shows, such verification could practically be carried out without prior notification.

Material balance verification in the second material balance area has been designed as a combination of interim inspections to verify inventory changes and of inventory verification. Advance notification is needed for such inspections in order to have the necessary declarations prepared by the plant. In particular, however, the timing of such inspection should be synchronized with the plant's batch régime. Therefore, the time of the inventory verification should be agreed with the operator of the facility, while interim inspections can be conducted in accordance with the rolling text.

5. Advance preparations on the site

6. Escort and points of contact arrangements

The escorting of the inspection team and the setting-up of a work-room for the inspection team proved to be useful and necessary. The facility personnel was co-operative. The inspector's scope of action was not impaired.

7. Other participants

8. Duration of inspection and "initial visit"

Taking into account the experience made during the trial inspection, three or four inspections of a duration of two or three days each per calendar year could be conceivable for routine inspections. The initial visit should be conceived as a longer process of inspections, information, data gathering and evaluation. Currently it is difficult to give more details about the necessary efforts and time.

9. Measures to protect confidential information

A considerable part of information used for elaborating the verification approach and the facility agreement was of a confidential character. Handing over the information to the TS would pose no problems, if the protection of these data against unauthorized access were guaranteed. The same applies, in principle, to the carrying out of routine verifications.

10. Opening conference

One hour was sufficient. As inspectors become acquainted with the facility, the time needed for the opening conference can be significantly shortened.

11. Types of records audited

During the routine verification it proved useful that all relevant records, documents and data carriers had already gone into the verification approach.

12. Plant orientation tour

13. Inspection of areas and facility equipment

It has proved worthwhile that exact facility documentation was available (wiring diagrams, equipment lists). It could be useful for an international inspection to record photographically certain parts of the facility (record to be kept under lock and key within the facility).

14. Inspection of the operation procedures

The verification inspection has shown that there are ways of identifying critical technological stages or equipment (not counting safety equipment) for certain chemicals listed in Schedule [1] in the absence of which in an inspected facility it can be largely ruled out that that facility is capable of producing such substances. For these very reasons, e.g. phosphor-organic nerve warfare agents cannot be produced in the inspected facility without major modifications.

15.-18. Sampling and sample-taking procedures, handling of samples, analysis of samples, types of analyses

It would be useful to develop and test methods and appliances for continuous sample-taking at critical points of the facility (e.g. air outlet and waste water lines). In elaborating the verification approach, the TS should also see to it that the necessary facility-specific sample-taking appliances are available.

19. Documentation of the inspection

Generally all data and information going into the documentation of the inspection should be regarded as confidential.

20. Evaluation by the inspector

21. Closing conference

22. Anomalies, disputes and complications

23. Report of the inspection team

A division of the report into a non-confidential part containing details essential for evaluating the observance of the Convention and a confidential attachment comprising detailed inspection data would be conceivable. The confidential part should be accessible only to TS insiders and to persons authorized accordingly by the Director-General of the TS.

24. Impact of the inspection on facility operations

25. Other problems

CONFERENCE ON DISARMAMENT

CD/900
CD/CW/WP.229
15 March 1989

Original: ENGLISH

CZECHOSLOVAKIA

Report on the Conduct and Results of the National Trial Inspection

A. Concrete approach by the Czechoslovak Socialist Republic to carrying out the national inspection

1. The preparation and actual conduct of the national trial inspection (further NTI) proceeded in accordance with document CD/CW/WP.213.

The purpose of the inspection was to test the procedures in order to verify that the selected plant:

- does not manufacture, process and store any of the chemicals of Schedules [1] and [2];

- that the manufactured and/or processed quantities of Schedule [3] chemicals are consistent with the declared data;

- that manufactured, processed and stored chemicals are not used for purposes prohibited by the Convention.

2. The national experimental inspection has been carried out in accordance with the supplement to Article VI [2] of document CD/874. In keeping with document CD/CW/WP.213, selected for the National Trial Inspection was a plant at Mníšek of the State Enterprise for Chemical and Metallurgical Production, Ústí nad Labem, manufacturing and processing chemicals of Schedule [3] with the understanding that the applied régime for the NTI will be stricter, i.e. such as is prescribed for substances of Schedule [2].

3. The inspection was carried out in the form of familiarization and initial visits, followed by on-site inspection.

4. Since the NTI related to one plant, the notification of its activities is contained in its Facility Attachment.

5. The plant manufactures auxiliary preparations for the textile and leather-working industries and the subject of the inspection is the manufacture of a substance for non-flammable treatment of cotton bearing the commercial designation SPOLAPRET OS.

6. The inspection was carried out during full operation of the plant. Verified were the announced activities and, at the same time, possible potential for the production of other substances in accordance with the Convention.

7. The production process in question is composed of continuous manufacturing of dimethyl phosphite with follow-up discontinuous manufacturing of Spolapret OS. Selected for the purposes of the NTI from among the observed substances were phosophorus trichloride, dimethyl phosphite, acrylamide and Spolapret OS.

B. Results of the National Trial Inspection

1. The inspection mandate has been issued by the respective government body for the members of the inspection team.

2. Composition of the inspection team:

Head of the inspection team:	Ing. Jan ZELENKA, Director of Dept., Ministry of Industry of the Czech Socialist Republic
Members of the inspection team:	Dr. Ján CHANDOGA, Head of Section, Federal Ministry of Foreign Affairs
	Ing. Milan MAXA, Head of Section, Ministry of Industry of the Czech Socialist Republic
	Doc. Dr. Jiří BAJGAR, CSc., Expert of the Federal Ministry of National Defence.

3. There was no need for the inspection team to use special technical equipment.

4. Prior to the inspection proper the plant had been advised of the decision on the NTI, of the composition of the inspection team and the time schedule of the inspection. In the event that a member of the inspection team would be rejected, which was not the case, another expert was prepared for selection to membership on the inspection team (see paragraph 7).

5. The preparation of the NTI was undertaken on the site during the familiarization and initial visits.

6. The inspection team met in Prague, from where it was transported to the site of the inspection.

7. Furthermore, five experts from the sectors of the Federal Ministry of Foreign Affairs, Federal Ministry of National Defence and the Ministry of Industry of the Czech Socialist Republic participated in the inspection as observers (in document CD/CW/WP.213 mentioned under paragraph B.7).

8. Duration of the experimental inspection:

Initial visit:	there were six short visits at the inspected facility in November-December of 1988. During this period some details were settled and the draft Facility

Attachment prepared. The initial visit finished on 25 January with the conclusion of the Facility Attachment.

On-site inspection: one day, 26 January 1989.

9. The protection of confidential information has been secured by the mandate of the inspectors and by the Facility Attachment. After carrying out the NTI, the inspection team reached the conclusion that from Czechoslovakia's point of view the items 2.2.(a) and 2.2.(b) could be combined into one category. Another category could be the data relating to:

- the capacity of plants;
- input and output data on inspected materials;
- customers and suppliers.

The following data could be categorized as classified:

- the layout plan of plants;
- technological process and flow charts;
- specification of raw materials and products needed for compiling and evaluating the list of chemicals related to the Convention;
- the parameters of processes and the status of chemicals at sites of their balancing and measuring needed for the verification of the amount of the chemicals in accordance with the Convention.

10. The head of the inspection team submitted information on the purpose, aims and methods of carrying out the inspection and a representative of the plant reported on the readiness of the plant for the inspection.

11. The operational record for 1988 and the production plan for 1989 have been verified from written documentation.

12. An inspection has been undertaken of the production unit and the related peripherals. The operated equipment does not permit a change-over to the manufacturing of Schedules [1] and [2] chemicals without major engineering and construction alterations.

13. The sites and facilities have been determined which were subject to inspection.

14. A comparison has been made between the operated technological process and the process flow sheet on-site. It has been established that the quantity of the input raw materials was in conformity with the end products and the quantity of the processed substances under observation was in conformity with the indicated production of Spolapret OS.

15. Samples were taken as needed in predetermined locations, they were sealed and conveyed to an authorized testing facility under the supervision of an

authorized member of the testing team. Duplicates of the samples have been deposited under seal in the State Enterprise Spolek pro chemickou a hutní výrobu, Ústí nad Labem. The results of the analyses of these samples confirmed the identity of the chemicals under observation and the absence of Schedule [1] and Schedule [2] chemicals.

16. The entire documentation has been checked on-site and is henceforth deposited in the Mníšek plant.

17. Each member of the inspection team checked whether the indicated operational input of the observed chemicals corresponded with the indicated output and whether the technological process used corresponded with the declared production. The head of the inspection team evaluated the co-operation of the representatives of the inspected plant with the inspection team.

18. A final meeting of the inspection team and the representatives of the plant evaluated to what degree the purpose and the aims of the inspection have been achieved.

19. No anomalies or complications occurred during the inspection.

20. The final report of the inspection team revealed that the objective of the national trial inspection was met and that the activities of the inspected plant were in conformity with the provisions of the Convention.

Composition of the Inspection Team

The Ministry of Industry of the Czech Socialist Republic simulating "Technical Secretariat" for the purposes of the national experimental inspection hereby appoints:

Ing. Jan ZELENKA - Director of Department, Ministry of Industry of the Czech Socialist Republic

as the Head of the Inspection Team which is to carry out an experimental inspection on national level to ascertain whether the activities of the production complex SPOLAPRET OS in the Mníšek plant of the State Enterprise Spolek pro chemickou a hutní výrobu Ústí nad Labem (chemical and metallurgical production) conform to the provisions of the Convention.

Ing. Milan MAXA - Head of Section, Ministry of Industry of the Czech Socialist Republic

Dr. Ján CHANDOGA - Head of Section, Federal Ministry of Foreign Affairs

Doc. Dr. Jiří BAJGAR, CSc. - Expert of the Federal Ministry of National Defence

as members of the Inspection Team for the experimental inspection referred to above.

(signed)

Ing. Bořivoj Frýbert
Deputy Minister of Industry
of the Czech Socialist Republic
in charge of development and
investments

Prague, 20 January 1989

Instructions on basic rules governing the inspection and behaviour of inspectors in connection with the trial inspection carried out on a national level

1. The inspectors fulfil their mission on the basis of a mandate given to them for the purpose of an experimental inspection on a national level, as currently outlined in the draft Chemical Weapons Convention. They shall refrain from any activities going beyond this mandate.

2. The activities of the inspectors shall be carried out in a manner causing the least possible disruption to the inspected facility, inspected sites and work stations. The inspectors may request only such information and data necessary for the fulfilment of their mandate. They shall handle these data as confidential. In particular, they shall not disclose information to persons not involved in the experiment with whom they come into contact during the inspection or in connection with it. They shall remain bound by this obligation even after the termination of the trial inspection.

3. During the exercise of their duties the inspectors shall be accompanied by representatives of the inspected facility or of its superior management.

4. During the exercise of their functions the inspectors shall avoid any unnecessary disturbance, slowdown of production or interference with the safety of the operation. In particular, the inspectors shall not operate any equipment or issue instructions to employees of the facility concerning its operation. If, in the view of an inspector, it is necessary to perform some activity relating to the operation of the facility in order to fulfil the mandate, he shall address this request to the designated representative of the facility's management.

5. After completion of the trial inspection, the inspectors shall prepare a report on their activities and results. The report shall contain only facts as to whether the provisions of the Convention are being observed as stipulated in the mandate for the trial inspection. The report is furthermore considered to be of a confidential nature.

I have been made familiar with the instructions and I undertake to be guided by their provisions.

.....
Signature

Praque, 20 January 1989

FACILITY ATTACHMENT

(Based on the draft Model for an Agreement relating to facilities producing, processing or consuming chemicals listed in Schedule [2] as contained in CD/881 on pages 124-127.)

between the State Enterprise Spolek pro chemickou a hutní výrobu (chemical and metallurgical production) Ústí nad Labem, and the National Technical Secretariat represented by the Ministry of Industry of the Czech Socialist Republic on Trial Inspection of the Non-production of Chemical Weapons.

---

1. Identification of the facility

(a) Facility identification code: will be assigned by the Technical Secretariat.

(b) Name of the facility:

Spolek pro chemickou a hutní výrobu, s.p., Ústí nad Labem (Corporation for chemical and metallurgical production), Facility at Mníšek, District Liberec

(c) Owner of the facility:

Spolek pro chemickou a hutní výrobu, s.p., Ústí nad Labem

(d) Name of the company operating the facility:

Spolek pro chemickou a hutní výrobu, s.p., Ústí nad Labem

(e) Exact location of the facility:

The facility is located in the North Bohemian Region, in the community of Mníšek, District Liberec, approximately 8 kilometers north of Liberec in the direction of Frýdlant. The production facility which is the subject to the trial inspection consists of a raw material storehouse, the manufacture of dimethyl phosphite, including a biological waste water treatment plant, and the follow-up manufacture of Spolapret OS with expedition of the product.

(f) Access of inspectors:

To all areas of the production facility during the initial visit and to predetermined places designated in a relevant Annex during the routine inspection.

2. Information on the facility

This Agreement is the result of the familiarization and initial visits during the autumn of 1988 and January 1989.

(a) Production process:

Consists of continuous production of dimethyl phosphite with follow-up discontinuous production of Spolapret OS.

(b) Raw materials processed during production (quantities of observed substances would be indicated in an Annex):

phosphorus trichloride

methyl alcohol

acrylamide

formaldehyde.

(c) End-products of the processing (quantities of observed chemicals would be indicated in an Annex; for illustration, see data of production of Spolapret OS below):

dimethyl phosphite

N - (Hydroxymethyl) - 3 - (dimethoxyphosphoryl) propionamide,
(Spolapret OS): delcared production 1988: 471,05 t
planned production 1989: 551 t

(d) By-products:

methyl chloride;

hydrogen chloride;

monomethyl phosphite.

By-products are stored on a long-term basis.

Non-usable by-products are liquidated in a biological cleaner.

(e) Safety and health measures:

The operation of the production facility does not require any special safety and health equipment.

(f) Transportation of input raw materials and of products:

Automobile transport

g) Storage capacity:

methyl alcohol	30 tons
phosphorus trichloride	105 tons
dimethyl phosphite	25 tons
acrylamide	20 tons
formaldehyde - 40 per cent water solution	25 tons

(h) Detailed orientation plan of the production facility including infrastructure in a relevant Annex:

- buildings
- storage rooms
- main technological points
- stored material flow
- main electricity, water and steam points
- key points for measurement and sample-taking.

2.1. Storage of information

Information mentioned under items 1 and 2, including Annexes, will be deposited at the Ministry of Industry of the Czech Socialist Republic.

2.2. Confidentiality of information

Information provided by the Czechoslovak Socialist Republic for the purposes of the national trial inspection would be considered, in the process of implementation of the CW Convention, to be of varying degrees of confidentiality. With regard to the further treatment of this information, Czechoslovakia deems it possible to express the level of its confidentiality in the following way:

(a) Information about the existence of a facility manufacturing Schedule [3] chemical would be considered as having no degree of confidentiality;

(b) Data in paragraphs 1 (a) through (e) of the Facility Attachment would be accessible to States parties of the CW Convention only;

(c) Data in paragraphs 2 (a) through (f) of the Facility Attachment should be limited, on a need-to-know basis, to the relevant staff of the Technical Secretariat;

(d) Specific facility related information in paragraphs 2 (g) and (h) of the Facility Attachment required for the actual conduct of inspection.

3. Number and modalities of inspections

The inspection will be carried out once a year on the national level.

4. Verification measures, the plan and specific places to be inspected

(a) The relationship between feedstocks and the quantity of the end-product:

- By verifying the documentation and carrying out on-site inspection.

(b) Identification of key points for measurement and sample-taking:

Measurement points:

- phosphorus trichloride:	level indicator on storage bunkers (position No. 105)
- acrylamide:	dosing apparatus on the Spolapret OS reactor
- dimethyl phosphite:	level indicator on the storage bunker (position No. 103)
- Spolapret OS:	filling and weighing of the product

Sample-taking points:

- phosphorus trichloride:	storage bunker before entry to reactor
- dimethyl phosphite:	in-process storage bunker (position No. 25)
- Spolapret OS:	storage bunker of end-product (position No. 96)

(c) Methods for continuous monitoring:

- For purposes of verification continuous monitoring is not conducted.

(d) Losses within the production process:

- They are taken into account in the consumption norms of the process.

5. Inspection activities

5.1. Mode of routine inspection

To be inspected:

- consumption of phosphorus trichloride
- consumption of acrylamide
- production and consumption of dimethyl phosphite
- production of Spolapret OS.

5.2. The scope of the inspection under ordinary circumstances

The members of the inspection team will have access to areas indicated in relevant Annex:

Scope:

(a) Examination of records of the operation;

(b) Examination of the technological equipment of the production process, including the control room;

(c) Taking of samples;

(d) Examination of the flow of selected raw materials and selected products in the facility.

6. Sample-taking and analysis of samples

The samples will be taken by the attending personnel in the presence of a member of the inspection team. Analyses will be made at an authorized testing facility at VÚOS Pardubice. Duplicates of the samples will be deposited under seal in the State Enterprise Spolek pro chemickou a hutní vyrobu, Ústí nad Labem, for the duration of one to two years. The means of transport to the site of the testing facility will be secured by the inspection team.

7. Records

7.1. Type of records

It has been determined during the initial visit. It includes both storage and operating records.

7.2. Location and language of records

The records will be located in the Mníšek facility and they will be in the Czech language.

7.3. Access to records

The inspection team will have access to the records of the production facility retrospectively for the year 1988 and to data on planned production for 1989.

7.4. Retention period of records

Five years.

8. Services to be provided by the facility

- a room for the study of the documentation;
- telephone connection;
- medical and health services (identical to those provided for the employees of the Mnísek facility).

9. Specific safety and health measures

None are taken.

10. Annexes will be attached to the Facility Attachment containing:

(a) map indicating the exact location of the facility;

(b) orientation plan of the inspected facility with the designation of access for inspectors and detailed plan of inspected facility including infrastructure;

(c) annual data on the production, consumption, export and import of all mentioned chemicals for the previous year and the same data planned for the following year.

Done at Mnísek on 25 January 1989

For National Technical Secretariat represented by the Ministry of Industry of the Czech Socialist Republic:

.....
Ing. Jan Zelenka

Director of the Department of Concepts and Technical Development of the Chemical, Rubber, Polygraphic Industries and Technical Glass

For the State Enterprise Spolek pro chemickou a hutní vyrobu, Ústí nad Labem:

.....
Ing. Eduard Zárybnicky

Enterprise Manager

Analyses of samples from the production of Spolapret OS

Sample I - PCl_3

Sample II - $HP(O)(OCH_3)_2$

Sample III - SPOLAPRET OS

^1H, ^{13}C and ^{31}P NMR spectra were measured on a JEOL JNM-FX 100 spectrometer at 99.602, 25.047 and 40.324 MHz, respectively. The compounds I and II were measured as 1 : 1 (v/v) solutions in deuteriochloroform, the compound III as 4 : 1 (v/v) in deuteriumoxide at 300K. ^1H chemical shifts were referred to internal hexamethyldisiloxane (HMDSO; δ = 0.00); ^{13}C chemical shifts to the signal of $CDCl_3$ (δ = 77.00) and ^{31}P chemical shifts were referred to external neat H_3PO_4 (85%; δ = 0.0). Positive values of chemical shifts denote downfield shifts. In addition, density (d) and refractive index (n) were measured with compounds I and II at 20°C.

Sample I - PCl_3

$\delta(^{31}P)$ = 219.5

n = 1.513

d = 1.574 $kg.m^{-3}$

Sample II - $HP(O)(OCH_3)_2$

δ (P-<u>H</u>) = 6.76; $^1J(^{31}P, ^1H)$ = 697.8 Hz

δ ($OC\underline{H}_3$) = 3.77; $^3J(^{31}P, ^1H)$ = 11.7 Hz

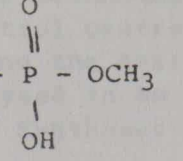
δ ($O\underline{C}H_3$) = 50.32; $^2J(^{31}P, ^{13}C)$ = 5.9 Hz

$\delta(^{31}P)$ = 10.9

n = 1.403

d = 1 203 $kg.m^{-3}$

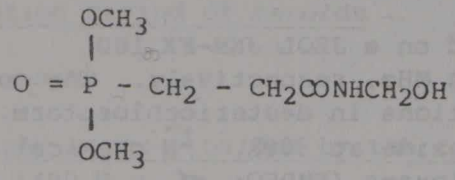
The sample contains 2% of monoester



The above-mentioned two sets of data are in an excellent agreement with published values [D.G. Gorenstein, Progr. NMR Spectr. 16, 1 - 98 (1983) and CRC Handbook of Chemistry and Physics, 51st Edition. The Chemical Rubber Co., Cleveland, USA, (1970).]

Sample III - SPOLAPRET OS

SPOLAPRET OS represents a mixture of compounds with strongly prevailing compound III [$\delta(^{31}P)$ = 35.8]



III

^{31}P NMR spectrum is in agreement with that of Pyrowatex produced by Ciba-Geigy.

Signature and certificate of the
Head of the authorized laboratory

Final Report of the Inspection Team

Within the framework of national verification of the non-production of chemical weapons in civilian industry a National Trial Inspection was carried out on 25 and 26 January 1989 in the State Enterprise Spolek pro chemickou a hutní výrobu (chemical and metallurgical production), Ústí nad Labem - subsidiary plant at Mníšek, District Liberec. The subject of the inspection was the production unit for Spolapret OS using chemicals of Schedule [3]. The inspection was carried out by a team composed of:

Head of the inspection team:	Ing. Jan ZELENKA, Director of Department, Ministry of Industry of the Czech Socialist Republic
Members of the inspection team:	Dr. Ján GHANDOGA, Head of Section. Federal Ministry of Foreign Affairs
	Ing. Milan MAXA, Head of Section, Ministry of Industry of the Czech Socialist Republic
	Doc. Dr. Jiří BAJGAR, CSc., expert of the Federal Ministry of National Defence

During the concluding stage of the initial visit to the plant on 25 January 1989, a "Facility Attachment between the State Enterprise Spolek pro chemickou a hutní výrobu Ústí nad Labem and the National Technical Secretariat represented by the Ministry of Industry of the Czech Socialist Republic on a Trial Inspection of Non-production of Chemical Weapons" was concluded.

It was the task of the inspection team to verify that the mentioned facility:

- does not manufacture, process or store any of the chemicals of Schedules [1] and [2];
- the manufactured and/or processed amounts of chemicals of Schedule [3] correspond to the amounts announced;
- does not use the manufactured, processed and stored chemicals for purposes prohibited by the Convention.

The inspection itself took place on 25 and 26 January 1989 and consisted of examining the records of the operation, the technological equipment involved in the production, including the control centre, the flow of selected raw materials and products within the plant and the taking of samples. The extracted samples have been subsequently analysed in an authorized testing facility in the Research Institute of Organic Syntheses at Pardubice.

Conclusions of the Inspection Team

1. On the basis of the examinations undertaken, the inspection team arrived at the conclusion that the activities in the inspected production unit were not in contradiction with the Convention.

2. The operated technological equipment would not permit a change-over to the production of Schedule [1] and Schedule [2] chemicals without major engineering and construction alterations.

3. It has been unequivocally established that the quantities of the observed input raw materials correspond with the end-product. The data announced by the plant have, at the same time, been verified.

4. The results of the analyses have confirmed the identity of the observed chemicals and the absence of chemicals listed in Schedule [1] and Schedule [2].

5. The inspection team noted that the inspected facility co-operated with the inspection team very well. No anomalies or complications occurred during the inspection.

For the inspection team:

Ing. Jan ZELENKA, Director of Department of the Ministry of Industry of the Czech Socialist Republic
Head of Inspection Team

Prague, 3 February 1989

Conclusions to be drawn from the Czechoslovak National Trial Inspection

1. The preparation, carrying out and evaluation of the NTI testified to the fact that the relevant verification provisions, as contained in CD/881, are suitable for the verification of non-production of chemical weapons in the civilian chemical industry.

2. The experiment confirmed the special importance of Facility Attachments and the need for their thorough preparation. The time necessary for their preparation and conclusion, if undertaken without interruptions, might be approximately one week.

3. The minimum number of inspectors required could be estimated at three persons although this number may need to be increased depending on the type of facility. In the case of a larger inspection team, specialization of its members might be useful. Access to all information should be limited basically to the Head of the inspection team.

4. The use of national technical instruments during an inspection is preferable. However, this does not exclude the use of instruments belonging to the inspection team.

5. The timing of a routine inspection at a facility of the civilian chemical industry would be approximately one to two days, depending on the type of the facility inspected.

6. There is a need to ensure the protection of confidential data and it would be desirable to use a system of classification of confidential information.

7. Various time periods might be required for the evaluation of the final report, depending on the course of inspection and its results. If no serious anomalies occur it might last five to seven days.

CONFERENCE ON DISARMAMENT

CD/901
CD/CW/WP.230
16 March 1989

ENGLISH
Original: FRENCH

FRANCE

Convention on chemical weapons

Confidentiality

INTRODUCTION

Implementation of the regular or exceptional verification measures stipulated in the convention must be acceptable to all parties concerned, and for that reason it is imperative to find a proper balance between the effective exercise of controls and the need for the inspected State to protect its confidential information in the military, commercial, and industrial fields. It is essential to maintain confidence in the treaty régime while keeping the risk of the loss of confidential information in the military, commercial and industrial fields at acceptable levels. Far from being contradictory, verification and confidentiality must be combined in order to ensure that the convention is implemented in the best possible way: if properly applied, confidentiality can contribute to better verification.

The procedures linked to confidentiality should be spelt out in the actual verification provisions of the convention, because they touch on fundamental national interests.

The convention should include in particular specific provisions governing the procedures for handling confidential information, as well as provisions concerning parties entrusted with the handling of such information.

This working paper deliberately presents an open-ended approach which covers different aspects of confidentiality and various ways to handle them in the convention. After a first chapter on the scope and limits of the concept, it explores three different avenues:

- A systematic review of the "rolling text" (CD/881), in order to identify places where the insertion of a reference to confidentiality could be deemed appropriate;
- The tentative structure of a specific article devoted to confidentiality;
- The principal elements of a special annex covering the various aspects of confidentiality.

I. SCOPE AND LIMITS

Note: The need to define confidentiality in the convention can be questioned. But for the sake of considering this important concept thoroughly, it is necessary to evaluate its scope and limits.

The following should be considered confidential: any information (or data relevant to security, intellectual property or know-how) which brought to the attention of another party (another country, an industrial firm, a research and development organization), either separately or in association with some other information or data, could afford it a special advantage of a military, scientific, technical, industrial, commercial or financial nature.

The concept of confidentiality and the special measures for ensuring its protection may be determined:

- With respect to the recipients of the information: national authorities, States parties, the Organization, the Executive Council, the Technical Secretariat (as a whole, central level, international inspectorate);

- In accordance with the various aspects of the verification régimes: initial and annual declarations, model agreements, routine inspections, challenge inspection, instrument monitoring;

- In respect of application to different fields: military facilities, small-scale production facilities (and laboratories authorized for schedule [1] chemicals); chemical, agro-chemical, pharmaceutical industries; distributors, middlemen, wholesalers.

This first assessment shows that there is no simple, single concept of confidentiality which can be defined, since each element of it is specific.

The outcome of national and multilateral trial inspections should make it possible to undertake a functional analysis with a view to identifying each of the elements in which confidentiality is involved, in what way it is involved and thus how it may be protected (especially with respect to the collection of, storage of, transmission of, access to, and use of data).

II. PROPOSED AMENDMENTS AND ADDITIONS TO THE PROVISIONS OF DOCUMENT CD/881

Note: This section is intended to identify all the parts of the text where insertion of additional provisions or amendment of existing provisions might be deemed necessary. This implies by definition a substantial amount of redundancy. If this approach to dealing with confidentiality in the convention text were to be pursued, insertions would of course have to be limited to what appears essential.

2.1. Provisions related to articles IV and V

Page 19, paragraph 9: Add the following sentence:

The sole purpose of the Inspectors' activities and the verification methods used shall be to provide sufficient facts to verify compliance with the provisions of the Convention.

Page 21, paragraph 11: Add the same sentence.

Page 40, paragraph 3 (a): Add the following sentence:

The model agreement shall also include special provisions which take confidentiality into account.

Page 44, paragraph 7 (c): Add at the end of the subparagraph:

- take into account only information and data related to compliance with the Convention.

Page 51, paragraph 7 (e): Add the same sentence as to paragraph 7 (c) above.

Page 60, paragraph 2 (a): Add the same sentence as to paragraph 3 (a) above.

Page 65, paragraph 7 (c): Add the same sentence as to paragraph 7 (c) above.

2.2. Provisions related to article VI

Page 23, paragraph 9: Add after subparagraph (c):

(d) take into account, for that purpose, the provisions on protection of confidentiality contained in:

- the annexes to this article;
- articles VII and VIII;
- the annex specifically dealing with confidentiality.

Page 76, paragraph 5: Add after subparagraph (ii):

(iii) Special measures, applicable to inspection methods and on-site instrument-monitoring procedures, shall be taken for the protection of confidentiality, and mentioned in the guidelines.

Page 77, paragraph 10: Add the following sentence:

Special guidelines shall be applied during the initial visit for the protection of confidentiality.

Page 77, paragraph 12: Add after the second sentence:

The model agreement shall contain provisions on the protection of the various aspects of confidentiality.

Page 78, paragraph 14 (c): Replace the fourth subparagraph by the following:

- perform on-site analysis, either using equipment available at the facility, or, if possible, using mobile analytical equipment provided and approved by the Technical Secretariat.

Page 79, paragraph 14 (c): Replace the fifth subparagraph by one of the following sentences:

- transfer, if necessary, samples for off-site analysis at a laboratory of the State party, approved by the Technical Secretariat, where the analyses will be performed, under the control of the Inspectors, using an approved methodology; or

- transfer, if necessary, samples for off-site analysis:

  - either at a central laboratory reporting to the Technical Secretariat, where the analyses will be performed (in accordance with procedures approved by the States parties which ensure confidentiality protection), for the sole purpose of disclosing the presence or absence of the chemical product(s) in question;

  - or at a laboratory of another State party in the same region, approved by the Technical Secretariat, where the analyses will be performed using an approved methodology (and in accordance with procedures approved by the States parties which ensure confidentiality protection), for the sole purpose of disclosing the presence or absence of the chemical product(s) in question;

Page 79, paragraph 15: New wording: 1/

A sealed container shall be maintained at each site, under double lock, one key being retained by the Technical Secretariat and the other by (the director of the facility) (the national authority), each committing himself to open it at the request of the other. The container may be used to store photographs, plans and any other information to which the Inspectorate may wish to refer during subsequent inspections. In particular, some of the reports described in paragraph 16 below might be kept therein.

Page 79, paragraph 16: New wording:

16. After each inspection or visit to the facility, the International Inspectors shall draw up a report or reports on the basis of their findings. Three possibilities may be considered:

(i) The findings of the International Inspectors are in accordance with the declarations, notifications and model agreements, in which case:

- A full report shall be kept in the sealed container (cf. para. 15);

- The representative of the State Party shall be informed of the findings;

1/ The underlined paragraphs could be incorporated in a technical section of the annex on confidentiality and could be adjusted to the corresponding topics dealt with in article IV (in particular page 45, para. 7 (f)) and article V (page 65, para. 7 (f)).

- A certificate of compliance shall be sent to the (Director-General, who) (Technical Secretariat, which) shall forward a copy to the State Party inspected or visited.

(ii) The International Inspectors consider that there are ambiguities, uncertainties or irregularities, in which case:

- If a clarification cannot be made on-site, the detailed report shall be kept in the container and a brief interim report, referring only to the ambiguities, uncertainties or irregularities, shall be sent to the Director-General of the Technical Secretariat;

- If clarification is obtained between the State Party and the Technical Secretariat, the latter shall issue the certificate of compliance for the inspection in question;

- If clarification cannot be obtained between the State Party and the Technical Secretariat, or if the facts established are such as to suggest that the obligations arising from the Convention have not been observed, the full report shall be sent to the Executive Council by the Director-General.

(iii) The inspection leads the Inspectors to a finding of non-compliance with the provisions of the Convention, such as ... . In this case, the Inspectors shall transmit a report with their findings on non-compliance to the Director-General of the Technical Secretariat, who shall forward a copy to the State Party inspected or visited. The Technical Secretariat shall immediately inform the Executive Council thereof.

Page 82: After paragraph 2 add the following text:

The initial and annual declarations submitted by a State Party under paragraphs 3 and 4 of article VI shall be drafted and transmitted in such a way as to take into account confidentiality requirements, which must be identical for all States Parties (to be developed).

Page 82: At the end of the text add a paragraph as follows:

The procedures adopted for initial and annual declarations, as well as for verification, shall take into account the provisions on confidentiality protection, as indicated ... (to be developed).

2.3. Provisions related to article VII

Page 24: Add the following after paragraph 5:

- The national authority of a State Party may, jointly with (the Executive Council and) (the Technical Secretariat), take such measures as it deems necessary to protect confidentiality, provided that such measures must not be incompatible with its obligations under the Convention.

2.4. Provisions related to article VIII

Page 29: Add after paragraph 2 (h):

(i) in carrying out all its activities, take the measures necessary to protect the various aspects of confidentiality.

Page 30: Add after paragraph 2 (h):

(i) in all its activities, take the measures necessary to protect the various aspects of confidentiality, by reference to the relevant provisions of annex ... .

Page 31: Paragraph 3 becomes paragraph 5 (see below).

Page 31: Paragraph 4 becomes paragraph 3.

Page 31: Paragraph 5 becomes paragraph 4, and is worded as follows:

4. The Director-General of the Technical Secretariat shall be appointed by the Conference of the States Parties (upon the recommendation of the Executive Council) for a term of (four) (five) years (, renewable for one further term but not thereafter). The Director-General shall be responsible to the Conference of States Parties and the Executive Council for the organization and functioning of the Technical Secretariat, as well as for the appointment of staff. Depending on their (responsibilities) (duties), the staff shall be recruited in accordance with the special provisions on confidentiality protection as mentioned in annex ... . Conditions of staff employment shall be defined in such a way as to ensure that access to and use of confidential information are in conformity with the procedures established by the Director-General, in accordance with provisions on confidentiality as mentioned in annex ... .

Page 31: Paragraph 3 becomes paragraph 5, and is worded as follows:

5. The International Inspectorate shall be a unit of the Technical Secretariat and shall act under the supervision of the Director-General of the Technical Secretariat. (The Director-General shall be responsible to the Conference of States Parties and the Executive Council for the appointment of the International Inspectors.)

The International Inspectors shall be recruited in accordance with the special provisions on confidentiality, as mentioned in annex ... .

Page 31: New paragraph 6:

6. The paramount consideration in the recruitment of the staff of the Technical Secretariat and the International Inspectorate, and in the determination of their conditions of service, shall be the necessity for securing the highest standards of efficiency, competence and integrity.

Only citizens of the States Parties shall be recruited as International Inspectors or as members of the administrative and technical 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.

Page 31: Paragraph 6 becomes paragraph 7, with the deletion of the final sentence ("The Director-General shall establish ...") and the addition of the following:

The use and protection of confidential data within the Technical Secretariat, and their transmission to the other organs of the Convention and/or States Parties, shall be effected under the responsibility of the Director-General, in accordance with the special provisions on confidentiality, as mentioned in annex ... .

Page 31: Paragraph 7 becomes paragraph 8.

2.5. Guidelines on the International Inspectorate

Page 99, section III, paragraph 2: Replace the last two sentences by:

They shall be expected to abide by the relevant regulations included in articles ... and their annexes in order to protect confidentiality. They shall in particular be subject to the provisions concerning confidentiality contained in annex ... .

Page 101: Add at end of footnote 4:

", especially with regard to all aspects of confidentiality."

Page 102, section IV, paragraph 2 (c): New wording:

(c) In order to assist the Inspectors in carrying out inspections under article IX, the Director-General may request (the national authority) (the State Party) to supply him with supporting staff with special skills or training. The national authority of each State Party shall make available to the Technical Secretariat a list of such staff and the specialists available, such as interpreters, security personnel, etc.

Page 102, paragraphs 2 (d) and 2 (e): Delete the references to "supporting staff".

Page 104, paragraph 5 (b): Add:

"They shall be responsible for ensuring that the work requested of the supporting staff is smoothly carried out."

2.6. Appendix II

Page 116: After section II, paragraph 5, add:

III. Confidentiality

The procedures for declarations and verification shall take into account the requirements relating to protection of confidentiality (to be developed).

Page 125, section 2.1: New wording:

Relevant information on the facility provided under paragraph 2 will be kept in a sealed container in the facility, under double lock, one key to be kept by the Technical Secretariat and the other by (the director of the facility) (the national authority), each committing himself to open it at the request of the other.

Page 127: Add a new section 12:

12. Confidentiality

Provisions on the protection of confidentiality shall be established on the basis of a general model.

Page 132: Add a new section 13 with the same wording as the new section 12 above.

III. TENTATIVE STRUCTURE OF A SPECIFIC ARTICLE DEVOTED TO CONFIDENTIALITY

1. General obligations of States parties and of the Organization.

2. General rules for procedures concerning the Technical Secretariat, and more specifically the International Inspectorate.

3. Considerations on breaches of confidentiality and settlement of disputes.

4. Reference to the role of the national authority.

IV. PRINCIPLE ELEMENTS OF A SPECIAL ANNEX COVERING THE VARIOUS ASPECTS OF CONFIDENTIALITY

4.1. Technical Secretariat

4.1.1. Central administration

4.1.1.1. Obligations

Note: This section could, if appropriate, be inserted among the provisions covering the general status of the staff of the Organization, In any event, it would address the following items:

(a) In taking up his duties, the Director-General shall undertake to ensure that no confidential information will be disclosed or shared without the written authorization of the State party that furnished it.

(b) The Director-General shall organize a "special office" directly under him, which shall be responsible for verifying the protection of confidential information during the process of collection, storage, use and transmission, and for identifying any source of leaks of confidential information, and the person responsible.

(c) Prior to the recruitment of members of this "special office", who must be citizens of a State party, the Director-General shall carefully review their origin, their skills and their integrity. (Each State party shall be entitled to acquaint itself with the candidates' files, and shall give its consent to the final recruitment.)

(d) The individuals referred to in subparagraphs (b) and (c) above shall, upon taking up their duties:

(i) Be engaged for a minimum of (five) years (exceptional conditions for breaking a contract: to be defined);

(ii) Be required not to disclose any confidential information without the authorization of the Director-General.

(e) When a person having had knowledge of confidential information leaves the Technical Secretariat, he shall similarly pledge to ... not to disclose any information for a period of ... years, and to keep the Technical Secretariat informed of his subsequent employ for a period of ... years. Any State party may have access to such information.

4.1.1.2. Procedures (to be developed)

(a) The Technical Secretariat shall establish specific procedures and means to be agreed upon by the States parties with respect to confidential data:

- Storage of information (in coded form);

- Access to information on the basis of the level of confidentiality, in accordance with the "need to know" principle (with, for example, a "double password" system, one password being kept by the office referred to in section 4.1.1.1. (b) above and the other by the user of the information).

(b) Regarding the distribution of confidential data, procedures shall also be approved and implemented by the States parties, both for routine transmissions and for those effected in connection with specific actions, between the Technical Secretariat and:

- The States parties, on the basis of a model agreement;

- The Inspectors;

- The Executive Council;

- The Conference of States Parties;

- Sites which have been or are to be inspected.

(c) The Director-General shall regularly organize security briefings for his staff and the International Inspectors.

(d) Any case of unauthorized disclosure of confidential information shall be the subject of a report to be sent by the Director-General to:

- The Executive Council;

- The State party concerned.

4.1.2. The International Inspectorate

Note: The very specific responsibilities of the International Inspectors with regard to confidentiality make it necessary to devise more stringent rules for them than for the rest of the staff of the Organization. Whatever the place finally chosen, whether in the staff rules of the Organization or in an annex on confidentiality, reference should be made in the latter to the precise obligations of the Inspectors.

4.1.2.1. Obligations

(a) The Inspectors shall be required to abide by the regulations established by the Technical Secretariat regarding the handling of confidential information.

(b) The Inspectors shall carry out their duties on the basis of the mandate issued by the Technical Secretariat, and shall refrain from any activities not relevant thereto.

(c) The Inspectors shall require only the information and data needed to establish effectively and efficiently, within the scope of their mandate, the facts directly linked to respect for the provisions of the Convention.

(d) The Inspectors shall communicate to no State, organization or person outside the Technical Secretariat any information to which they may have had access by virtue of their activities in a State party. They shall neither seek nor accept instructions from any Government or from any other authority external to the Organization.

4.1.2.2. Procedures (to be developed)

(a) Recruitment:

(i) Only nationals of the States parties shall be eligible to become inspectors;

(ii) The professional qualifications and curriculum vitae of each inspector shall be examined by the Director-General to assess the efficiency, competence and integrity of the candidate;

(iii) Each State Party shall be entitled to acquaint itself with a candidate's file; unless a State objects, within a period of ... , the candidate shall be formally recruited (possibility of nominating inspectors prior to the commencement of inspection activities?).

(b) Employment and career opportunities in the Technical Secretariat:

- The inspectors shall be recruited for a minimum contract of (five) years.

- Exceptional conditions under which the Organization or the Inspector may break his contract are as follows:

...

- The Inspectors shall be promoted either (automatically) or (under a procedure to be determined).

- The States Parties may seek information concerning each inspector's assignment and any change in his professional activities within the Technical Secretariat.

(c) Status of the Inspectors at the end of their contracts:

(i) The Inspectors shall disclose no confidential information connected with their activities in the course of their careers with the Technical Secretariat for a period of (five) years after the expiry of their contract;

(ii) The Inspectors may not work, directly or indirectly, for any chemical industry (or industrial group that includes a chemical company) for a period of (five) years following the expiry of their contracts with the Technical Secretariat. The Technical Secretariat may inform the States parties (at their request) of the subsequent careers of former inspectors.

(d) Responsibility of the Inspectors:

Each Inspector shall personally promise by virtue of his employment contract not to disclose confidential information during and at the end of his contract, and to agree to the conditions relating to his employment upon the expiration of his contract.

4.1.3. Auditing

Regular audits of the implementation of the rules and procedures on confidentiality in the Technical Secretariat shall be conducted by:

- An agency of the Executive Council, independent of the Technical Secretariat;

- (Another body?)

(to be developed: the establishment of such a body might be provided for in article VIII (c)).

4.2. Procedures applicable to breaches of confidentiality rules (first outline, to be developed)

4.2.1. Possible investigations of allegations of such breaches

Type of breach:	Investigation undertaken by:
- Within a State party	- The State party
- By a member of the Technical Secretariat	- The Director-General of the Technical Secretariat
- By a State party	- A subsidiary body of the Conference of States Parties
- By the Technical Secretariat as a whole	- A subsidiary body of the Conference of States Parties

4.2.2. Process for settlement of disputes relating to confidentiality

4.2.2.1. For breaches involving only a State party, or nationals not related to the Organization, national legislation shall apply; the Director-General shall be kept informed as the procedure progresses.

4.2.2.2. For breaches involving both a national authority and the Organization, or, specifically, for breaches within the Technical Secretariat (core staff, International Inspectorate, Director-General), a "Commission for the settlement of disputes relating to confidentiality", set up as a subsidiary body of the Conference of States Parties, shall consider the case. This Commission shall be appointed by the Conference of States Parties and shall have the necessary authority to impose disciplinary sanctions on the personnel of the Organization.

4.2.2.3. All other breaches, and disputes between States parties related to breaches of confidentiality and not involving the staff of the Organization, shall be considered directly by the Executive Council.

4.2.3. Enforcement measures/sanctions: questions

- What kind of liability (financial/criminal) should be applied to each party?

- Options available to the Director-General of the Technical Secretariat, in relation to members of the Technical Secretariat; in particular, roles of the Director-General, in the exercise of his disciplinary powers, and of the "Commission for the settlement of disputes relating to confidentiality" (to be developed).

4.3. National authority

4.3.1. Participation

The national authority shall, inter alia, assist in the communication of data and render assistance on the occasion of on-site international inspections.

Respect for confidentiality shall be a concern of the national authority, which shall in particular be responsible for:

- Assembling and storing national data which a State Party needs to know;
- Transmitting certain such data, appropriately processed, as necessary, to:
  - The Technical Secretariat (the Executive Council) (the Conference of States Parties);
  - The national authority of another State Party (cf. article IX);
- Organizing the arrival of the inspectors, attending the inspection, offering its opinion on the inspection;
- Ensuring respect for confidentiality during an inspection;
- Offering its opinion on the inspection report in the light of the provisions of paragraphs 15 and 16 of the annex to article VI [2], as revised, and of section 2.2 of this working paper.

4.3.2. Procedures

Note: An attempt is made in the following provisions, which are relatively detailed, to illustrate the various kinds of measures which will have to be taken in connection with confidentiality by the States parties. Each State party will have to spell them out on a national basis. Accordingly, this is merely a first outline intended to establish common ground.

(a) To ensure protection of confidentiality under all circumstances for its own data to be transmitted to the Organization, as well as for data transmitted through it to the State party, the national authority shall:

- Formulate the national regulations needed for data collection procedures, particularly those dealing with responsibilities regarding the protection of confidentiality, as well as sanctions applicable to its nationals in the event of breaches, and inform the Technical Secretariat thereof;
- Establish classification and declassification procedures for data according to their destination;
- Appoint an individual who, having signed a special undertaking, shall be in charge of all activities involving the protection of confidential information;
- Establish a mechanism for identifying any source of leaks of confidential information within the State party;
- Develop means of communicating confidential data with other States parties, if necessary with the assistance of the Technical Secretariat.

(b) Auditing

The State party may designate a national agency or a member of the national authority to undertake regular audits of the implementation of the rules and procedures for the protection of confidentiality, or to conduct inquiries into specific cases of violation of such rules and procedures.

If necessary, all or part of the results of such audits or inquiries may be communicated to the Technical Secretariat and to another State party.

(c) In conjunction with the Technical Secretariat, the national authority shall:

- Devise the most reliable means of transmitting data between the State party and the Technical Secretariat, in ordinary times and in connection with specific actions;

- Negotiate a model agreement for the exchange of confidential information with the Technical Secretariat (and the other States parties);

- Propose to the Organization any change in the formulation and application of the rules of confidentiality;

- Pledge to disclose no confidential information from the Technical Secretariat or from another State Party without their written authorization;

- Develop the double-lock security container systems for installation at the inspection sites, as provided for in the annex to article VI [2] [page 79, paragraph 15].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