

FINAL RECORD OF THE SEVEN HUNDRED AND FOURTH MEETING

held at the Palais des Nations, Geneva  
on Thursday, 22 April 1976, at 10.30 a.m.

Chairman: Mr. C.A. van der Klaauw (The Netherlands)

PRESENT AT THE TABLE

<u>Argentina</u>	Mr. S.N. MARTINEZ
<u>Brazil:</u>	Mr. I.M.A. MASTROGIOVANNI
<u>Bulgaria:</u>	Mr. B. GRINBERG Mr. I. PETROV
<u>Burma:</u>	U THET TUN
<u>Canada:</u>	Mr. W.H. BARTON Mr. J.T. SIMARD Mr. P.W. BASHAM
<u>Czechoslovakia:</u>	Mr. V. SOJÁK
<u>Egypt:</u>	Mr. S.A. ABOU-ALI
<u>Ethiopia:</u>	Mr. G. DEMISSIE
<u>German Democratic Republic:</u>	Mr. G. HERDER Mr. H.J. MICHEEL Mr. M. GRACZYNSKI Mr. H. THIELICKE
<u>Germany, Federal Republic of:</u>	Mr. G.J. SCHLAICH Mr. J. BAUCH
<u>Hungary:</u>	Mr. M. DOMOKOS Mr. R. TOTH Mr. I. KÖRMENDY
<u>India:</u>	Mr. B.C. MISHRA Mr. P.R. SOOD Mr. P.K. GUPTA
<u>Iran:</u>	Mr. H. AMERI Mr. D. CHILATY

Italy:

Mr. N. DI BERNARDO

Mr. M. MORENO

Japan:

Mr. M. OGISO

Mr. T. SAWAI

Mr. S. SUYEHIRO

Mr. H. OKITSU

Mr. M. OBATA

Mr. M. YAMAMOTO

Mexico:

Mr. M.A. CÁCERES

Mongolia:

Mr. M. DUGERSUREN

Mr. L. ERDENECHULJUN

Mr. L. BAYARTE

Morocco:

Mr. A. SKALLI

Mr. S.M. RAHHALI

Netherlands:

Mr. C.A. VAN DER KLAUW

Mr. A.J. MEERBURG

Mr. A.R. RITSEMA

Nigeria:

Mr. G.S. AKUNWAFOR

Mr. S.T. ADAMU

Pakistan:

Mr. K. SALEEM

Peru:

Mr. G. CHAUNY

Poland:

Mr. E. WYZNER

Mr. A. CZERKAWSKI

Romania:

Mr. V. TUDOR

Mr. M. MANEA

Mr. G. TINCA

Mr. C. IVASCU

Sweden:

Mr. G. HAMILTON

Mr. U. REINIUS

Mr. R. ANGSTROM

Mr. J. LUNDIN

Mr. J. PRAWITZ

Union of Soviet Socialist  
Republics:

Mr. A.A. ROSHCHIN

Mr. V.I. LIKHATCHEV

Mr. Y.K. NAZARKIN

Mr. N.V. PESTEREV

Mr. I.P. GLAZKOV

United Kingdom:

Mr. M.E. ALLEN

Mr. J.G. TAYLOR

Mr. H. THIRLAWAY

Mr. D. FAKLY

Mr. A. DOUGLAS

Mr. K. PARKER

Mr. I.R. KENYON

United States of America:

Mr. J. MARTIN

Mr. R. EINHORN

Mr. D.R. WESTERVELT

Mr. T. LANDAUER

Mr. J. FILSON

Mr. E. IFFT

Yugoslavia:

Mr. M. MIHAJLOVIC

Zaire:

Special Representative of the  
Secretary-General

Mr. RISTO HYVARINEN

Alternate Representative of the  
Secretary-General:

Mr. A. CORRADINI

Communiqué of the meeting.

The Conference of the Committee on Disarmament today held its 704th plenary meeting in the Palais des Nations, Geneva, under the chairmanship of H.E. Ambassador C.A. van der Klaauw, representative of the Netherlands.

Statements were made by the Chairman and by the representatives of Sweden, the United Kingdom of Great Britain and Northern Ireland, Canada, the Netherlands, the Union of Soviet Socialist Republics, the United States of America and Romania.

The delegation of Sweden submitted a "Working paper on some aspects of on-site verification of the destruction of stockpiles of chemical weapons" (CCD/485).

The delegation of Canada submitted a document on "The verification of a comprehensive test ban by seismological means" (CCD/490).

The delegation of the United States of America submitted a document on the "Current status of research in seismic verification" (CCD/491).

The delegation of the United Kingdom of Great Britain and Northern Ireland submitted a "Text of a statement on a comprehensive test ban made by Mr. Fakley at an informal meeting of the CCD on Tuesday, 20 April 1976" (CCD/492).

The next plenary meeting of the Conference will be held on Tuesday, 22 June 1976, at 3.00 p.m.

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The CHAIRMAN: I have been asked to read the following statement on behalf of the Co-Chairmen:

The Co-Chairmen, after consultation with the other members of the Committee, propose that the informal meetings requested by the delegation of the Federal Republic of Germany on the subject of chemical weapons be held commencing at 10.30 a.m., Monday, 5 July, and that, as requested by the delegation of Nigeria, the plenary meetings of 20 July, 22 July and 27 July be devoted primarily to a consideration of the mid-term review of the disarmament decade.

It was so decided.

Mr. HAMILTON (Sweden): The Swedish delegation has asked for the floor today in order to address two matters on our agenda. First, we will introduce a working paper (CCD/485) on aspects of the verification of an international agreement on a ban of chemical weapons. Second, we will formally propose the establishment of a group of experts to consider international co-operative measures with regard to the monitoring of a comprehensive test ban.

In her latest intervention, on 25 March 1976, Mrs. Thorsson emphasized that the CCD must make a fresh start so that substantive and concrete negotiations aiming at an international agreement with regard to the prohibition of the development, production and stockpiling of chemical weapons can be initiated at the earliest possible date. At the same time, the Swedish delegation welcomed the proposal by the Federal Republic of Germany for another expert meeting during the summer session. We also expressed the hope that by then substantive negotiations could be started.

Since then, on 13 April, we have heard the important statement by Ambassador Martin and taken note of the latest contribution of Japan, the interesting working paper CCD/483. We welcome this increased activity with respect to a ban on chemical weapons and look forward to further discussions.

I have the honour to introduce today a working paper of the Swedish delegation (CCD/485). The paper deals with certain aspects of the verification of an international agreement. As is well known, this area constitutes one of the main stumbling blocks on the road towards an agreement.

(Mr. Hamilton, Sweden)

This working paper, of course, is not the first in the CCD dealing with aspects of the verification of a ban on chemical weapons. We already have a rich dossier on this subject, comprising wide parts of the many problems involved. Our contribution is aimed at a specific problem: the verification of destruction of stockpiles of chemical weapons.

Let me now give some background to the issue discussed in the paper;

In the draft treaty, presented by the delegation of Japan (CCD/420), it is suggested that observers from a proposed international verification agency should be invited to watch the destruction of stockpiles of chemical warfare agents. This idea was also proposed by the Swedish delegation (CCD/322, 16 March 1971).

The Canadian delegation has expressed the opinion that it is technically feasible to verify destruction of such stockpiles in a way which would not lead to disclosure of military or commercial secrets. In a Canadian statement on 23 May 1974 the following views were put forward:

"The Japanese draft treaty contains one essential element of verification and a possible general approach. The essential element is the international on-site verification of destruction of declared stocks. It is our view that such verification is technically feasible and would involve the most minimal political or commercial intrusion in that the destruction of stocks could be carried out in places of a State's own choosing and no military or commercial secrets need be exposed". (CCD/PV.638)

The Soviet Union, on the other hand, has expressed concern that such disclosure of secret information might take place nevertheless. The Soviet Union has also pointed to the particular risk that the chemical nature of a chemical warfare agent, which so far had been kept secret, might be disclosed, leading to a risk of proliferation of new chemical weapons (CCD/PV.647 and 652). Although the Soviet delegation thus did not reject the idea of international on-site verification of destruction, it stated that it would be more practical to carry out the verification of this activity by national teams owing to the security risks mentioned.

My delegation believes that these fears on the part of the Soviet Union might diminish if an international on-site verification method for destruction of stockpiles could be devised, which would confirm that destruction of a toxic substance has taken place without disclosing the chemical nature of the destroyed agent.

(Mr. Hamilton, Sweden)

In the Swedish working paper such a method is described. I am referring to the ordinary toxicity test, which is used in civilian medical and health research for tests of drug toxicities and health risks.

It should be underlined that it is not possible to use this or other methods for the remote verification of stock destruction or for finding hidden stockpiles. The intention of our suggestion is to point to one possible way of improving the common understanding of the difficult verification problem. We wanted to put forward our thoughts already now in order to give delegations time to consider this matter before the coming expert meeting in July.

We believe that an agreement on on-site verification of the destruction of stockpiles would also serve as a confidence-building measure of some importance. Accordingly, we note with great interest that similar ideas were put forward by Ambassador Martin in his last statement when discussing technical exchange visits. We will revert to a further discussion on this and the other constructive contributions during the expert meeting and during the remainder of the summer session.

Mr. Chairman, now I turn to the test ban and in particular the test ban control issue. We are today in the middle of our meeting with experts on a CTB, and I must say that we are very glad to have obtained valuable contributions, both informally and in the form of working papers. In particular we are glad that not only the basic scientific issues but also questions of data handling systems and of data centres have been discussed. I am thinking in particular of the working papers by Norway, the United Kingdom, Japan, the United States and Canada.

In our original proposal we intended the expert meeting to cover the whole range of obstacles which are still considered as standing in the way of a CTB. Therefore I would like to mention the significant contribution by the United Kingdom to the question why nuclear weapon States might still be interested in continued testing in spite of their repeated public statements on the desirability to conclude a CTB agreement.

In my statement on 6 April 1976, I mentioned the intention of my delegation to propose an expert study on international co-operative measures for the monitoring of a CTB. This proposal has been outlined in detail in the Swedish working paper (CCD/482). The Swedish delegation has tried to assess the contributions already made



(Mr. Hamilton, Sweden)

at the informal meeting with CTB experts. This assessment confirms, in our view, that a promising scientific basis exists for a study of the kind envisaged. Therefore, Mr. Chairman, I formally propose that the CCD establish a group of scientific governmental experts, to consider international co-operative measures to detect and identify seismic events.

The present international data exchange provides data mainly for the detection and location of seismic events. To achieve a monitoring capability in a CTB context as well, data and procedures for the identification of observed events are required.

We therefore further propose that the expert group to be established should be given the following terms of reference:

"For the purpose of carrying out this investigation the expert group should specify the characteristics of an international monitoring system including inter alia:

- (1) A global network of seismological stations, selected from existing and planned installations;
- (2) Data required from the stations to facilitate the analysis for detecting, locating and identifying seismic events;
- (3) Transmission facilities for the timely exchange of data between seismological stations and data centres;
- (4) Facilities and procedures required at the data centres for detecting, locating and identifying seismic events from reported seismological and other relevant data.

In addition to the items listed above, the group would endeavour to define the detection and identification capability of such an international co-operative system. The group should not, however, assess the adequacy of such a system for verifying a comprehensive test ban. Rather it should provide factual results of its analysis for the benefit of Governments to assist them in making such an assessment. The responsibility of the group would be purely scientific.

The CCD would be able to invite States not members of the CCD, to participate in the group's work. By participating in the group's study, States do not agree to the adequacy of the system or systems studied.

The expert group should hold its first meeting in the summer of 1976 and present its initial report to the CCD before the end of the 1976 summer session of the Committee".

(Mr. Hamilton, Sweden)

We have submitted these terms of reference to the CCD for the consideration of member States during the recess in order to facilitate agreement on the establishment of the expert group at the beginning of our forthcoming summer session.

Mr. ALLEN (United Kingdom): I should like to address briefly the matter of a comprehensive nuclear test ban which our experts are in the process of discussing during the course of the current week. Delegations from every group represented around this table have, during the current CCD session, frequently and correctly insisted that this subject is one of the most important with which the CCD deals. This is why we, for our part, welcomed the Swedish drive to focus attention on the subject. We are grateful for the many useful contributions made by a number of delegations' experts. I would only single out for mention in this connexion the most welcome contribution contained in CCD/484 from a country not represented in the CCD, namely Norway, a country of considerable interest and importance, seismologically, as well as of course in many other fields. For our part, we too have tried to make a contribution to the discussion of this significant subject as frankly and simply as possible, in the belief that obscurity is the enemy of progress; in response to many requests I am asking the Secretariat to circulate Mr. Fakley's statement of 20 April as a CCD working paper.

It seems to my delegation, Mr. Chairman, that our discussions have already revealed a substantial area of what can be discerned as common ground. There is first the question of determining the level of signal, associated with a seismic event, below which it is virtually impossible to determine whether an event has been caused by an earthquake or a nuclear explosion. It seems to us that there is fairly general agreement that this "area of darkness", seismologically speaking, lies below seismic events of body wave magnitude of about  $4\frac{1}{2}$ . It is still a matter of debate how big a nuclear explosion could be concealed within this area of darkness. We believe, as we have argued, that this could in certain circumstances be as high as an explosion with a 50 kiloton yield. Others still appear to be unconvinced; but there is no doubt that there is an area of darkness, not susceptible to verification by national seismic means,

(Mr. Allen, United Kingdom)

and that this could conceal nuclear events of significance from a weapons testing point of view. We also believe we should all face the fact that there is little probability that new seismological techniques are likely to be developed in the near future which would enable States to detect and determine seismologically the nature of events within this area of darkness. My delegation therefore continues to believe that it is quite impossible to verify adequately a CTB by national means of a seismological character.

We believe on the other hand, Mr. Chairman, that there is indeed a good prospect of future improvement and refinements of techniques for the national identification of seismic events above a body wave magnitude of  $4\frac{1}{2}$  through fostering international co-operation in this field. In this context we welcome the Swedish proposal for setting up a group of scientific governmental experts to study this subject. We agree with the distinguished representative of Sweden that there is a good hope of such a group making useful progress, provided it is set a clearly defined task. It will however take rather more than the time now available in the present CCD session to agree on a definition of this task; thus we welcome the proposal of the distinguished representative of Sweden that the Conference might consider the matter further at the beginning of the summer session of the CCD.

Mr. BARTON (Canada): We support the Swedish proposal for the establishment of an expert group to examine the feasibility of further international co-operation in exchange of seismic data. We will be glad to participate in the group's work. We believe it would be useful to take a few weeks to consider the group's terms of reference and, for this reason, we welcome the Swedish suggestion that this matter be considered at the beginning of the summer session. We also support the inclusion in the group of experts from non-CCD countries which have extensive seismological resources and experience.

Mr. van der KLAUW (Netherlands): Like Canada, my Government also supports the Swedish proposal for setting up an ad hoc experts group to study the verification of a nuclear test ban.

Secondly, I wish to say something about the question how to conduct our discussions on peaceful nuclear explosions under nuclear weapons test ban conditions. During our informal meetings last year on the arms control implications of PNEs we had a preliminary discussion on this subject. Although we achieved some valuable information on the problems involved, we did not proceed much. The last General Assembly asked the CCD to keep the arms control implications of PNEs under review and in particular the relation of PNEs with a nuclear weapons test ban.

As my delegation already pointed out during the informal talks last year, we have grave doubts that an easy solution for this problem can be found. The fact that the United States and the Soviet Union needed so much time to conclude an agreement on this issue may also be an indication of the difficulties involved. I hope that the agreement will be available in summer.

In our opinion, it is necessary for the CCD to study the bilateral PNE agreement in depth, inter alia since it can probably teach us a lot how to tackle the PNE problem in a more comprehensive nuclear weapons test ban. Since we could not study the agreement yet, the Netherlands delegation would like to propose to the Committee to spend a few meetings, either formally or informally, during the summer session on this question. Perhaps we can take up this proposal in the beginning of the summer session.

Mr. ROSHCIN (Union of Soviet Socialist Republics) (translated from Russian): During the spring session of the Committee on Disarmament, a broad range of problems relating to the limitation of armaments and disarmament were considered. At official and informal meetings of the Committee, comprehensive discussions were held on important questions relating to the cessation of the arms race and the elimination of the danger of the use of the most destructive and devastating means of warfare in military conflicts.

The Soviet Union attaches great importance to the solution of disarmament problems and especially to the cessation of the arms race in respect of weapons of mass destruction and annihilation. The twenty-fifth Congress of the Communist Party of the Soviet Union, held in February-March of this year, presented a broad programme for

(Mr. Roshchin, USSR)

the continuation of the struggle for peace and international co-operation, providing for the development of efforts aimed at the implementation of a considerable number of specific measures in this field. The disarmament programme approved by the Congress and contained in the report of the General Secretary of the Central Committee of the Communist Party of the Soviet Union, Mr. L.I. Brezhnev, provides for the implementation of a whole series of measures aimed at the limitation of armaments and the prohibition of new types of weapons of mass destruction. These measures relate, inter alia, to the prohibition and destruction of chemical weapons, prohibition of the development of new types and systems of weapons of mass destruction, and the prohibition of action to influence the environment for military and other hostile purposes. These matters were also the subject of discussion at the spring session of the Committee on Disarmament. In my statement today, I intend to comment on some of the questions discussed.

I should like first of all, to refer to the draft agreement proposed by the Soviet Union on the prohibition of the development and manufacture of new types of weapons of mass destruction and new systems of such weapons. As we have already pointed out, the Soviet Union has raised this question for the purpose of preventing the emergence of new types and systems of such weapons, including those utilizing the latest discoveries of modern science and technology. In accordance with the decision of the United Nations General Assembly at its thirtieth session, the text of the draft agreement on this question should be worked out and approved by the Committee on Disarmament, with the assistance of qualified governmental experts.

The Soviet side has taken a most active part in the Committee's consideration of this question. On its initiative a number of informal meetings of the Committee have been held, with the participation of experts, on the problem of the prohibition of these types of weapons of mass destruction. At the informal meetings of the Committee, the Soviet experts Academician A.V. Fokin and Colonel B.T. Surikov made important and useful comments on the problem under consideration, particularly with regard to the definition of new types and systems of weapons of mass destruction. They pointed out that, proceeding from general scientific considerations, the prohibition should apply to new types and systems of weapons of mass destruction which are based on physical, chemical and biological principles other than those of any of the types and systems of such weapons in existence at the time of the entry into force of the proposed agreement.

(Mr. Roshchin, USSR)

The Soviet side considers that the actual definition of new types of weapons of mass destruction could be worked out only through the joint efforts of many States, and above all those which are the most developed from the scientific and technical standpoint, interested in the prohibition of new types and systems of weapons of mass destruction. The approaches proposed by Soviet experts for the solution of the problem in question, together with the list of certain new types of such weapons, constitute a constructive contribution by the Soviet side to the formulation of the most important provisions of the agreement on the problem under consideration.

The Soviet experts sought to define the basic characteristics of the new types and systems of weapons of mass destruction, and proposed for consideration the following preliminary version of such a definition:

New types and systems of weapons of mass destruction should be understood to mean those qualitatively new material means of waging war which are or may be at the development stage and which are based on new types of action -- physical, chemical, biological and other action -- designed to bring about destruction or devastation. Moreover, new types of weapons of mass destruction would be those whose use might lead to the mass annihilation of military personnel and the civilian population as a result of their pernicious effects on human beings both within and far beyond the area of use of such weapons, and both at the time when they are used and for a long time afterwards. New types of weapons of mass destruction would be those which, in their effectiveness, are comparable with existing types of weapons of mass destruction or even surpass them.

The formulation of the definition of new types and systems of weapons of mass destruction carried out at the spring session is only the beginning of the process of working out the basic provisions of the agreement under consideration. From the scientific and technical standpoint as well as from that of international law, these provisions should establish the subject of the prohibition and the content of the obligations of the parties to the proposed agreement, whose purpose is to avert the danger inherent in the use of the achievements of modern science for the creation of new types and systems of weapons of mass destruction. Such types and systems of weapons may be even more destructive and devastating than existing types of weapons of mass destruction.

We express our deep gratitude to the delegations of the Hungarian People's Republic and the German Democratic Republic, whose experts took an active part in the informal meetings of the Committee on Disarmament during the examination of the question we are considering and effectively helped to elucidate the substance and significance of the problems connected with the prohibition of new types and systems of weapons of mass

(Mr. Roshchin, USSR)

destruction. At the same time, we cannot but express our concern at the fact that some of the most scientifically and technically developed States members of the Committee on Disarmament chose not to make a constructive contribution to the fulfilment of a great and important task, on whose solution depends the fate of all countries of the world and, as has been rightly pointed out by one of the representatives in the Committee, the survival of mankind as a whole.

The delegation of the USSR expresses the hope that the Committee will be able, during its summer session, to make progress towards the solution of the task of prohibiting new types and systems of weapons of mass destruction, and that efforts in that direction will be made by a large number of States members of the Committee, and above all by the Powers possessing the means and capability of developing and producing such weapons.

The question of prohibiting the use of environmental modification techniques for hostile purposes was discussed actively and thoroughly at the spring session of the Committee on Disarmament. The detailed consideration of this question took place at formal and informal meetings of the Committee, with the participation of experts from the USSR, the United States and the Federal Republic of Germany, as well as observers from the United Nations Environment Programme and the World Meteorological Organization.

Delegations which spoke on this question expressed satisfaction that the USSR and the United States had submitted an agreed draft of a convention on this problem, which was the basis for discussion in the Committee. During its consideration, a large number of delegations presented proposals, additions to and comments on the draft. The observations made by delegations on the draft convention and the proposals they put forward will be studied by the Soviet side with due attention. Our preliminary comments on the questions referred to in the discussion were set out in the statement of the USSR delegation in the Committee on 30 March 1976.

With regard to the great interest shown by members of the Committee in the provisions of the draft convention relating to the scope of prohibition and the procedure for examining complaints in cases of violation of the convention, we should like to point out that these provisions were carefully considered by the co-sponsors of the draft during the process of drawing up an agreed text. Through their inter-relationship they constitute a balanced set of solutions to complex questions concerning an extremely important problem -- that of prohibiting environmental modification for hostile purposes at the international level.

(Mr. Roshchin, USSR)

We hope that, during the forthcoming summer session, it will be possible to reach agreement on the questions raised during the discussion. In this connexion, we should again like to refer to the request of the General Assembly for an early agreement, if possible in 1976, on the text of a convention on the prohibition of environmental modification techniques for hostile purposes.

At the present session of the Committee on Disarmament, considerable interest was expressed in the problem of prohibiting chemical weapons. We listened with interest to statements made on this question by the delegations of the United States, the Federal Republic of Germany, Japan, Poland, Hungary, Sweden and others. The representative of the Federal Republic of Germany proposed that informal meetings of the Committee should be held in July this year on this problem, with the participation of experts. The delegation of the USSR supported that proposal.

The Soviet Union is in favour of the rapid accomplishment of the task of prohibiting the development, production and stockpiling of chemical weapons and of their destruction. To this end, the USSR, together with other socialist countries, submitted a draft convention for the Committee's consideration as far back as 1972. This draft was thoroughly explained and argued by its co-sponsors for a number of years. Since then, a great many discussions and technological studies of the problem of controlling such a ban have taken place. The socialist countries, the co-sponsors of this draft convention, proposed a detailed system of control entailing the use of many forms and methods of observation and verification of the fulfilment, by parties to the convention, of the obligations which they would assume concerning the prohibition of chemical means of warfare. This system, which is described in the draft convention and in the working paper of socialist countries of 28 June 1973 (CCD/403), provides for:

- the establishment of national control committees to supervise the cessation of production of chemical weapons and the means of delivering them, and the destruction of stockpiles of such weapons;

- the exchange of information on questions relating to the implementation of the obligations provided for by the convention;



(Mr. Roshchin, USSR)

- the use of statistical and other methods of analysing materials relating to the cessation of production of chemical weapons and the destruction of stocks of such weapons;
- the adoption by parties to the convention of specific legislative measures aimed at prohibiting chemical means of warfare, and particularly the prohibition of the patenting of such means of warfare;
- co-operation and consultation among States in the consideration of controversial and doubtful situations relating to the implementation of the convention;
- consideration by the United Nations Security Council of complaints regarding violations of the convention, etc.

During the discussion of questions of control over the prohibition of chemical weapons, delegations also suggested other types and forms of control which deserve attention (observation by instruments, water, soil and atmospheric analyses, etc.), which could supplement the forms and methods of verification mentioned above.

We consider that all possible measures should be taken to activate the work of the Committee on Disarmament in the direction of considering and reaching agreement on a draft convention on the prohibition of the development, production and stockpiling of chemical weapons and on their destruction. For its part, the USSR will take an active part in this process. At the same time, the Soviet Union is prepared to continue its co-operation towards the achievement of a Soviet-United States declaration concerning a joint initiative on the prohibition of the most lethal chemical means of warfare. J.

We do not think that it is possible in today's statement to express our views on the position of the USSR concerning questions referred to in the discussion relating to the prohibition of chemical weapons. We expect to do this during the Committee's summer session, after having studied the statements of delegations on these questions with due attention. We express the hope that substantial progress will be made towards the positive solution in the interest of all States of the problem at issue as a result of its consideration at the Committee's summer session.

Considerable attention has been devoted by delegations at the spring session of the Committee on Disarmament to questions connected with the reduction of the threat of nuclear war. It was emphasized that the fate of all peoples of the world depends on the solution of these problems. In this context, the Soviet Union presented a proposal for the conclusion of an agreement on the complete and general cessation of nuclear weapon tests. The conclusion of an agreement making all nuclear weapon tests illegal would be a major contribution to the task of limiting the nuclear arms race and would, thereby,

(Mr. Roschin, USSR)

promote the further development and deepening of the process of international détente and the elimination of the danger of nuclear conflict. The delegation of the USSR made this Soviet proposal the subject of its statement in the Committee on 18 March 1976, in which it described its content and emphasized its great significance. In accordance with the procedure recommended by the General Assembly (resolution 3478 (XXX)), this proposal is being considered by a group of States outside the framework of the Committee on Disarmament, since not all nuclear States participate in its work.

Important steps towards strengthening international security and eliminating the threat of nuclear war are being taken by the Soviet Union in bilateral contacts and talks with the United States, which have resulted in agreements and understandings which are well known to members of the Committee. These agreements constitute an important part of international efforts aimed at preventing the use of nuclear weapons in international conflicts and the establishment of a system of genuine guarantees of international security.

In its pursuit of the aim of strengthening international peace and ensuring the security of peoples, the Soviet Union propounds the goal of renouncing the use of force and the threat of the use of force to solve controversial international questions. This principle has been reflected in a number of agreements between the USSR and other countries. It is contained in the Final Act of the All-European Conference. A report by Mr. Brezhnev, approved by the twenty-fifth Congress of the Communist Party of the Soviet Union has the following to say on this question: "In order further to diminish the danger of war and to create favourable conditions for progress towards disarmament, we propose that a world wide agreement on the non-use of force in international relations should be concluded now. The States parties to it, including of course the nuclear Powers, would assume the obligation to refrain from the use of any types of weapons, including nuclear weapons, for the settlement of disputes among themselves. The Soviet Union is prepared to examine, together with other States, practical steps towards the implementation of this proposal".

The conclusion of such a treaty would be of paramount importance for strengthening world peace and international security, and for prohibiting the use of all types of weapons, including nuclear and other weapons of mass destruction.

We hope that, during the summer session of the Committee on Disarmament, even greater efforts will be made by participants to create conditions in which the danger of catastrophic and devastating international conflicts will be eliminated.

Mr. MARTIN (United States of America): In my statement today, I would like to address the question of a comprehensive test ban, the subject we are presently considering in informal meetings with experts. My Government's position on this subject can be summarized quite briefly. In the absence of a reliable, mutual prohibition, we believe that our nuclear testing programme serves as an important means of maintaining the effectiveness of our nuclear deterrent. However, as representatives of the United States have stated on several previous occasions, we would be prepared to give up whatever benefits exist in continued testing if this were done pursuant to an adequately verified agreement that provided reasonable confidence that other parties to the agreement were also giving up those benefits. Inability to reach a common understanding on verification measures capable of providing such confidence has, in our view, been the principal reason why a CTB has remained beyond our grasp.

There is general agreement that seismic monitoring would be one of the essential means of providing confidence in compliance with a CTB. For this reason, my Government has expended substantial resources and effort to improving seismic verification capabilities. Document CCD/491, which my delegation is formally introducing today and which was outlined to members of the Committee during our informal meetings, reviews recent progress made in seismic verification research in the United States.

The working paper describes the development and installation of new seismic systems, including the projected 13-station Seismic Research Observatory Network, which will add significantly to our existing data sources. Concurrently, we are developing a sophisticated data processing facility, located in Alexandria, Virginia, which we expect will enable a large volume of data from many sources to be applied efficiently and effectively to seismic research problems.

The working paper also reports on some encouraging developments from our research efforts. For example, it describes a new technique that could improve our understanding of the anomalous event problem. This technique appears promising but requires further evaluation. Another development mentioned in the paper is the completion of a model study of evasion problems. This indicated that a well-sited network of single stations within a given land mass could, within that area, reduce by a full order of magnitude the yield at which an evader could be confident of escaping detection. We are hopeful

(Mr. Martin, United States)

that the application of the new data resources and these new analytical techniques to the principal remaining problems of seismic monitoring will result in a further improvement in seismic verification capabilities.

However, the results of several comprehensive detection and identification studies, which were reported in the working paper, indicate that there are significant remaining limitations to seismic verification. This indication was confirmed by the presentations of experts from several delegations during the informal meetings. Because of these limitations, we do not presently foresee how a CTB verification system based solely on teleseismic means could provide adequate assurance that a party was not conducting a clandestine testing programme of military significance.

Differences of opinion were expressed by the experts this week on the seismic magnitude level at which nuclear explosions could be detected and identified with confidence. However, there was little disagreement that, below some level, the verification possibilities were exceedingly limited. Some delegations have nonetheless stated that any clandestine testing that might be possible under a CTB would not be of military significance. We cannot agree with this conclusion. It is noteworthy, in this connexion, that a significant number of United States nuclear tests during the last few years have had explosive yields of less than 20 kilotons. Tests at these lower yields could provide much fundamental information useful both for tactical and strategic weapons development. For these reasons, we believe that the effects of a testing programme carried out at yields that might not be identified by teleseismic means could indeed have considerable military value.

Some delegations have claimed that national technical means of verification other than seismic monitoring could facilitate verification of a CTB. We would agree that other methods of remote monitoring could, in principle, contribute to CTB verification. However, the value of such methods should not be overestimated, since they would have inherent practical limitations. For example, a determined evader might be able to disguise or avoid the characteristics of testing that such methods were intended to detect.

In view of the existing limitations of national technical means of verification, we believe that adequate verification of a CTB continues to require some on-site inspection. In many instances, on-site inspection would be the only means of providing conclusive evidence -- for example, through sampling for radioactivity -- that a detected seismic event was a nuclear explosion rather than an earthquake or a conventional

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explosion. Thus, a verification system that included on-site inspection would provide not only a substantial deterrent to clandestine testing by increasing the risks that any significant violation would be discovered, but also a means of assuring confidence in the treaty régime in those cases where seismic methods may have misidentified earthquakes as explosions or presented ambiguous evidence concerning the nature of a seismic event.

Unmanned seismic observatories (USOs), sometimes called "black boxes", have also been suggested as a means of verifying a CTB. USOs could lower the threshold magnitude for detection and identification, improve the capability to locate events, and thereby provide additional deterrence to a violation. However, they could not provide conclusive evidence that a seismic event was a nuclear explosion. Thus, USOs could make an important contribution to seismic verification of a CTB, but they are not the equivalent of, and should not be regarded as a substitute for, on-site inspection. Nonetheless, we believe it is important that further effort be devoted to the development of tamper-proof, reliable, low maintenance USOs involving minimum intrusiveness, and also to evaluating the potential utility of such instruments to a CTB verification system.

The United States continues to regard international seismic co-operation as a promising component of a CTB verification system. We have in the past made a substantial amount of seismic information available internationally in an effort to promote greater understanding of how seismic data exchange could contribute to monitoring a CTB. In light of these efforts, we support the Swedish proposal that an ad hoc group of experts be established to examine the contribution that international seismic co-operation could make to the detection and identification of seismic events. We believe, however, that the project -- which would be a major undertaking for the Committee -- should be carefully conceived and that its terms of reference should be carefully formulated. In particular, we believe it should be made clear that the group's responsibilities are technical in nature. We further feel that it should not attempt to make judgments that would more appropriately be made by Governments -- such as an assessment of the adequacy of a given seismic monitoring system for verifying a CTB. We further believe that the study should be confined strictly to seismic means of monitoring. We look forward to discussions early in the summer aimed at reaching broad agreement on acceptable terms of reference for the study.

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Recently it has become widely recognized that the problem of clandestine weapon testing is not the only CTB verification issue still unresolved. There is, in addition, the critical question of whether, under a CTB, an adequately verifiable accommodation for PNEs can be worked out. In CCD/456, my Government took the view that, if PNEs were to be accommodated under a CTB, a verification system would have to be devised that would provide adequate assurance that weapon-related benefits were not being acquired from nuclear explosions carried out ostensibly for peaceful purposes. To achieve that objective, a control system, at a minimum, would have to prevent the testing of a new weapon concept, the substitution of a stockpiled weapon for the "PNE" explosive to verify its performance, and the carrying out of nuclear weapons effects studies.

In CCD/481, the delegation of Sweden maintained that it was possible to deal with the problem of PNE accommodation by expert observation and on-site inspection. They discussed two different approaches to solving the problem.

"One possibility could be to monitor the composition of radioactive debris produced at the explosion site. Thereby one could check that nuclear devices of well-known design were not replaced by grossly different constructions. Another, and in our view quite effective, way would be to make sure, by expert inspection, that the explosions are not used for what is called diagnostic measurements of the explosion itself in its very early stages. In this way it could, in our view, be possible to reduce any weapon development advantages to a minimum."

My Government cannot agree that the two approaches suggested by Sweden would meet the requirement of achieving adequate assurance that weapons-related benefits were not being derived from peaceful explosions. Even if it were possible to demonstrate — by radio-chemical analysis or any other means — that the device used was of a "well-known design", this would provide no assurance that the explosion was not contributing useful information to a weapons programme. In addition, detailed diagnostic measurements are not essential for deriving important weapons-related information.

Further consideration is needed of the difficult and complex question of whether, under a CTB, an adequately verified accommodation for PNEs can be achieved. No satisfactory solution to this problem has yet been found.

A question that has recently surfaced as a significant issue in CTB discussions is whether the adherence of all nuclear-weapon States, or all nuclear testing Powers, would be required before a CTB could enter into force. In light of the serious security implications of nuclear weapons testing, the question of participation would obviously

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have to be addressed in considering any CTB proposal. Among the factors that would presumably be taken into account in arriving at a position on this matter would be a testing State's perception of its own nuclear capabilities and testing experience relative to the nuclear capabilities and testing experience of other testing Powers. However, we question the desirability and timeliness of taking a position on the participation issue in the abstract, before resolving the principal problems holding up a CTB -- namely, verification difficulties, including PNEs. Once they are resolved, several options would be available. These include: an agreement that would enter into force upon the adherence of all nuclear Powers, a limited duration agreement not requiring adherence by all nuclear Powers that would provide for review and extension, and an unlimited duration agreement not requiring adherence by all nuclear Powers but containing a provision for withdrawal in the event that treaty parties considered their supreme interests to be jeopardized. For its part, the United States has not made a determination whether a CTB should require the participation of all nuclear Powers before it could enter into force.

During the major portion of this week the Committee has considered, in the words of the sponsors of the informal meetings, the "remaining obstacles to a comprehensive test ban agreement". I would like to conclude my discussion of the test ban issue with a few remarks about the nuclear testing restraints that, in the face of these remaining obstacles, the United States and Soviet Union agreed to adopt as a practical step toward the CTB objective. I am referring, of course, to the Threshold Test Ban Treaty and its associated agreement on peaceful nuclear explosions.

As members of this Committee are aware, the TTBT, which was signed in Moscow in July 1974, bans underground nuclear weapon tests with a yield exceeding 150 kilotons. In accordance with article III of that Treaty, the United States and the USSR began negotiations in October 1974 on a separate agreement governing the conduct of underground nuclear explosions for peaceful purposes. On several occasions, my Government expressed the view that, because of the integral relationship between the verification of a threshold on nuclear weapon tests and the conduct of PNEs, we would not present the TTBT to the Senate for ratification until a satisfactory agreement for peaceful nuclear explosions had been concluded.

I can now report to the Committee that the United States and Soviet delegations have concluded their negotiations, and that an ad referendum agreement is being reviewed by the two Governments. It is our hope that the draft agreement will be formally

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approved by the Governments shortly and that the two agreements will be ratified and will enter into force in the near future. I expect to be able to present a full report to the Committee during the summer session on the contents of the PNE agreement, its relationship to the TTBT, and the implications of the TTB/PNE régime for our common objective of achieving further nuclear testing restraints.

Before leaving the test ban issue, I would like to express my delegation's appreciation to the Swedish delegation, which took the initiative to hold the current series of informal meetings, and to all the experts who have helped make those meetings a most constructive conclusion to our spring session.

In concluding this intervention, I would like to touch briefly on another subject. During the spring session, considerable attention was devoted to the question of the Committee's procedures. Informal meetings and consultations resulted in substantial progress toward agreement, if only on a provisional basis, on two important aspects of the operation of the CCD. Inability, so far, to achieve consensus on an additional item under discussion has prevented the Committee from taking a formal decision on these matters, and it appears at this time that consideration of these three questions will have to be deferred until the start of our summer session.

While we would have preferred to put these provisional decisions behind us before the recess, we see no cause for concern in the current status of our consideration of procedural questions. After all, changes in procedures, even those that may appear quite minor, may nonetheless have important implications for the work of the Committee. They therefore deserve careful and detailed scrutiny, and they must be based on a true consensus of the CCD's members. If we can continue to approach these matters in the same constructive spirit that all delegations have displayed to date, I am certain that we can solve the remaining difficulties early in the summer session, either individually, as a package, or in the context of the comprehensive procedural review. This should give us time to make any adjustments in procedures, such as regarding the preparation of the annual report, without interfering with the smooth operation of the Committee.

I would suggest that one item be given priority when we reconvene in June. Several delegations have expressed the view that it would be desirable to establish an informal working body to facilitate the negotiation of the draft convention on environmental warfare. My delegation shares this view. Whatever such a body is called, we believe it should be established in the opening days, if not the opening hours, of our summer session. In our view, it should have a rotating chairmanship, it should enjoy the



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assistance of the Secretariat, it should be able to request the preparation of whatever records are deemed advisable, and it should issue whatever reports are considered necessary. We further believe it should not prejudice the work of the comprehensive procedural review -- to which my delegation looks forward.

Finally, I can unequivocally say that this has been the most interesting, hard-working and productive CCD session that I have attended. I want to express my appreciation to all of my colleagues for their co-operation and understanding which has made this possible. I would also like to thank Ambassador Hyvärinen and the Secretariat for all their excellent work; and in particular mention Mr. Corradini, Mrs Gill and the interpreters who put up with so much in our unstructured informal meetings.

Mr. TUDOR (Romania) (translated from French): Since this is the last meeting of this session, I should like to refer briefly to the question of the organization of the work of the Committee.

At the beginning of this session, on the basis of the Committee's decision last year to the effect that it would, unless decided otherwise, discuss the organization of its work "when the first session of each year commences, and thereafter as the need arises", the Romanian delegation proposed that the Committee should immediately take up the question of the organization of its work during this year. We made this proposal not as a new question, but as a means of giving effect to a decision of the Committee itself.

Throughout the spring session, the Committee has had before it various proposals whose constructive intent has been evident to all. Despite the laudable efforts which have been made, the Committee has succeeded in reaching agreement only on fragmentary decisions, which obviously have the merit of helping to create a framework for discussions on certain resolutions transmitted by the General Assembly to the Committee for action. But it must be acknowledged that these partial decisions are still a far cry from the comprehensive solutions necessary for the more orderly organization of the Committee's work.

In view of this situation which we regret, we are obliged to observe, once again, that the Committee continues to be dependant on certain practices which are still proving to be ineffective.

The meeting rose at 12.15 p.m.

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