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CONFERENCE ON DISARMAMENT

NUCLEAR TEST BAN

COMPREHENSIVE NUCLEAR TEST BAN TREATY (CTBT)

DRAFT TREATY AND RELATED TREATY TEXTS

1962-1993



**TREATY
TEXTS**

COMPILED AND EDITED BY:

NON-PROLIFERATION, ARMS CONTROL AND DISARMAMENT DIVISION OF THE
DEPARTMENT OF FOREIGN AFFAIRS AND INTERNATIONAL TRADE
OTTAWA, CANADA



JANUARY 1994

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DRAFT TREATY AND RELATED TREATY TEXTS

PREFACE

This volume covers working papers relating to draft treaties for a Comprehensive Nuclear Test Ban, as well as the texts of treaties for partial nuclear test ban agreements, submitted in plenary to the Eighteen-Nation Committee on Disarmament (ENDC), the Conference of the Committee on Disarmament (CCD), the Committee on Disarmament (CD) and the Conference on Disarmament (CD) during the period 1962-1993. Only texts that were directed specifically at nuclear test limitations are covered; not texts in which such a limitation is a component of a larger agreement. This volume is compiled to facilitate research and discussions on this issue.

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

NUCLEAR TEST BAN
Comprehensive Nuclear Test Ban Treaty (CTBT)

DRAFT TREATY AND RELATED TREATY TEXTS

Submitted to ENDC, CCD and CD 1962-1993

Chronological Index

EIGHTEEN-NATION COMMITTEE ON DISARMAMENT (ENDC)

Serial	Reference	Country	Description	Date
1	ENDC/9	UK and USA	Draft treaty on the discontinuance of nuclear weapon tests	21.3.62
2	ENDC/11	USSR	Statement by the Soviet Government dated 27 November 1961 in connexion with the resumption of negotiations on the discontinuance of nuclear weapon tests and text of a draft agreement on the discontinuance of nuclear and thermo-nuclear weapon tests	22.3.62
3	ENDC/58	UK and USA	Draft treaty banning nuclear weapon tests in all environments	27.8.62
4	ENDC/59	UK and USA	Draft treaty banning nuclear weapon tests in the atmosphere, outer space, and underwater	27.8.62
5	ENDC/100/ Rev.1	USSR, UK and USA	Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space, and Underwater	30.7.63

CONFERENCE OF THE COMMITTEE ON DISARMAMENT (CCD)

Serial	Reference	Country	Description	Date
6	CCD/431	USSR and USA	Treaty between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Underground Nuclear Weapon Tests (Not Reproduced: see CD/1066)	16.7.74
7	CCD/496 and Corr.1	USSR and USA	Treaty between the United States of America and the Union of Soviet Socialist Republics on Underground Nuclear Explosions for Peaceful Purposes (Not Reproduced: see CD/1067)	23.6.76
8	CCD/523	USSR	Draft treaty on the complete and general prohibition of nuclear weapon tests	22.2.77
9	CCD/526/ Rev.1	Sweden	Draft treaty banning nuclear weapon test explosions in all environments	5.7.77

COMMITTEE ON DISARMAMENT (CD)

Serial	Reference	Country	Description	Date
10	CD/130	USSR	Letter dated 30 July 1980 from the Permanent Representatives of the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland and the United States of America transmitting a document entitled "Tripartite Report to the Committee on Disarmament"	30.7.80

Serial	Reference	Country	Description	Date
11	CD/346	USSR	Letter dated 14 February 1983 from the Representative of the Union of Soviet Socialist Republics to the Committee on Disarmament transmitting the "Basic provisions of a treaty on the complete and general prohibition of nuclear-weapon tests"	16.2.83

CONFERENCE ON DISARMAMENT (CD)

12	CD/381	Sweden	Draft treaty banning any nuclear weapon test explosion in any environment	14.6.86
13	CD/1066	USA	Letter dated 28 February 1991 from the Representative of the United States of America addressed to the President of the Conference on Disarmament transmitting the text of the 1974 Treaty between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Underground Nuclear Weapon Tests, together with its Protocol	8.3.91
14	CD/1067	USA	Letter dated 28 February 1991 from the Representative of the United States of America addressed to the President of the Conference on Disarmament transmitting the text of the 1976 Treaty between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Underground Nuclear Explosions for Peaceful Purposes, together with its Protocol	8.3.91

Serial	Reference	Country	Description	Date
16	CD/1089 CD/NTB/ WP.14	Sweden	Letter dated 9 July 1991 from the Head of the Swedish Delegation addressed to the Secretary-General of the Conference on Disarmament transmitting the text of a draft comprehensive test-ban treaty and its annexed protocols	25.7.91
17	CD/1202 CD/NTB/ WP.19	Sweden	Letter dated 3 June 1993 from the Head of the Swedish Delegation addressed to the Secretary-General of the Conference on Disarmament transmitting the text of a draft comprehensive test-ban treaty	3.6.93
18	CD/1232 CD/NTB/ WP.33	Sweden	Letter dated 6 December 1993 from the Head of the Delegation of Sweden addressed to the Secretary-General of the Conference on Disarmament transmitting the text of a draft comprehensive nuclear test-ban treaty and its annexed draft protocol	6.12.93

CONFERENCE OF THE EIGHTEEN-NATION COMMITTEE
ON DISARMAMENT

PRIVATE
ENDC/3
21 March 1962
ORIGINAL: ENGLISH

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND
AND UNITED STATES OF AMERICA

DRAFT TREATY ON THE DISCONTINUANCE OF NUCLEAR WEAPON TESTS

At the request of the Delegations of the United Kingdom and of the United States document GEN/DNT/110, dated 18 April 1961, and addenda 1 to 3 thereto, issued earlier as General Assembly document A/4772 and addendum 1 thereto, is attached and circulated as a document of the Conference of the Eighteen Nation Committee on Disarmament..

PRIVATE

GEN/DNT/110

18 April 1961

ORIGINAL: ENGLISH

CONFERENCE ON THE DISCONTINUANCE OF NUCLEAR WEAPON TESTS

Draft Treaty on the Discontinuance of Nuclear Weapon Tests *

Submitted by the Delegations of the United Kingdom and the United States
at the 292nd meeting of the Conference

* Incorporates GEN/DNT/110/Corr.1 issued in English only.

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Preamble

The Parties to this Treaty

Pursuing the aim of reducing international competition in armaments and in the development of new weapons of war:

Endeavoring to take a practical step towards the achievement of the objectives of the United Nations in the field of disarmament, including the eventual elimination and prohibition of nuclear weapons under effective international control and the use of atomic energy for peaceful purposes only

Desirous of bringing about the permanent discontinuance of nuclear weapon test explosions:

Recognizing that the establishment and continuous operation of effective international control is essential to the achievement of this objective;

Hoping that all other countries will also join in undertakings not to carry out nuclear weapon tests and to ensure the satisfactory operation of that control throughout the world;

Confident that a discontinuance of such tests under effective control will make possible progress toward agreement on measures of disarmament

Have agreed as follows:

Article 1

Obligations to Discontinue

1. Each of the Parties to this Treaty undertakes, subject to the provisions of this Treaty and its Annexes:

A. to prohibit and prevent the carrying out of nuclear weapon test explosions at any place under its jurisdiction or control; and

B. to refrain from causing, encouraging, or in any way participating in, the carrying out of nuclear weapon test explosions anywhere.

2. The obligations under paragraph 1 of this Article shall apply to all nuclear weapon test explosions except those underground explosions which are recorded as seismic events of less than magnitude 4.75.

Article 2Establishment of Control Organization

1. For the purpose of assuring that the obligations assumed in this Treaty are carried out by the Parties, there is hereby established a Control Organization, hereinafter referred to as "the Organization", upon the terms and conditions set forth in this Treaty and the Annexes thereto.

2. Each of the Parties agrees to cooperate promptly and fully with the Organization established under paragraph 1 of this Article and to assist the Organization in the discharge of its responsibilities pursuant to the provisions of this Treaty and the provisions of any agreements which the Parties shall have concluded with the Organization.

Article 3

Elements of Control Organization

1. The Organization established under Article 2 of this Treaty shall consist of: a Control Commission, hereinafter referred to as "the Commission", a Detection and Identification System, hereinafter referred to as "the System"; a Chief Executive Officer, hereinafter referred to as "the Administrator"; and a Conference of Parties to the Treaty, hereinafter referred to as "the Conference".

2. The Headquarters of the Organization shall be located at Vienna.

Article 4

Composition of Control Commission*

1. The Commission shall consist of the following Parties:

A. The Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, and the United States of America, as original Parties to this Treaty and

B. Eight other Parties to the Treaty elected by the Conference as follows: Three Parties associated with the USSR; two Parties associated with either the United Kingdom or the United States; three Parties not associated with any of the original Parties.

2. The Parties referred to in paragraph 1 B of this Article shall be elected and shall serve for a period of two years; they shall be eligible for re-election.

3. The Parties elected to the first elected Commission shall serve from the time of their election until the end of the third regular session of the Conference. The Parties elected at the third regular session of the Conference, and those elected biennially thereafter, shall serve from the end of the Conference at which they were elected until the end of the Conference which elects their successors.

4. Each member of the Commission shall have one representative.

*The above revised text is submitted in the context of the statements made by the United States and United Kingdom Representatives at the 274th, 286th, and 289th meetings, to the effect that the United States and United Kingdom Governments are prepared to accept the above text provided expressly, and not otherwise, that agreement is reached by this Conference upon a control system which is reliable, rapid and effective - such as is set forth in other articles and annexes of the present draft treaty proposal - and provided that agreement is reached upon all other treaty articles and annexes.

Article 5

Parties or Other Countries

Associated with the Original Parties

The determination whether a Party or other country is at any time to be regarded for the purposes of this Treaty as associated with any of the original Parties shall be made by the Preparatory Commission or by the Commission. However, in any case in which advice is jointly tendered by the three original Parties, the determination shall be made in accordance with that advice.

Article 6

Functions of the Control Commission

1. The Commission shall establish procedures and standards for the installation and operation of all elements of the System, and shall maintain supervision over the System to ensure its timely installation and effective operation in accordance with the terms of this Treaty and its Annexes. The Commission shall determine, after consultation with the Parties concerned, the extent to which existing launching, tracking, and data receiving and transmission facilities should be used in the installation and operation of the satellite systems.

2. A. The Commission shall appoint the Administrator; this appointment shall require the concurring votes of the original Parties.

B. (i) Subject to the approval of the Commission in each case, the Administrator shall appoint five Deputy Administrators, including one First Deputy Administrator who shall act in place of the Administrator in case of absence or vacancy.

(ii) Approval by the Commission of the appointment of the First Deputy Administrator shall require the concurring votes of the original Parties.

(iii) Appointment by the Administrator of two Deputy Administrators shall be made upon the recommendation, or with the approval of the Government of the USSR; appointment of the two other Deputy Administrators shall be made upon the recommendation, or with the approval, of the Governments of the United Kingdom and the United States.

C. The term of office of the Administrator shall be a period of three years. The initial term of office of the First Deputy

Administrator shall be a period of two years; subsequently, the term of office of the First Deputy Administrator shall be a period of three years. The term of office of the other Deputy Administrators shall be a period of three years.

D. The Administrator and the Deputy Administrators shall be eligible for reappointment. An Administrator or Deputy Administrator appointed to fill a vacancy which has occurred before the expiration of the term provided for by this Article shall hold office only for the remainder of his predecessor's term but shall be eligible for reappointment.

3. The Commission shall establish procedures for disseminating to all Parties and interested scientific organizations data produced by the System.

4. The Commission shall submit to the Conference an annual report and such special reports as the Commission deems necessary on the operation of the System and on the activities of the Commission and the Administrator in carrying on their respective responsibilities. The Commission shall also prepare for the Conference such reports as the Organization may make to the United Nations.

5. Except for the location of the Headquarters of the Organization, the Commission shall decide upon the location of components of the System. Such decisions shall be taken in agreement with the Party exercising jurisdiction or control over the territory on which the component is to be located. If any location recommended by the Commission should be unacceptable to the Party concerned, the Party shall provide, without undue delay, an alternative location which in the judgment of the Commission meets the requirements of the System, in accordance with the provisions of this Treaty and its Annexes.

6. The Commission shall lay down permanent flight routes, for use by special aircraft sampling missions, over the territory under the jurisdiction or control of each Party. Such flight routes shall be laid down in agreement with the Party concerned and in accordance with the standards set forth in Article 7 of Annex I. If a permanent flight route which the Commission desires to lay down should be unacceptable to the Party concerned, the Party shall provide, without undue delay, an alternative route which in the judgment of the Commission meets the requirements of the System.

7. The Commission may conclude agreements with any State or authority to aid in the carrying out of the provisions of this Treaty and its Annexes.

8. The Commission shall ensure that the most effective and up-to-date equipment and techniques are incorporated in the System and, to this end, shall ensure that an adequate research and development program is carried out.

9. The Commission shall establish procedures for the implementation of Article 13 on detonations for peaceful purposes.

10. In addition to the functions referred to in the preceding paragraphs of this Article, the Commission shall perform such other functions as are provided for in this Treaty and its Annexes.

Article 7

Procedures of the Control Commission

1. The Commission shall be so organized as to be able to function continuously.

2. The Commission shall meet at such times as it may determine, or within twenty-four hours at the request of any member. All members shall be notified in advance of meetings of the Commission. The meetings shall take place at the Headquarters of the Organization unless otherwise determined by the Commission.

3. The Commission shall adopt its own rules of procedure including the method of selecting its chairman.

4. Any Party to the Treaty which does not have a representative on the Commission may participate, without vote, in the discussion of any question brought before the Commission whenever the latter considers that the interests of that Party are specially affected.

5. Except as otherwise expressly provided in this Treaty, decisions of the Commission shall be made by a simple majority of the members present and voting. Each member of the Commission shall have one vote.

Article 8

The Conference

1. The Conference consisting of representatives of Parties to this Treaty shall meet in regular annual session and in such special sessions as shall be convened by the Administrator at the request of the Commission or of a majority of Parties to the Treaty. The sessions shall take place at the Headquarters of the Organization unless otherwise determined by the Conference.

2. At such sessions, each Party to the Treaty shall be represented by not more than three delegates who may be accompanied by alternates and advisers. The cost of attendance of any delegation shall be borne by the State concerned.

3. The Conference shall elect a President and such other officers as may be required at the beginning of each session. They shall hold office for the duration of the session. The Conference, subject to the provisions of this Treaty, shall adopt its own rules of procedure. Each Party to the Treaty shall have one vote. Decisions on budgetary matters shall be made pursuant to Article 15 and decisions on amendments pursuant to Article 23. Decision on other questions, including the determination of additional questions or categories of questions to be decided by a two-thirds majority, shall be made by a simple majority of the Parties to the Treaty present and voting.

4. The Conference may discuss any questions or any matters within the scope of this Treaty or relating to the powers and functions of any organs provided for in this Treaty and may make recommendations to the Parties or to the Commission or to both on any such questions or matters.

5. The Conference shall:

A. elect States to serve on the Commission in accordance with Article 4;

B. consider the annual and any special report of the Commission;
C. approve the budget recommended by the Commission in accordance with paragraph 1 of Article 15;

D. approve reports to be submitted to the United Nations as required by any relationship agreement between the Organization and the United Nations or return them to the Commission with the recommendations of the Conference;

E. approve any agreement or agreements between the Organization and the United Nations or other organizations as provided in Article 17. or return such agreement with its recommendations to the Commission for re-submission to the Conference;

F. approve amendments to this Treaty in accordance with Article 23.

6. The Conference shall have the authority:

A. to take decisions on any matter specifically referred to the Conference for this purpose by the Commission;

B. to propose matters for consideration by the Commission and request from the Commission reports on any matter relating to the functions of the Commission.

Article 9

Administrator and International Staff

1. The Administrator shall be the chief executive officer of the System and the head of the staff of the Organization. He shall be responsible to the Commission and, under its supervision, shall carry out its policy directives. He shall have executive responsibility for the installation and operation of the System under procedures and standards established by the Commission. He shall provide to the Commission such advice, reports and assistance as the Commission may request.

2. The Administrator and the staff shall not seek or receive instructions concerning the performance of their duties from any authority external to the Organization. They shall refrain from any action which might reflect on their status as international officials and employees responsible only to the Organization. Each Party undertakes to respect the international character of the responsibilities of the Administrator and staff and not to seek to influence them in the discharge of their duties.

3. Except as otherwise provided in this Treaty, the Administrator shall appoint, organize and direct the staff of the Organization in accordance with the following provisions:

A. The staff shall include such qualified scientific, technical and other personnel as may be required to carry out the functions of the Organization with the highest standards of efficiency, technical competence and integrity.

B. The staffing of individual components of the System shall be designed so as to ensure maximum operating efficiency.

C. In keeping with the foregoing stipulations, the staff of the Organization shall be recruited on as wide a geographical basis as possible from personnel recommended by, or acceptable to, the governments of the countries of which they are nationals and acceptable to the Administrator, subject to the following provisions:

(1) The permanent administrative, scientific and technical staff of the Headquarters of the Organization shall, as a whole and at all levels, be composed in equal proportions of nationals of the USSR,

nationals of the United Kingdom or the United States, and nationals of other countries. In cases where deputies, other than the Deputy Administrators, to senior officials of the Organization Headquarters are appointed, a national of the USSR shall have a deputy who is a national of the United Kingdom or of the United States, and a national of the United Kingdom or the United States shall have a deputy who is a national of the USSR.

(ii) In land control posts situated on territory under the jurisdiction or control of any of the original Parties, the scientific and technical staff of each post shall be composed in equal proportions of nationals of the USSR, nationals of the United Kingdom or the United States, and nationals of other countries. In the appointment of nationals of other countries, preference shall be given, subject to other provisions of sub-paragraph C of this Article, to nationals of countries exercising jurisdiction or control over territory upon which control posts are to be established.

(iii) In land control posts situated on territory under the jurisdiction or control of Parties other than the original Parties, no more than one-third of the scientific and technical staff of each post shall be composed of nationals of the country exercising jurisdiction or control over the territory on which the control post is situated.

(iv) The supporting and auxiliary staffs of each land control post shall, wherever possible, be composed of nationals of the country exercising jurisdiction or control over the territory on which the control post is located.

(v) The scientific and technical staffs of control posts on ships or in areas not under the jurisdiction or control of sovereign states and the members of the staff of the Organization selected by the Administrator for the purposes of paragraph 3 of Article 11 of Annex I shall be composed in equal proportions of nationals of the USSR, nationals of the United Kingdom or the United States, and nationals of other countries.

(vi) The chief or acting chief of each control post shall be a national of a country other than that exercising jurisdiction or control over a territory on which the control post is situated. If the country exercising jurisdiction or control over such territory is associated with an original Party, the chief or acting chief of the control post shall be a national of other than such original Party or a country associated with it.

(vii) The chief or acting chief of each control post situated on territory under the jurisdiction or control of the United States or the United Kingdom shall be a national of the USSR the chief or acting chief of each control post situated on territory under the jurisdiction or control of the USSR shall be a national of the United States or the United Kingdom.

(viii) The scientific and technical staffs of on-site inspection groups shall be composed of technically qualified personnel who are not nationals of the country exercising jurisdiction or control over the territory in which the event under investigation may have occurred. The Party exercising jurisdiction or control over such territory may designate one or more observers to accompany the inspection group.

(ix) The scientific and technical staff of any on-site inspection group despatched to conduct an inspection on territory under the jurisdiction or control of the USSR shall be composed of nationals of the United States or the United Kingdom: the scientific and technical staff of any on-site inspection group despatched to conduct an inspection on territory under the jurisdiction or control of the United States or the United Kingdom shall be composed of nationals of the USSR.

(x) The USSR or the United Kingdom and the United States may authorize the Administrator to depart from the requirements of sub-paragraphs (i) through (ix) above, insofar as they concern the appointment of their respective nationals to scientific and technical staff positions, either in favor of the nationals of another Party or other Parties or without restriction. In each case, the original Party or Parties concerned shall

furnish the Administrator in writing with the authorization, including the period of its duration. Notwithstanding the authorization made under this paragraph, the nationals so appointed shall be considered, for the purposes of sub-paragraphs (i), (ii) and (v) to be nationals of the original Party authorizing the departure.

(xi) In making appointments under sub-paragraphs (i), (ii), (iii) and (v), the Administrator shall ensure that the administrative, scientific and technical staff of the Headquarters of the Organization, and the scientific and technical staff of each control post, shall be so composed that the total number of nationals of the USSR and of countries associated with it shall be equal to the total number of nationals of the United States and the United Kingdom and of countries associated with either of them.

(xii) Any adjustment to the proportions in sub-paragraphs (i), (ii) and (v) above, which may be unavoidable for practical reasons, shall be kept to the minimum, and a compensating adjustment shall, whenever possible, be made elsewhere in the System.

D. Regulations governing the appointment, remuneration and dismissal of staff shall be approved by the Commission.

4. The Administrator shall prepare for the Commission the budget estimates of the Organization.

5. The Administrator shall develop and arrange for the execution of a program of research and development for the continuing improvement of the equipment and techniques used in all components of the System, and shall from time to time make recommendations to the Commission regarding improvements to be incorporated in the System. The program may, with the approval of the Commission, include detonations performed to test the effectiveness of the System. Any nuclear detonations for this purpose shall be conducted under the procedures set forth in Article 13.

6. The Administrator shall prepare recommendations for approval by the Commission regarding:

A. specific sites for all components of the System

B. specific flight patterns for routine air sampling flights;
C. the number and base location of inspection groups;
D. the equipping of all components of the System and the standards and specifications which equipment to be used therein must meet.

7. A. When special aircraft sampling missions are undertaken, the Administrator shall appoint two qualified members of the Organization staff to accompany each aircraft as technical operators. The technical operators shall, in accordance with the provisions of Article 7 of Annex I, verify the execution of the agreed flight plan; operate the sampling equipment; direct sampling operation; make appropriate arrangements for the safe delivery to the Organization of the samples collected; and report on the mission to the Administrator.

B. (i) The technical operators shall not be nationals of
(a) any Party exercising jurisdiction or control over territory in which the event under investigation may have occurred, or of
(b) any original Party which may be associated with the Party in paragraph 7 B (i)(a) of this Article, or of
(c) any Party which may be associated with any original Party to which paragraphs 7 B (i)(a) or 7 B (i)(b) of this Article may refer;

nor, subject to the provisions of sub-paragraph B (ii), shall they be nationals of any Party exercising jurisdiction or control over territory in the air space over which samples may be taken.

(ii) On flights investigating events which may have occurred in territory under the jurisdiction or control of the USSR, the technical operators shall be nationals of the United Kingdom or the United States. On flights investigating events which may have occurred in territory under the jurisdiction or control of the United Kingdom or the United States, the technical operators shall be nationals of the USSR.

C. Any Party exercising jurisdiction or control over territory in which the event under investigation may have occurred or in the air space over which samples are to be taken may designate an observer to accompany the technical operators on the flight.

8. The Administrator shall determine when special aircraft sampling missions are required in accordance with the terms of Article 7 of Annex I and shall have authority to order the despatch of such missions. For missions whose purpose is the collection of samples over the territory of a Party or Parties, the Administrator shall select routes from among the permanent flight routes laid down by the Commission in accordance with paragraph 6 of Article 6; before despatch of the mission, the Administrator shall notify all Parties over whose territories it will fly and shall inform them of the routes selected.

9. The Administrator shall forward to the Commission within twenty-four hours after receipt all reports submitted to him by inspection teams and special aircraft missions, together with any relevant data and analyses.

10. The Administrator shall encourage and facilitate the participation by personnel of components of the System in programs of basic scientific research, to the extent that such participation would not interfere with their primary duties.

11. In addition to the functions referred to in the preceding paragraphs of this Article, the Administrator shall perform such other functions as are provided for in this Treaty and its Annexes.

Article 10

On-Site Inspection of Seismic Events

1. A. The Administrator shall certify immediately by public notice at the Headquarters of the Organization whenever he determines that an event eligible for on-site inspection in accordance with the provisions of Article 8 of Annex I has occurred. This certification shall include a specification of the time of origin and location of the seismic event, the area eligible for inspection (hereinafter referred to as the "certified area"), and the data and analysis upon which the determination of eligibility was made. The Administrator shall make every effort to make this certification within seventy-two hours after the occurrence of the event.

B. Whenever the Administrator is informed through the Organization that a seismic event of seismic magnitude of 4.75 or above which is located by the System has occurred, and if the event is not immediately rendered ineligible for on-site inspection in accordance with the provisions of Article 8 of Annex I, he shall ^{immediately} make public at the Headquarters of the Organization all data relating to such a seismic event which could be of assistance

(i) to any Party exercising its right to request an on-site inspection under paragraphs 2 and 3 of this Article, or

(ii) to the Commission in its decision whether to issue a directive under paragraph 4 of this Article.

The Administrator shall make every effort to make this data public within seventy-two hours after the occurrence of all events referred to in this sub-paragraph, except for those events which have subsequently been found ineligible for on-site inspection in accordance with sub-paragraphs 3 C and 3 D of Article 8 of Annex I.

2. A. If any portion of the certified area lies in territory under the jurisdiction or control of any of the original Parties, the Administrator shall immediately despatch an inspection group to carry out an on-site inspection of such portion of the certified area in accordance with Annex I, provided that:

(i) The USSR requests the inspection of such portion of the certified area which lies in territory under the jurisdiction or control of

the United Kingdom or the United States, and the current annual number of inspections for the Party liable to inspection is not exhausted, or

(ii) The United Kingdom or the United States requests the inspection of such portion of the certified area which lies in territory under the jurisdiction or control of the USSR and the current annual number of inspections for the USSR is not exhausted, and

(iii) The request for inspection is made to the Administrator not later than fifteen days after the Administrator has made public all data relating to the seismic event in question, as specified in paragraph 1 B of this Article.

B. An original Party requesting an on-site inspection pursuant to this paragraph shall simultaneously inform the other original Parties.

3. A. If any portion of a certified area lies in territory under the jurisdiction or control of a Party other than an original Party, any Party may, not later than fifteen days after the Administrator has made public at the Headquarters of the Organization all data relating to the seismic event in question as specified in paragraph 1 B of this Article, request the Commission to direct an on-site inspection of such portion of the certified area.

B. The Commission shall consider and decide upon any such request within forty-eight hours after its receipt. If a certified area lies in territory under the jurisdiction or control of more than one Party, other than an original Party, the Commission shall make a separate decision as to the inspection of that portion of the certified area on the territory of each Party concerned. If the current annual number of inspections of the Party liable to inspection is not exhausted, and if the Commission decides that the request to direct an on-site inspection

should be complied with, the Commission shall direct the Administrator to carry out an on-site inspection of the certified area lying in that Party's territory in accordance with Annex I.

C. If any portion of a certified area lies in territory under the jurisdiction or control of a Party represented on the Commission, that Party shall not participate in the decision as to the inspection of such portion of the certified area.

D. If any portion of a certified area lies in territory under the jurisdiction or control of a Party associated with an original Party, that original Party and Parties associated with it which are represented on the Commission shall not participate in the decision as to the inspection of such portion of the certified area.

4. A. If any portion of a certified area lies in an area not under the jurisdiction or control of any sovereign state, the Administrator shall decide whether to undertake an on-site inspection. The Administrator shall notify the Commission of his decision whether to undertake an on-site inspection and shall make every effort to do so within seventy-two hours after the occurrence of the event. After the Administrator notifies the Commission that he has decided to undertake an on-site inspection, he shall proceed to have the inspection carried out unless he is otherwise directed by the Commission within forty-eight hours of such notification.

B. The Commission may direct the Administrator to inspect a certified area not under the jurisdiction or control of any sovereign state, if the Administrator has not already proceeded to do so, not later than fifteen days after the Administrator has made public at the Headquarters of the Organization all data relating to the seismic event in question as specified in paragraph 1 B of this Article.

C. All on-site inspections under this paragraph shall be carried out in accordance with Annex I.

5. The number of on-site inspections which may be carried out in territory under the jurisdiction or control of each of the original Parties,

pursuant to paragraph 2 of this Article, shall be twenty inspections in each annual period.

6. A The number of on-site inspections which may be carried out in each annual period in territory under the jurisdiction or control of a Party other than an original Party, pursuant to paragraph 3 of this Article, shall be, with respect to each such Party, two, or such higher number as the Commission may, after consultation with the Party, determine by a two-thirds majority of those present and voting.

B. Pending the determination of a Party's number by the Commission, the provisional number for that Party shall be one inspection in each annual period for each 500,000 square kilometers or remaining fraction thereof of territory under its jurisdiction or control, except that for each Party the provisional number shall be at least two inspections in each annual period. Inspections carried out under a Party's provisional number shall be deducted from the number subsequently determined for that Party for the annual period in which such inspections were initiated. In the case of acceding Parties, the Preparatory Commission shall, after consultation with such Parties, promptly recommend, for subsequent approval by the enlarged Preparatory Commission an appropriate number of inspections to be carried out in each annual period within territory under the jurisdiction or control of such Parties.

7. The number of on-site inspections for each Party shall be reviewed by the Commission within three years after this Treaty enters into force and annually thereafter. In light of each such review, which shall take full account of practical experience in the operation of the System and of measures taken to maintain or improve its effectiveness, the Commission may fix revised numbers, provided that no number (A) shall be less than two, (B) nor less than twenty per cent of the average annual number of events of seismic magnitude 4.75 or above which are located by the System in accordance with paragraph 2 of Article 8 of Annex I, provided that when criteria for the identification of seismic events eligible for on-site inspection are agreed, no less than thirty per cent of the events remaining unidentified after the application of such criteria, occurring in territory under the jurisdiction or control of the Party to which the number relates. Such average annual number shall be based on data from control posts and research programs

undertaken by the Commission in accordance with the provisions of Article 6 for a period prescribed by the Commission.

8. The liability of a Party to on-site inspections pursuant to paragraph 2 or 3 of this Article shall commence from the date on which the Treaty enters into force for that Party. The annual period in which the number of on-site inspections for each Party may be carried out shall commence on the date of entry into force of the Treaty and thereafter on the anniversary of that date in each succeeding year. In the case of a Party which deposits its instrument of ratification or acceptance after the date of entry into force of the Treaty, the number of on-site inspections which may be carried out in territory under its jurisdiction or control in the period remaining before the next anniversary of the date of entry into force of the Treaty shall bear the same proportion to its number determined in accordance with paragraph 6 of this Article, as that period bears to one year, but shall not be less than two. If the number of on-site inspections calculated in accordance with the preceding sentence includes a fraction, that fraction shall, if it is smaller than one-half, be disregarded, or, if it is one-half or greater, be regarded as equivalent to one.

9. Notwithstanding any other provision of this Article, the Commission may direct the Administrator to carry out on-site inspection in territory under the jurisdiction or control of any Party either at the request of such Party or pursuant to an agreement made by such Party prior to or subsequent to signature of the Treaty. Inspections carried out under this paragraph shall not be deducted from a Party's number. Inspections carried out pursuant to paragraphs 2 and 3 of this Article shall take priority over inspections carried out under this paragraph.

10. The Administrator shall make available to all Parties to the Treaty within twenty-four hours after receipt all reports submitted to him by on-site inspection groups, together with any relevant data and analyses.

Article 11

Installation and Operation of the System in Parties' Territories

Each of the original Parties and all other Parties to this Treaty agree to accept on territory under their jurisdiction or control components of the System which is established on the basis of the "Report of the Conference of Experts to Study the Methods of Detecting Violations of a Possible Agreement on the Suspension of Nuclear Tests" of August 20, 1958, the "Report of the Technical Working Group on the Detection and Identification of High-Altitude Nuclear Explosions" of July 15, 1959, and the "Conclusion of Technical Working Group II Regarding Possible Improvements of Techniques and Instrumentation" of December 18, 1959, and shall be installed and shall operate in accordance with the provisions of this Treaty and its Annexes.

Article 12

Undertakings Concerning Co-operation with the System

1. Each of the Parties undertakes to assure that adequate and expeditious transportation is available from the point of entry, or within its territory, to the site of any element of the System or any area where an on-site inspection is to be conducted.

2. Each of the Parties undertakes to enter into appropriate arrangements with the Commission for the utilization of existing meteorological and commercial aircraft flights over ocean areas for routine air-sampling purposes.

3. Each of the Parties undertakes to enter into appropriate arrangements with the Commission to have aircraft immediately available for special flights, carried out pursuant to the provisions of Article 9 and Article 7 of Annex I, over territory under its jurisdiction or control or to permit such special flights by aircraft forming part of the System.

4. Each of the Parties undertakes to enter into appropriate arrangements with the Commission for the utilization of existing weather or geophysical exploration vessels for use as components of the System.

5. Each of the Parties undertakes to give inspection groups, despatched pursuant to the provisions of Article 10, immediate and undisputed access to the area in which an on-site inspection is to be conducted, to refrain from interference with any operation of an inspection group and to give such groups the assistance they may require in the performance of their mission.

6. Each of the Parties undertakes to enter into appropriate arrangements with the Commission: for the design, construction, and provision of necessary satellite vehicles; for the provision and use of launching sites and launching vehicles; for the establishment and

operation of stations to track satellites and to receive and analyze data from such satellites; and for the establishment and carrying out of a research program to measure background levels in space and to develop the necessary equipment and techniques to put effective space monitoring control systems into operation.

Article 13

Detonations for Peaceful Purposes

1. Each of the Parties to this Treaty undertakes to detonate, or assist others in the detonation of, nuclear devices for peaceful purposes only in accordance with the provisions of this Article. The detonations carried out pursuant to the provisions of this Article shall not be regarded as a violation of Article 1.

2. A Party intending to carry out or assist in such a detonation shall provide the Commission, at least four months in advance of the proposed detonation date, with a plan containing the following information.

A. The date, site and purpose of the proposed detonation;

B. The procedure it will follow to comply with paragraph 4 of this Article;

C. The expected yield of the device;

D. The measures to be taken to ensure that there will be no substantial fallout outside the immediate vicinity; and

E. The measurements to be taken and any experimentation to be conducted therewith.

3. Within two months after the receipt of the plan, the Commission shall authorize the Party to proceed with, or assist in, the proposed detonation, unless the Commission shall find that such detonation would not be carried out in accordance with paragraph 4 of this Article. If, as a result of observations at the proposed site, the Commission determines that there is a lack of compliance with paragraph 4, it shall immediately so notify the Party planning to conduct or assist in the detonation. The Party shall thereupon refrain from carrying out or assisting in the detonation until notified by the Commission that it has determined that the detonation will be carried out in accordance with paragraph 4.

4. Each of the original Parties shall be given an adequate opportunity at a designated inspection site to inspect externally and internally any nuclear device to be detonated pursuant to this Article and to examine detailed drawings of the device, provided that such detailed drawings may not be reproduced

or taken away from the inspection site. The device to be detonated shall, after inspection and reassembly, be under the continual surveillance of members of the Organization staff until detonation.

5. Members of the Organization staff shall, in addition to maintaining surveillance of the device to be detonated, observe all preparation for, and the actual firing of, the device and shall at all times have unrestricted access to the vicinity of the detonation to ensure that the device employed is the one provided in accordance with paragraph 4 of this Article.

6. Representatives of the original Parties shall be given adequate opportunity to accompany and to participate with members of the Organization staff in the exercise of their functions under paragraphs 4 and 5 of this Article.

7. The Commission may, with the concurring votes of the original Parties, provide for any other system of safeguards to ensure that nuclear detonations for peaceful purposes are carried out in accordance with the objectives of this Treaty.

Article 14

Periodic Review of the System

1. Three years after the coming into force of this Treaty, the Commission shall review the System established under this Treaty in order to:

A. evaluate its effectiveness for verifying compliance with the obligations set forth in Articles 1 and 13 of this Treaty;

B. determine in the light of experience and scientific progress whether any specific improvements should be made or new elements added to the System:

C. consider such measures to improve or maintain the effectiveness of the System as may be proposed by any Party to the Treaty in the light of experience in the operation of the Treaty.

2. The System may be reviewed by the Commission annually thereafter for the same purpose upon request of the Conference or any of the original Parties.

Article 15

Finance

1. Annual budget estimates for the expenses of the Organization shall be submitted to the Commission by the Administrator. After receipt of these estimates, the Commission shall submit a proposed budget to the Conference. The Conference may approve the budget as submitted or return it to the Commission with recommendations. If the budget is returned, the Commission shall then submit a further budget to the Conference for its approval.

2. The expenses of the Organization shall be borne by the Parties in accordance with a scale fixed by the Conference on the basis of recommendations submitted by the Commission as part of each annual budget. The annual contributions of the USSR and the United States shall be equal.

3. Any Party desiring to pay its assessments, in whole or in part, by supplying materials, services, equipment or facilities shall make its offer in writing to the Commission. Within ninety days after receipt of the offer, the Commission shall determine whether to accept the offer, in whole or in part, and shall notify the Party of its decision. The Commission shall not accept such an offer unless the materials, services, equipment or facilities offered by the Party meet the standards prescribed by the Commission and are readily usable.

4. Subject to the rules and limitations approved by the Conference, the Commission shall have the authority to exercise borrowing powers on behalf of the Organization without, however, imposing on the Parties to this Treaty any individual liability in respect of a loan or loans entered into pursuant to this authority.

5. Decisions of the Commission and of the Conference on all financial questions shall be made by a majority of those present and voting. However, decisions by the Commission on the scale of contributions to be recommended and on the total amount of each annual budget shall require the concurring votes of the original Parties.

Article 16

Privileges and Immunities

The privileges and immunities which the Organization, its staff and the representatives of Parties shall be granted by the Parties, and the legal capacity which the Organization shall enjoy in the territory of each of the Parties, shall be as set forth in Annex II of this Treaty.

Article 17

Relationships with Other International Organizations

1. The Commission, with the approval of the Conference, is authorized to enter into an agreement or agreements establishing an appropriate relationship between the Organization and the United Nations.

2. The Commission, with the approval of the Conference, shall arrange for the Organization to be brought into an appropriate relationship with any international organization which may in the future be established among any of the Parties to this Treaty to supervise disarmament and arms control measures.

Article 18

Annexes

The Annexes to this Treaty form an integral part of this Treaty.

Article 19

Parties to the Treaty

1. The essential Parties to this Treaty shall be:

A. the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland and the United States of America, referred to herein as the "original Parties";

B. Any other State whose adherence is decided by the Commission to be necessary for the achievement of the fundamental Treaty purpose of securing an effectively controlled permanent discontinuance of nuclear weapon test explosions on a world-wide basis or to permit the installation of elements of control as required by the provisions of Annex I. If any State which is proposed to be the subject of a decision in accordance with the preceding sentence is associated with an original Party for the purposes of this Treaty, that original Party and any State associated with it for the purposes of this Treaty shall abstain from voting in the decision.

2. The signature and ratification or the acceptance of this Treaty by all the States designated in paragraph 1 A and any State whose adherence is decided to be necessary in accordance with paragraph 1 B shall be required for the fulfillment of the provisions of this Article.

3. Any other State desiring to adhere, whose adherence the Preparatory Commission or the Commission decides would contribute to the achievement of the purposes of this Treaty, may become a Party.

Article 20

Signature, Ratification, Acceptance and Entry into Force

1. This Treaty shall be open for signature by the states referred to in paragraph 1 A of Article 19. The signatory states shall become Parties to this Treaty by deposit of instruments of ratification.
2. Instruments of ratification and instruments of acceptance by states adhering pursuant to paragraphs 1 B and 3 of Article 19 shall be deposited with the Government of _____, hereby designated as Depositary Government.
3. Ratification or acceptance of this Treaty shall be effected by states in accordance with their respective constitutional processes.
4. This Treaty, apart from Annex III, shall enter into force when all the original Parties have deposited instruments of ratification thereof.
5. The Depositary Government shall promptly inform all signatory states of the date of deposit of each instrument of ratification and of each instrument of acceptance and the date of entry into force of this Treaty. The Depositary Government shall promptly inform all Parties of the dates on which states become Parties to this Treaty.
6. Annex III of this Treaty shall come into force on the day after this Treaty shall have been signed by the original Parties.

Article 21

Registration

1. This Treaty shall be registered by the Depositary Government pursuant to Article 102 of the Charter of the United Nations.

2. Agreements between the Organization and any Party to this Treaty or any other State or public international organization shall be submitted for registration by the Commission with the United Nations.

Article 22

Duration

This Treaty shall remain in force indefinitely subject to the inherent right of a Party to withdraw and be relieved of obligations hereunder if the provisions of the Treaty and its Annexes, including those providing for the timely installation and effective operation of the control system, are not being fulfilled and observed.

Article 23

Amendments

Amendments to this Treaty and its Annexes shall enter into force for all Parties to the Treaty when they have been adopted by a vote of two-thirds of the members of the Conference and ratified in accordance with their respective constitutional processes by two-thirds of the Parties to this Treaty, including all the original Parties.

Article 24

Authentic Texts

This Treaty, of which the English and Russian texts are equally authentic, shall be deposited in the archives of the Depositary Government. Duly certified copies of this Treaty shall be transmitted by the Depositary Government to the Governments of the other signatory States and to the Governments of States which become Parties to this Treaty pursuant to paragraphs 1 B and 3 of Article 19.

IN WITNESS WHEREOF the undersigned, duly authorized, have signed this Treaty.

DONE at _____, this _____ day of _____,
one thousand nine hundred and sixty-one.

ANNEX I

DETECTION AND IDENTIFICATION SYSTEM

Part I -- DESCRIPTION

Article 1

The System established in this Treaty shall include the features set forth herein which are derived from the "Report of the Conference of Experts to Study the Methods of Detecting Violations of a Possible Agreement on the Suspension of Nuclear Tests" of August 20, 1958, the "Report of the Technical Working Group on the Detection and Identification of High Altitude Nuclear Explosions" of July 15, 1959, and the "Conclusion of Technical Working Group II Regarding Possible Improvements of Techniques and Instrumentation" of December 18, 1959.

Article 2

1. The System shall, when completely established and unless otherwise decided in accordance with the provisions of this Treaty, consist of the following components: A headquarters, regional offices, land control posts and ship-based control posts, systems of satellites, radiochemistry laboratories, air and water sampling facilities, on-site inspection facilities, and communications facilities. Upon recommendation of the Administrator, the Commission may decide, with the affirmative votes of the original Parties, to add components as may be appropriate for detecting and identifying nuclear explosions.

2. The general characteristics of the System shall be as follows:

A. The land control posts shall be uniformly equipped with apparatus for the collection of radioactive debris and for the recording of acoustic waves, seismic waves, electromagnetic signals, fluorescence of the upper atmosphere, visible light, and cosmic noise absorption.

B. A number of control posts situated on islands or near the shore lines of oceans shall be equipped, in addition to the methods mentioned in paragraph 2 A of this Article, with apparatus for the recording of hydroacoustic

waves. Certain control posts in areas not covered by existing weather stations (e.g. Southern Hemisphere) shall include meteorological equipment and personnel necessary to obtain data on air mass movements in order to predict the course of any air mass suspected to contain debris from nuclear explosions.

C. Control posts located on ships, which shall be stationed within specified ocean areas, shall be uniformly equipped with apparatus for the collection of radioactive debris and for the recording of hydroacoustic waves, fluorescence of the upper atmosphere and visible light. The methods of recording electromagnetic signals and cosmic noise absorption may also be used on ships at the discretion of the Administrator.

D. Aircraft and vessels for air and water sampling operations shall be suitably equipped with apparatus for the collection of radioactive debris from the air and from the water.

E. On-site inspection groups shall be appropriately manned and equipped to carry out on-site inspections to determine the nature of unidentified events which could be suspected of being nuclear explosions.

F. Satellites in terrestrial and solar orbits shall be suitably equipped with apparatus for recording delayed and prompt gamma rays, X-rays, neutrons, and electrons trapped in the earth's magnetic field.

G. Suitably located ground stations shall be equipped to launch, track and to transmit to and receive data from satellites.

Part II -- COMPONENTS

Article 3

Headquarters

1. The Headquarters of the System shall include directorates for Administration, for Supply, for Technical Operations and for Field Operations. Technical Operations shall be comprised of a Research and Development Center and a Data Analysis Center which shall include a Central Radiochemical Laboratory. Field Operations shall be comprised of a Central Inspection Office, a Communications

Center and an Operations Center which shall include a Weather Center. Administration shall include offices for Finance and Personnel; and Supply shall include offices for System Construction and for Supply and Maintenance.

2. The Research and Development Center shall have the necessary professional staff and facilities to conduct, either directly or by contract, research and development programs for developing and improving equipment and techniques for detection and identification of nuclear explosions.

3. The Data Analysis Center shall have the necessary professional staff and facilities for evaluating all data received from components of the System. All data from the components of the System shall be reported directly to the Data Analysis Center, whose functions shall include:

- A. To analyze all data received from all components of the System.
- B. To determine and report strictly on the basis of this analysis the time and place of occurrence and the magnitude or equivalent yield of:
 - (i) an event for which the data is sufficient to establish its nature as a nuclear explosion.
 - (ii) an event which is identifiable on the basis of the data as a natural geophysical disturbance.
 - (iii) an event which is not identifiable on the basis of the data as natural and which therefore could be suspected of being a nuclear explosion.

C. To examine continuously the work of the components of the System to ensure the maintenance of a high degree of technical proficiency.

4. The Central Radiochemical Laboratory shall have the necessary professional staff and facilities to perform radiochemical and physical analyses of samples received from control posts, ships, aerial sampling centers or other components of the System. The Central Radiochemical Laboratory shall analyze the samples for fission products and other nuclides to confirm the origin of the debris as being from a nuclear detonation as opposed to some

other type of nuclear reaction. In addition, the Central Radiochemical Laboratory shall review for accuracy the findings of these components of the System concerning the characteristics and age of any nuclear debris involved. The Central Radiochemical Laboratory shall also be responsible for developing test procedures for use at field laboratories as required to ensure uniformity in analysis and measurement techniques throughout the System.

5. The Central Inspection Office shall have the necessary professional staff and facilities to direct on-site inspection of events which cannot be identified as natural events and which could be suspected of being nuclear explosions. The Central Inspection Office shall organize and maintain inspection groups on an alert basis and shall be responsible, when so directed, for the dispatch of these groups to areas designated for inspection as soon as possible following notification by the Administrator. For these purposes the Central Inspection Office shall be responsible for:

A. Rapid development of a plan for movement of the inspection group to the area of the event in consultation with the Party or Parties exercising jurisdiction or control over territory in which the inspection is to take place;

B. Rapid movement of inspection personnel and equipment to the area;

C. Direction of the inspection groups and for the conduct of the inspection in the suspect area, including provisions for additional staff, equipment and supplies deemed necessary by the inspection group.

6. The Communications Center shall have the necessary professional staff and facilities to ensure rapid and reliable communications with control posts, ships, aerial sampling centers, regional offices, and satellite tracking stations. "Rapid and reliable communications" is defined as such a communications network as will ensure an exchange of accurate and complete messages with any of the components of the System within eight hours.

7. The Operations Center shall have the necessary professional staff and

facilities to control all field operations, excluding on-site inspection. The Operations Center shall control the launching and positioning of satellites, as well as the movement of aircraft, vessels, equipment and personnel which are deployed for the purpose of conducting air and water sampling operations. It shall maintain complete and current information on the operational status of each component of the System, including aerial sampling flights over the oceans and over territories under the jurisdiction or control of Parties to this Treaty. The Operations Center will ensure that steps are taken to maintain all components of the System at all times in a high state of operational readiness to perform their assigned functions.

5. The Weather Center shall have the necessary professional staff and facilities to prepare forecasts of air mass trajectories from any point at which a nuclear explosion is suspected to have occurred for use in vectoring aerial sampling flights to intercept these air masses. The Weather Center shall be provided by wire or radio with weather data from existing national weather networks under the control of the Parties. Appropriate arrangements shall be made for other national or international networks to supply weather data to the Weather Center by wire or radio. In addition, the Weather Center shall be provided with weather data from special weather detachments established in accordance with paragraph 2 B of Article 2 of this Annex.

Article 4

Regional Offices

1. Regional Offices shall be established as the Commission determines to be necessary for the effective administration and operation of the System.
2. Each Regional Office shall perform the following functions:
 - A. Provide logistic support to and administrative supervision over components of the System operating in its region;
 - B. Provide necessary support and administrative assistance to inspection groups operating in its region;

C. Maintain liaison with national and local authorities in its region in connection with its performance of the above functions and in particular to ensure the expeditious transportation and local support of inspection groups.

Article 5

Land Control Posts

1. The network of control posts shall, when completely established include at least 170 land control posts. Unless otherwise determined under paragraph 2 below, the spacing between control posts shall be about 1700 kilometers in continental aseismic areas, about 1000 kilometers in continental seismic areas, and between 1000 and about 3500 kilometers in ocean areas.

2. The number of control posts to be installed in the USSR, United Kingdom and United States shall be as specified in Article 17 of this Annex. Except for the number of control posts to be installed in the USSR, United Kingdom and United States, the Commission shall determine, on the basis of the foregoing standards of spacing, the number of control posts to be installed in other territories under the jurisdiction or control of the original Parties and all territories under the jurisdiction or control of Parties other than the original Parties to the Treaty. With the approval of the Commission and of the Party concerned, the control posts may be arranged in an alternative distribution within territory under the jurisdiction or control of a Party if, in the view of the Commission, such a redistribution will result in an improvement in the capabilities of the System.

3. Specific sites for control posts shall be selected in a manner to give the maximum over-all capability to the System. The siting of individual control posts shall be determined primarily on the basis of the seismic requirement. However, in the event that two or more suitable seismic sites are found in the desired areas, a final selection of the location of the control posts shall be made with due consideration of siting requirements of the other methods

of detection set forth in Article 2 of this Annex. In the event that no control post location fulfilling seismic requirements is found that permits satisfactory operation of other detection equipment as set forth in this Annex, the Administrator may direct the installation of such equipment at a more favorable location. In the event that after a control post is established, the background seismic noise increases above acceptable limits due to human or other activity, the Administrator, after consultation with the Party, may direct that the control post may be moved to another location.

4. All land control posts shall maintain continuous operation of apparatus for the collection of radioactive debris and for the recording of fluorescence of the upper atmosphere, visible light, cosmic noise absorption, acoustic waves, seismic waves and electromagnetic signals. Control posts situated on islands or near the shore lines of oceans shall, in addition, maintain continuous operation of apparatus for the recording of hydroacoustic waves. In addition, equipment may be operated at certain land control posts to track and to transmit to and receive data from satellites.

Article 6

Ship-Based Control Posts

1. The network of control posts shall, when completely established, include a system of ship-based control posts, which shall be employed in ocean areas which do not contain suitable islands. There shall be a sufficient number of ships to maintain a capability for continuous operation of four stations each in the North Pacific and South Pacific Oceans and one station each in the North Atlantic and Indian Oceans.

2. Ship-based control posts shall maintain continuous operation of apparatus for the collection of radioactive debris and for the recording of hydroacoustic waves, fluorescence of the upper atmosphere and visible light. Equipment for recording electromagnetic signals and cosmic noise absorption may also be used on ships at the discretion of the Administrator.

Article 7

Air and Water Sampling Operations

1. Daily routine air sampling flights shall be conducted at several different altitudes over ocean areas in approximately a north-south direction near the sides of continents, as well as in the center of remote ocean areas such as the Central Pacific the Indian Ocean west of Australia and the North Atlantic Ocean, for the purpose of detecting nuclear explosions by the method of collecting radioactive debris.

2. Special aircraft sampling flights shall be conducted to search for a possible radioactive cloud for the purpose of collecting samples of radioactive debris within two to five days after the date of origin of the debris. Special sampling flights shall be initiated whenever fresh radioactive debris has been detected by a routine air sampling flight or by a control post or when acoustic signals recorded at control posts establish the time and position of a possible explosion in the atmosphere. In each instance, the flight routes of the aircraft shall be selected on the basis of meteorological trajectory forecasts from the location of the suspected event, and the aircraft shall search at several different altitudes.

3. Special aircraft flights undertaken over territory under the jurisdiction or control of Parties shall be conducted, on instruction of the Administrator in accordance with Article 9 of the Treaty, over permanent flight routes as set out by the Commission in accordance with Article 6 of the Treaty. Such permanent flight routes shall be laid down in advance in such number and geographical location that, according to meteorological data, interception of any cloud containing radioactive debris will be assured within two to five days of the suspected event. Sampling aircraft to be used over territory under the jurisdiction or control of Parties shall be located in or near permanent flight routes and shall be maintained in a high state of operational readiness to conduct the sampling flights directed by the Administrator.

4. Special aircraft flights over ocean areas shall be conducted from aircraft sampling centers distributed uniformly throughout the Northern and Southern Hemispheres. When the area to be covered by such flights is remote from any one of the centers, operations will be staged out of the nearest air field, and necessary supplies which cannot be procured locally will be airlifted from the nearest center.

5. Water sampling operations, by ships and/or aircraft, shall be conducted for the purpose of collecting samples of water suspected of containing radioactive debris whenever hydroacoustic signals recorded at control posts establish the time and position of a possible underwater explosion. Suitably equipped aircraft and/or vessels shall be deployed in such a manner that water sampling operations can be conducted at the site of the event within four days after such operations are directed by the Administrator.

6. A. Radiochemical laboratories shall be located at each of the aerial sampling centers established in accordance with paragraph 4 above. Laboratories at aerial sampling centers shall be equipped to carry out all the necessary radiochemical analytical techniques required to determine the presence of fresh debris and to ascertain the date of origin of the debris with a precision consistent with the most modern radiochemical dating techniques. This shall be done by using as many dating techniques as sample-size and age of the debris permit.

B. Upon termination of a sampling flight, samples shall be assayed by suitable instruments, for example gamma spectrometers. Samples shall be divided in equal parts. One part shall be sent to the nearest radiochemical laboratory, and the other part shall be sent to the Central Radiochemical Laboratory for further analysis with an indication as to which are suspected of containing fresh fission products.

C. Water samples shall be assayed by suitable instruments as soon as practicable following sample collection, and those samples suspected of

containing fresh fission products shall be divided in equal parts. One part shall be sent to the nearest radiochemical laboratory and the other to the Central Radiochemical Laboratory for analysis.

Article 3

Criteria for On-Site Inspection of Seismic Events

1. A seismic event which is located by the criteria in paragraph 2 of this Article and which is determined to be of seismic magnitude 4.75 or greater shall be eligible for on-site inspection unless rendered ineligible for inspection by the fulfillment of any of the criteria in paragraph 3 of this Article.

2. A seismic event shall be considered to be located when seismic signals, whose frequencies, amplitudes, durations, and velocities are consistent with those of the waves from earthquakes or explosions, are recorded at a sufficient number of control posts to establish the approximate time and position of the event. This requires at least four clearly measurable arrival times of identifiable phases which are mutually consistent to within plus or minus three seconds. These four consistent arrival times must include P-wave arrival times at three different control posts.

3. A located seismic event shall be ineligible for inspection if, and only if, it fulfills one or more of the following criteria:

A. its depth of focus is established as below sixty kilometers;

B. its epicentral location is established to be in the deep open ocean, and the event is unaccompanied by a hydroacoustic signal consistent with the seismic epicenter and origin time;

C. it is established to be a foreshock of a seismic event of at least magnitude 6 which has been clearly identified as an earthquake by the criteria in sub-paragraphs A and B above. For this purpose a "foreshock" is defined as one of a sequence of earthquakes which occurs less than forty-eight hours before the main shock and which has an epicenter within ten kilometers of the epicenter of the main shock;

D. it is established to be an aftershock of a seismic event of at least magnitude 6 which has been clearly identified as an earthquake by the criteria in sub-paragraphs A and B above. For this purpose, an "aftershock" is defined as one of a sequence of earthquakes which occurs less than one week after the main shock and which has an epicenter within ten kilometers of the epicenter of the main shock.

4. In cases where adequately precise regional travel time curves are available, and where consistent arrival times are available from control posts surrounding the epicenter, that is, from control posts at least one of which lies in every possible 90-degree sector around the epicenter, the area eligible for inspection will be 200 square kilometers. In cases where adequately precise regional travel time curves are not available, or where data from control posts lying in every possible 90-degree sector around the epicenter are not available, an area of 500 square kilometers shall be eligible for inspection. The area eligible for inspection shall be chosen so as to have the highest likelihood of containing the epicenter.

5. The basic data for all criteria shall be obtained from control posts.

6. Within three years after the entry into force of this Treaty and annually thereafter, the Commission shall review the provisions of this Article.

Notwithstanding the provisions of Article 23, the Commission may at any time, with the concurring votes of the original Parties, amend the provisions of this Article. Such amendments shall be binding on all Parties to this Treaty.

Article 9A Seismic Event Equal to or Greater than Magnitude 4.75

1. "A seismic event equal to or greater than magnitude 4.75" is a seismic event whose apparent magnitude M as measured by the formula M equals Q plus $\text{LOG}(A/GT)$ is equal to or greater than 4.75 at one-half or more of the control posts which measure the quantity "A" and which are located at distances greater than 16 degrees and less than 90 degrees from the epicenter. The symbols in the formula M equals Q plus $\text{LOG}(A/GT)$ are defined as follows:

A. "A" is one-half of the maximum peak positive to negative amplitude (displacement), expressed in microns in the record of the first five cycles of the P waves made by a short-period vertical-component seismograph with characteristics which will permit operation of single seismometers at quiet stations with magnification greater than ten to the sixth power at the frequency of peak response. "A" is measured if it exceeds three times the arithmetical mean of the ten greatest peak amplitudes of the noise oscillations recorded during the preceding two minutes. Noises, the periods of which differ from the signal period by not more than one and one-half times, are counted. The noise amplitude and period are determined by the same procedure as for the signal.

B. "T" is the time, measured in seconds, between the first of the peaks used in determining "A" and the next following peak of the same sign.

C. "G" is the steady state magnification of the seismograph at period T.

D. "Q" is given as a function of distance in the following table:

DISTANCE	Q	DISTANCE	Q	DISTANCE	Q
16 Degrees	5.9	41 Degrees	6.5	66 Degrees	7.0
17	5.9	42	6.5	67	7.0
18	5.9	43	6.5	68	7.0
19	6.0	44	6.5	69	7.0
20	6.0	45	6.7	70	6.9
21	6.1	46	6.8	71	6.9
22	6.2	47	6.9	72	6.9
23	6.3	48	6.9	73	6.9
24	6.3	49	6.8	74	6.8
25	6.5	50	6.7	75	6.8
26	6.4	51	6.7	76	6.9
27	6.5	52	6.7	77	6.9
28	6.6	53	6.7	78	6.9
29	6.6	54	6.8	79	6.8
30	6.6	55	6.8	80	6.7
31	6.7	56	6.8	81	6.8
32	6.7	57	6.8	82	6.9
33	6.7	58	6.8	83	7.0
34	6.7	59	6.8	84	7.0
35	6.7	60	6.8	85	7.0
36	6.6	61	6.9	86	6.9
37	6.5	62	7.0	87	7.0
38	6.5	63	6.9	88	7.1
39	6.4	64	7.0	89	7.0
40	6.4	65	7.0	90	7.0

Article 10

Inspection Groups

1. Inspection groups shall be established and maintained to conduct on-site inspections as directed by the Administrator. They shall be based at a number of locations sufficient to insure prompt arrival and logistical support at the site of any unidentified continental or maritime event. Inspection groups shall be responsible for the collection and preliminary evaluation of evidence concerning the nature of the event in question. They shall remain in the inspection area until recalled by the Administrator.

2. Each inspection group shall be staffed with scientific, technical and other personnel qualified to perform the duties required in the conduct of an on-site inspection.

3. Each inspection group shall, when dispatched, conduct any inspection directed by the Administrator in a prompt and efficient manner and shall be authorized to:

- A. Establish a local base of operations.
- B. Establish and maintain communications with its permanent base, the Central Inspection Office, and, as required, other components of the System.
- C. Consult with local officials and individuals.
- D. Conduct low-altitude aerial inspection of the area eligible for inspection, utilizing such techniques as may be necessary for this purpose, including, but not limited to, photographic, electromagnetic, magnetic, infrared and radioactivity surveys.
- E. Conduct surface and subsurface inspection in the area eligible for inspection for all evidence which may in any way relate to the nature of the event, utilizing such techniques as may be necessary for this purpose, including, but not limited to, drilling for radioactive samples for scientific analysis.
- F. Utilize such other means of investigation on site as would be likely to produce relevant data.

4. Each inspection group shall submit to the Administrator periodic progress reports during the course of any inspection and a final report upon the conclusion of the inspection operation. Copies of these reports shall be sent to the Party or Parties exercising jurisdiction or control over the territory in which the inspection is being or has been carried out.

5. Each inspection group shall have available for its use the technical apparatus and facilities necessary for the performance of a prompt and efficient inspection operation. Such apparatus and facilities shall include, but shall not be limited to, the following:

- A. Portable seismographs for recording aftershocks, geophysical equipment for seismic profiling, detection equipment for locating metallic articles, radiation detectors, equipment for collecting radioactive samples on the surface, drilling equipment for obtaining underground radioactive samples, portable laboratory equipment for field radiochemical analysis, and photographic equipment.

B. Appropriate surface and air transport for rapid movement to an inspection area along routes prescribed by the host country, and for the operation and logistics of the inspection group.

C. Appropriate aircraft for the conduct of low-altitude aerial reconnaissance of the inspection area for evidence of the nature of the event in question.

D. Appropriate vessels for the conduct of inspection of maritime events.

E. Technically suitable and reliable communications equipment to establish and maintain contact with its permanent base of operations, the Central Inspection Office, and, as required, other System components.

Article 11

High Altitude Systems

1. The high altitude systems, which are based upon the recommendations contained in the "Report of the Technical Working Group on the Detection and Identification of High Altitude Nuclear Explosions", of July 15, 1959, are established for the purpose of providing, when in effective operation, a level of capability not less than that estimated by the Technical Working Group in sections A and B of their Report. The techniques and instrumentation for the detection and identification of nuclear explosions at high altitudes shall comprise apparatus installed at control posts and ground stations as specified in Articles 2, 5 and 6 of this Annex, together with satellite systems.

Satellite systems shall be so positioned in orbits as to provide maximum capability for detecting nuclear explosions as follows:

A. One or more satellites (trapped-electron satellites) placed in an appropriate terrestrial elliptical orbit and suitably instrumented with counters for recording electrons trapped in the earth's magnetic field. A satellite shall be replaced when it can no longer record or transmit the required data to ground stations.

B. At least six satellites (far-earth satellites) placed in terrestrial orbits at altitudes of more than 30,000 kilometers so as to be continuously

outside the earth's trapped radiation belts. Three of the satellites shall be nearly equally spaced in the same orbital plane, and three satellites shall be similarly placed in a second orbital plane positioned at approximately right angles to the first. Each satellite shall be suitably equipped with instruments for recording prompt and delayed gamma rays, X-rays, and neutrons. A satellite shall be replaced when it can no longer record and transmit to ground stations the required data from any three of the four methods of detection as set forth in this sub-paragraph. In addition, satellites shall be replaced when the System

- (i) no longer provides complete surveillance of the earth, or
- (ii) no longer provides surveillance in all directions in space lying outside the orbits of the System's component satellites by means of the X-ray detection method from at least three satellites.

C. At least four satellites (solar satellites) placed in appropriate solar orbits and suitably equipped with instruments, including those for recording X rays. A satellite shall be replaced when it can no longer record and transmit to ground stations the required data on X-ray signals.

2. Each satellite requiring replacement shall be replaced as rapidly as possible.

3. Each satellite shall carry apparatus for verifying the performance of its equipment. Each satellite shall be inspected immediately prior to launching to ensure its instruments meet the detection requirements and that the satellite includes nothing which might interfere with the performance of its equipment. After inspection, the launching of each satellite shall be observed. This inspection and the subsequent observation of the launching of the satellite shall be performed by members of the staff of the Organization selected by the Administrator in accordance with the principles set forth in sub-paragraph 3 C (v) of Article 9.

Part III - DATA REPORTING AND EVALUATION

Article 12

1. All components of the System shall immediately examine all records obtained. When data which meet criteria established by the Headquarters of the System are observed, they shall be reported by wire or radio to the Data Analysis Center. All components of the System shall provide additional data to the Center upon its request. In addition, all original data and records obtained by all components of the System shall be forwarded expeditiously to the Headquarters of the System. Reliable electronic transmission of data and frequent collection of records and materials by aircraft shall be incorporated in the reporting system.

2. The equipment at control posts, ships, satellite tracking and data transmitting and receiving stations, and air and water sampling centers shall be examined periodically by technical personnel from the Headquarters of the System for the purpose of ensuring the validity of the data transmitted from these components to Headquarters.

Part IV -- SUPPORT FACILITIES

Article 13

Communications

The System shall have rapid and reliable communications between its components and Headquarters and shall have the right to install, maintain and operate communications facilities, including radio networks, using existing channels when they are suitable for this purpose. The network must be capable of ensuring an exchange of accurate and complete messages between the Headquarters and any component of the System within eight hours. Provisions shall be made for the receipt of standard time signals by all components of the System which record geophysical data. Provisions shall also be made for transmission to the System Headquarters of all weather data required by the Weather Center as set forth in paragraph 8 of Article 3 of this Annex.

Article 14

Supplies and Services

1. The System Headquarters shall manage resources of the System for supplies and services by such means as: establishing procurement, construction and transportation criteria; publishing instructions for operation and maintenance of equipment; receiving and processing supply and maintenance reports from the elements of the System and establishing specification and performance standards for equipment.

2. The System Headquarters shall ensure that technical equipment meets required performance standards before authorizing acceptance of the equipment for use in the System.

3. Maximum use shall be made of sources of supply of non-technical equipment indigenous to the area where facilities of the System are located. Support equipment and supplies shall be locally procured where possible by the Regional Offices or control posts.

Article 15
System Phasing

The controls provided for in this Treaty shall be progressively extended, and the components of the System installed in three phases, in order to achieve and ensure world-wide compliance with the obligations of this Treaty. The sub-phases of Phase I shall begin within three months after the Treaty enters into force. Sub-Phase I-A shall be completed within two years after the Treaty enters into force. Sub-Phase I-B shall be completed within four years after the Treaty enters into force. Phase II shall begin within one year after the Treaty enters into force, and shall be completed within five years after the Treaty enters into force. Phase III shall begin within two years after the Treaty enters into force and shall be completed within six years after the Treaty enters into force. Each control post and each other facility shall be put into operation, in whole or in part, as it is installed, and the System shall be fully operational within six years after the Treaty enters into force. The Commission may, however, decide, with the affirmative votes of the original Parties, to postpone, add to, or refrain from establishing any part of Phases I, II and III.

Article 16
Phasing of Headquarters

The Headquarters of the System shall be established at the beginning of Phase I and shall be expanded through Phase I and subsequent phases as required to provide effective administration and operation of the System.

Article 17
Control Post Phasing

Land control posts and control posts on ships shall be established as follows:

	Phase I		Phase II	Phase III
	A	B		
USSR	9	9	-	-
U.S.	6	4	-	-
U.K.	1	-	-	-
Oceanic Islands	20	-	16	24
Ships	10	-	-	-
Australia	-	-	4	3
Asia (Non-USSR)	-	-	21	-
Europe (Non-USSR)	-	-	3	-
North America and Greenland	-	-	14	-
Africa	-	-	7	9
South America	-	-	6	10
Antarctica	-	-	-	4
	<hr/>	<hr/>	<hr/>	<hr/>
	46	13	71	50

Article 18

Aircraft Sampling Phasing

Aircraft sampling facilities shall be established and made fully operational within two years after the Treaty enters into force.

Article 19

Satellite Systems Phasing

Subject to the provisions of Article 11 of this Annex, satellite systems shall be installed as follows:

	Phase I		Phase II	Phase III
	A	B		
Trapped Electron Satellites	1	-	-	-
Far-Earth Satellites	-	6	-	-
Solar Satellites	-	-	-	4
	<hr/>	<hr/>	<hr/>	<hr/>
	1	6	-	4

Article 20

Inspection Group Phasing

Inspection groups shall be established from the beginning of Phase I. A sufficient number of groups shall be maintained to carry out inspections at any time in the numbers which, in accordance with the terms of this Treaty and its Annexes, may currently be required.

Article 21

Communications Phasing

A survey of communications requirements shall be performed at the beginning of each phase. Elements of the communications system shall be timed to be operational so as to ensure rapid and reliable communications for each control post or other component of the System as soon as such post or other component becomes operational.

Annex II

Privileges and Immunities

Article 1

Definitions

In this Annex:

(1) The expression "representatives of Parties to this Treaty" includes representatives on or to any organ of the Organization established under the provisions of this Treaty, including the Conference, together with the members of their official staffs.

(2) The expression "representatives of Parties to this Treaty on the Control Commission" includes all members of the official staffs of such representatives except those whose duties are clerical. For the purpose of this Annex such clerical personnel shall be deemed to come within the class of persons referred to in sub-paragraph (1) of this Article.

(3) The expression "members of the Organization staff" includes the Administrator and all the employees of the Organization.

(4) The term "expert" shall mean an individual performing a mission on behalf of the Organization either at the headquarters of the Organization or in the territory of a Party to this Treaty.

(5) The term "host government" shall mean the government of the country in which the headquarters of the Organization is located.

Article 2

Juridical Personality

A. The Organization shall possess juridical personality. It shall have the capacity (a) to contract, (b) to acquire and dispose of property, (c) to institute and defend legal proceedings.

B. The Organization may provide for suitable identification of ships and aircraft employed on the official service of the Organization.

Article 3

Property, Funds and Assets

A. The Organization, its property and assets, wherever located and by whomsoever held, shall enjoy immunity from every form of legal process except in so far as in any particular case the Commission, on behalf of the Organization, has expressly waived this immunity, but such express waiver of immunity shall not extend to any measure of execution or detention of property.

B. The premises of the Organization shall be inviolable. The property and assets of the Organization, wherever located and by whomsoever held, shall be immune from search, requisition, confiscation, expropriation and any other form of interference, whether by executive, administrative, judicial or legislative action.

C. The archives of the Organization and all documents belonging to it or held by it or by its staff or experts on its behalf shall be inviolable wherever located.

D. The Organization, without being restricted by financial controls, regulations or moratoria of any kind, may, subject to the obligation to give effect as far as is practicable to representations made to it by any Party, exercise the following rights:

- (1) To hold currency of any kind and operate accounts in any currency;
- (2) To transfer its funds freely from, to, or within any country Party to this Treaty and convert any currency held by it into any other currency.

E. The Organization, its assets, income and other property shall be:

(1) Exempt from all direct taxes except those taxes which are in reality a charge for specific services;

(2) Exempt from all customs duties, prohibitions and restrictions on imports and exports in respect of articles imported or exported by the Organization for its official use; articles imported under such exemption shall not be disposed of, by sale or by gift, in the country into which they are imported except under conditions approved by the Government of that country;

(3) Exempt from all customs duties, prohibitions and restrictions on imports and exports in respect of its publications.

F. The Organization shall be exempt from taxes imposed directly on its expenditure transactions but not exempt from those taxes which are in reality a charge for specific services.

Article 4

Communications

A. Each Party shall take appropriate steps necessary to ensure that its domestic and international telecommunication services accord to telecommunications of the Organization treatment at least equal to government telecommunications with respect to priority of transmission, and accord these telecommunications higher priority, i.e., special priority as accorded to the United Nations Organization in emergencies, when requested, and that rates charged shall be no higher than minimum government rates. Postal communications shall be handled in the most expeditious manner possible.

B. No censorship shall be applied to the official correspondence and other official communications of the Organization.

C. The Organization shall have the right to use codes known to all Parties and to despatch and receive by courier or in sealed bags only official correspondence, other official communications, and objects intended for official use. Such couriers and sealed bags shall have the same immunities and privileges as diplomatic couriers and bags.

D. Nothing in paragraphs B and C of this Article shall be construed to preclude the adoption of appropriate security precautions to be determined by agreement between a Party and the Organization.

Article 5

Representatives of Parties to this Treaty

A. Representatives of Parties to this Treaty on the Control Commission shall enjoy, in the territory of the host government, the same privileges and immunities as the host government accords diplomatic envoys accredited to it.

B. Representatives of Parties to this Treaty on the Control Commission shall enjoy, while present in the territory of another Party in the discharge of Commission duties, the same privileges and immunities as the Party accords diplomatic envoys accredited to it.

C. Representatives of Parties to this Treaty shall enjoy, while present in the territory of the host government and while in the territory of another Party in the discharge of their official duties and during their journey to and from the place of meeting, the following privileges and immunities:

- (1) Immunity from arrest, detention or any legal process with respect to words spoken or written and acts done by them in their official capacity;
- (2) Inviolability for all their official papers and documents;
- (3) The right to use codes, couriers, and sealed bags in communicating with their Governments, their staffs and with the Organization;
- (4) The same exemption in respect of themselves and their spouses from immigration restrictions, aliens' registration and national service obligations as is accorded to comparable categories of the staffs of diplomatic missions;
- (5) The same facilities with respect to currency or exchange restrictions as are accorded to comparable categories of the staffs of diplomatic missions;
- (6) The same immunities and facilities with respect to their personal baggage as are accorded to comparable categories of the staffs of diplomatic missions;
- (7) The right to import free of duty their furniture and effects at the time of first arrival to take up their posts in the territory of a Party and, on the termination of their functions there, to re-export such furniture and effects free of duty; furniture and effects so imported shall not be disposed of, by sale or by gift, in such territory except under conditions approved by the Government thereof.

D. A representative to whom this Article applies shall, during any period when he is present in the territory of another Party for the discharge of his duties, be exempt from taxation on his official salary and emoluments, and where the legal incidence of any other form of taxation depends upon residence, any such period shall, for the purposes of determining his liability to taxation, be treated as not being a period of residence in that territory.

E. The Administrator shall communicate to the Parties concerned the names of the representatives and members of their official staffs to whom paragraph B of this Article applies and the probable duration of their stay in the territories of such other Parties.

F. The privileges and immunities accorded under paragraphs A, B, and C are not for the personal benefit of the individuals themselves, but in order to safeguard the independent exercise of their functions in connexion with the Organization. Consequently, a Party not only has the right, but is under a duty,

to waive the immunity of its representatives and their staffs in any case where, in its opinion, the immunity would impede the course of justice and can be waived without prejudice to the purposes for which the immunity is accorded.

G. The provisions of paragraphs A to E above shall not require any Party to grant any of the privileges or immunities referred to therein to any person who is its national or any person who is its representative or is a member of the staff of such representative.

Article 6

Organization Staff and Experts

A. The Administrator and the deputies of the Administrator shall be accorded the privileges and immunities normally accorded to diplomatic envoys.

B. All other members of the Organization staff shall be accorded the following privileges and immunities:

(1) Immunity from arrest or detention whenever assigned to a control post, an inspection group, or a routine or special flight; and at all times immunity from arrest, detention or any legal process with respect to words spoken or written and acts done by them in the performance of their official functions;

(2) The same facilities with respect to currency or exchange restrictions as are accorded to comparable categories of the staffs of diplomatic missions;

(3) The same immunities and facilities with respect to their personal baggage as are accorded to comparable categories of the staffs of diplomatic missions;

(4) The same exemption from immigration restrictions, aliens' registration and national service obligations for themselves, their spouses and members of their immediate families residing with them and dependent on them as is accorded to comparable categories of the staffs of diplomatic missions;

(5) The same repatriation facilities in time of international crisis for themselves, their spouses and members of their immediate families residing with them and dependent on them, as are accorded to comparable categories of the staffs of diplomatic missions;

(6) The right to import free of duty their furniture and effects at the time of first arrival to take up their posts in the territory of a Party and, on the termination of their functions there, to re-export such furniture and effects free of duty; furniture and effects so imported shall not be disposed of, by sale or by gift, in such territory except under conditions approved by the Government thereof.

C. Every expert performing a mission for the Organization either at the headquarters of the Organization or in the territory of a Party shall be accorded the following privileges and immunities:

- (1) Immunity from arrest or detention;
- (2) Immunity from legal process in respect to words spoken or written and acts done by him in the performance of his official functions;
- (3) The same exemption from immigration restrictions, aliens' registration and national service obligations as is accorded to comparable categories of the staffs of diplomatic missions;
- (4) Immunities and privileges specified in items (2) and (3) of paragraph B of this Article.

D. Every member of the Organization staff and every expert shall be exempt from taxation on the salaries and emoluments paid to him by the Organization.

E. The Administrator shall keep the Parties currently informed as to each individual to whom any of the foregoing paragraphs of this Article is applicable. A Party shall always be entitled to notification of the name and responsibility of any such individual before his arrival for official duties in the territory of that Party, so that it may have an opportunity to comment to the Administrator upon the proposed assignment of such expert or member of the Organization staff.

F. Privileges and immunities are granted to members of the Organization staff and to experts in the interests of the Organization and not for the personal benefit of the individuals themselves. The Administrator shall have the right and the duty to waive the immunity of any such individual in any case where the immunity would impede the course of justice and can be waived without prejudice to the interests of the Organization. In the case of the Administrator his immunity may be waived by the Commission provided the Commission finds the immunity would impede the course of justice and can be waived without prejudice to the interests of the Organization.

G. The provisions of paragraphs A to D inclusive above shall not require any Party to grant any of the privileges or immunities referred to therein to any person who is its national, except:

(1) Immunity from arrest, detention or any legal process with respect to words spoken or written and acts done by him in the performance of his official functions for the Organization;

(2) Facilities with respect to currency or exchange restrictions so far as necessary for the effective exercise of his functions.

Article 7

Abuses of Privileges

A. The Organization shall at all times cooperate with the appropriate authorities of Parties to facilitate the proper administration of justice, secure the observance of police regulations, and prevent the occurrence of an abuse of the privileges and immunities set out in this Annex.

B. If any Party considers that there has been an abuse of the privilege of residence in its territory or of any other privilege or immunity granted by this Annex, the following procedure shall be adopted:

(1) In the case of an abuse by the Administrator, consultations shall be held between the Party and the Commission to determine the action to be taken.

(2) In the case of an abuse by any individual referred to in paragraphs (1) or (2) of Article 1, the Party which considers that there has been an abuse may, after consultation with the Party whose representative is concerned and in accordance with the diplomatic procedure applicable to diplomatic envoys accredited to the former Party, require the representative to leave its territory.

(3) In the case of an abuse by any individual referred to in paragraphs B and C of Article 6, the Party which considers that there has been an abuse may, after consultation with the Administrator and, in the event of disagreement, with the Commission, require the Administrator to arrange for an immediate replacement.

Article 8

Laissez-Passer

A. Members of the staff of the Organization and experts on missions on behalf of the Organization shall be entitled to use a special laissez-passer procedure modelled on the United Nations laissez-passer procedure, to be evolved by the Administrator pursuant to regulations approved by the Commission.

B. Parties shall recognize and accept the Organization laissez-passer issued to members of the staff of the Organization and to experts on missions on behalf of the Organization as valid travel documents.

C. Members of the staff of the Organization and experts travelling on the Organization laissez-passer on the business of the Organization, shall be granted the same facilities for travel as are accorded to comparable categories of the staffs of diplomatic missions.

Article 9

Interpretation and Supplementary Agreements

A. The provisions of this Annex shall be interpreted in the light of the functions with which the Organization is entrusted by this Treaty and its Annexes.

B. The provisions of this Annex shall in no way limit or prejudice the privileges and immunities which have been, or may hereafter be, accorded to the Organization by a State by reason of the location, in the territory of that State, of the headquarters or other components and agencies of the Organization. The Organization may conclude with any Party or Parties agreements supplementing the provisions of this Annex, so far as that Party or those Parties are concerned.

Annex III

The Preparatory Commission

A. A Preparatory Commission, consisting of one representative from each of the original Parties to this Treaty, shall come into existence on the day after this Treaty shall have been signed by all the original Parties. The Preparatory Commission shall remain in existence until the Control Commission has been elected in accordance with Article 4 of this Treaty.

B. Except as provided in Section E of this Annex, the Preparatory Commission shall take decisions by agreement among the three original Parties, adopt its own rules of procedure, meet as often as necessary and determine its own place of meeting. It shall appoint an executive secretary and such staff as shall be necessary, who shall exercise such powers and perform such duties as the Preparatory Commission may determine.

C. The expenses of the Preparatory Commission may be met by a loan provided by the United Nations or by advances from governments. The repayment of loans shall be included as an item in the budget for the Control Organization's first financial period. The Preparatory Commission shall make the necessary arrangements with the appropriate authorities of the United Nations for repayment of the loan. Advances from governments may be set off against assessments of the governments concerned levied in accordance with the provisions of Article 15.

D. Pending deposit of instruments of ratification of the Treaty by all the original Parties, the Preparatory Commission shall:

1. conduct preliminary technical studies and consultations with regard to the location, installation, and equipping of control posts and other components of the Control Organization, including:

(a) geological and topographic map studies of the geographical areas of the world where control posts are to be located;

(b) consultations with technical representatives of the original Parties for the purpose of adopting standard construction designs for control posts and regional offices and of choosing types of equipment for each of the methods of detection;

(c) studies of the surveys which will be required for selecting sites for control posts and other components;

(d) studies of communication requirements;

(e) consultations with the original Parties for equipping and utilizing their aircraft for routine flights and vessels to be stationed in accordance with the Treaty and its Annexes;

(f) studies of requirements for standard-time transmission and reception to ensure accurate relative time at all control posts and other components of the Control Organization.

2. Draw up detailed requirements and regulations for the staffing of the Organization and invite applications for posts to be filled during the initial operations of the Organization;

3. Draw up requirements and invite applications for the post of Administrator;

4. Recommend the site in Vienna of the permanent headquarters of the Organization; draw up recommendations for the provisions of a headquarters agreement defining the status of the Organization and its rights and relationship with the host country;

5. Draw up detailed plans for the day-to-day technical and administrative operations of the Organization;

6. Draw up for submission to the Conference the budget for the Organization's first financial period and a recommended scale of assessment;

7. In conjunction with the United Nations, initiate the preparation of a draft agreement which would be in accordance with Article 17 of this Treaty;

8. Make arrangements for the convening of the first Conference, to be held not later than six months from the date instruments of ratification have been deposited by all the original Parties.

E. 1. On the day after deposit of instruments of ratification of the Treaty by all the original Parties, or as soon thereafter as possible, the Preparatory Commission shall be enlarged, to consist of one representative from each of the original Parties to this Treaty and one

representative from eight other states, chosen by agreement between the three original Parties from among those states which at that time have deposited instruments of ratification of the Treaty.

2. The Preparatory Commission thus enlarged shall exercise the powers conferred upon the Control Commission by the Treaty, in accordance with the procedures therein specified for the Control Commission. After the Preparatory Commission has been enlarged and pending the appointment of the Administrator, the executive Secretary of the Preparatory Commission shall exercise the powers conferred upon the Administrator by the Treaty.

3. Pending the enlargement of the Preparatory Commission pursuant to paragraph (1) of this Section, the Preparatory Commission shall continue to exercise only those functions listed in Section D of this Annex.

PRIVATE

GEN/DNT/110/Add.1
31 May 1961

ORIGINAL: ENGLISH

CONFERENCE ON THE DISCONTINUANCE OF NUCLEAR WEAPON TESTS

Alternative Texts of Paragraphs 5 and 7
of Draft Article 10 (GEN/DNT/110)
Submitted by the Delegations of the United Kingdom
and the United States at the
313th meeting of the Conference

.....

5. A. The number of on-site inspections which may be carried out annually in territory under the jurisdiction or control of each of the original Parties, pursuant to paragraph 2 of this Article, shall be between twelve and twenty, in each annual period as set forth in paragraph 8 of this Article, depending upon the number of underground events of seismic magnitude of 4.75 or above occurring in the territory of the original Party, located by the System in accordance with paragraph 2 of Article 8 of Annex I. If the number of such events occurring within one year is one hundred or more, the number of on-site inspections which may be carried out during that year shall be twenty. If the number of such events occurring within the year is sixty or less, the number of on-site inspections which may be carried out during that year shall be twelve. If the number of such events occurring within the year is less than one hundred but greater than sixty, the number of on-site inspections which may be carried out during that year shall be twenty per cent of the number of such seismic events. If the number of on-site inspections calculated in accordance with this sub-paragraph includes a fraction, that fraction shall be disregarded.

B. If any portion of the certified area lies in territory under the jurisdiction or control of an original Party, the event, for the purpose of determining in accordance with sub-paragraph 5 A the number of on-site inspections which may be carried out in territory under the jurisdiction or control of that original Party, shall be deemed to have occurred in territory under its jurisdiction or control.

.....

.....
7. The number of on-site inspections for each Party shall be reviewed by the Commission within three years after the Treaty enters into force and annually thereafter. Each such review shall take full account of:

A. Practical experience in the operation of the System and of measures taken to maintain or improve its effectiveness;

B. Any criteria for the identification of seismic events eligible for on-site inspection which may be established; and

C. Any amendments to paragraph 2 of Article 1 of this Treaty. In the light of such review, the Commission, with the concurring votes of the original Parties, may fix revised numbers.

.....

PRIVATE

GEN/DNT/110/Add.2

30 August 1961

ORIGINAL: ENGLISH

CONFERENCE ON THE DISCONTINUANCE OF NUCLEAR WEAPON TESTS

Addendum to Article 6 of the
Draft Treaty on the Discontinuance of Nuclear Weapon Tests (GEN/DNT/110)

Submitted jointly by the Delegations of the United Kingdom and the United States
at the 338th meeting of the Conference

Add the following as sub-paragraph E of paragraph 2

E. The Administrator or the First Deputy Administrator shall be subject to removal from office by the Commission if, as a result of a failure on his part to comply with the requirements of paragraph 1 or 2 of Article 9 of this Treaty or for any other reason, the Commission decides that it no longer has confidence in him. Any such decision, and the exercise of the power of removal, shall require the concurring votes of seven members of the Commission."

PRIVATE

GEN/DNT/11C/Add.3
30 August 1961

ORIGINAL: ENGLISH

CONFERENCE ON THE DISCONTINUANCE OF NUCLEAR WEAPON TESTS

Revised sub-paragraph (viii) and (ix), paragraph 3 C of Article 9 of the
Draft Treaty on the Discontinuance of Nuclear Weapon Tests (GEN/DNT/110)

Submitted jointly by the Delegations of the United Kingdom and the United States
at the 338th meeting of the Conference

.....

(viii) The scientific and technical staff of an on-site inspection group shall be composed of technically qualified personnel who are not nationals of the country exercising jurisdiction or control over the territory in which the event under investigation may have occurred. If the country exercising jurisdiction or control over such territory is an original party or is associated with an original party, the scientific and technical staff of the inspection group shall be composed of nationals of countries other than such an original party or states associated with it. The party exercising jurisdiction or control over such territory may designate one or more observers to accompany the inspection group.

(ix) At least one-half of the scientific and technical staff of an on-site inspection group despatched to conduct an inspection on territory under the jurisdiction or control of the USSR or countries associated with it, including the leader of the group, shall be nationals of the United States of America or the United Kingdom or countries associated with either or both of them. At least one-half of the scientific and technical staff of an on-site inspection group despatched to conduct an inspection on territory under the jurisdiction or control of the United States of America or the United Kingdom or countries associated with either or both of them, including the leader of the group, shall be nationals of the USSR or countries associated with it.

.....

CONFERENCE OF THE EIGHTEEN-NATION COMMITTEE
ON DISARMAMENT

Private
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UNION OF SOVIET SOCIALIST REPUBLICS

Statement by the Soviet Government dated 27 November 1961
in connexion with the resumption of negotiations on the
discontinuance of nuclear weapon tests

and

text of a draft agreement on the discontinuance of
nuclear and thermo-nuclear weapon tests*

* Also issued as document Gen/DNT.122 on 11 December 1961

Statement by the Soviet Government in connexion with the
resumption of negotiations on the discontinuance of
nuclear weapon tests

The Soviet Government is firmly and consistently upholding the cause of general and complete disarmament. This problem has been placed before the peoples of our planet by the whole course of historical development. In our time, when States have at their disposal monstrous means of destruction and annihilation, concern about the life and welfare of present and future generations is inextricably bound up with the struggle for general and complete disarmament. There is now no other way out for humanity but to throw the whole war machine on to the scrapheap and create a world without armies and armaments. Otherwise the devastating tornado of nuclear missile warfare will overtake the peoples of the world, and then in a matter of minutes, not only will individual cities and inhabited places disappear from the face of the earth, but also entire countries may be laid waste.

The 22nd Congress of the Communist Party of the Soviet Union, after analysing the present international situation in all its aspects, confirmed with the utmost conviction that the preservation of peace in our time is a practical and feasible task. The true and sure path to this goal lies through the realization of general and complete disarmament under effective international control. The Soviet Union believes in the force of ideas, and not in the force of weapons. It is precisely for this reason that the Soviet Government proposes that all armaments, conventional and thermo-nuclear, be thrown into the deepest part of the ocean.

There can be no doubt that if the matter had depended only on the Soviet Union the problem of disarmament would have been solved long ago: armies would have been disbanded, stockpiles of arms eliminated and their production stopped. But it is obvious that the Soviet Government cannot solve this problem on its own, in isolation from the actual international situation, when the aggressive NATO bloc is feverishly increasing its armed forces, improving its armaments and openly threatening us with war. In these circumstances the Soviet Government could not and cannot ignore its own security interests and those of all peace-loving States.

The Soviet Union is compelled to seek a solution of the disarmament problem through agreement with the Western Powers, who in fact, unfortunately, still have no desire for this. The Soviet Union believes, however, that this state of affairs cannot go on for ever. Sooner or later the Western Powers, if they are not just bent on self destruction, will be forced to agree to general and complete disarmament.

The Soviet Government notes with satisfaction that the idea of general and complete disarmament, put forward by N.S. Khrushchev at the fourteenth session of the General Assembly of the United Nations, enjoys the widest support throughout the world, even though the Western Powers are evading the conclusion of an appropriate agreement. A certain hopeful element is the submission by the Soviet Union and the United States of America of a Joint Statement of Agreed Principles for Disarmament Negotiations for consideration at the present session. The Soviet Government assumes that the present session of the General Assembly will, as may be hoped, adopt on the basis of this Statement a resolution on the resumption of negotiations on the whole of the questions relating to general and complete disarmament and the establishment of a body within which these negotiations will be conducted.

Agreement on general and complete disarmament will also remove the difficulties regarding the establishment of a system of international control. The Soviet Government has repeatedly stated that it is prepared to accept any control proposed by the Western Powers, if they will agree to general and complete disarmament.

In the conditions when there will be neither armaments nor armies, States will have no grounds for fear that control may be used for espionage and intelligence purposes. In a completely disarmed world, control will become a means of verification alone, and will be really effective and comprehensive.

With the achievement of general and complete disarmament, the question of the discontinuance of nuclear weapon tests will be solved automatically, since nuclear weapons themselves will have been destroyed and, consequently, States will have no need for testing and, indeed, nothing to test.

The Soviet Government is convinced that precisely this path ensures the most reliable solution of the question of the discontinuance of nuclear weapon tests for all time.

The Soviet Government, in steadfastly striving to achieve the primary aim, namely, general and complete disarmament, considers that the utmost use must be made of all means and opportunities that would facilitate the achievement of this aim. Proceeding precisely from this premise, it has agreed to the resumption of negotiations on the discontinuance of nuclear weapon tests, and has sent its representative to Geneva with instructions to try once again to reach agreement on this question with the representatives of the Western Powers.

The Soviet Government has given careful study to the question of resuming negotiations at Geneva and, above all, to the means of making them succeed. Do the peoples need yet another fruitless conference? They have a right to expect and justly demand concrete and positive results.

It may be asked whether there is a way out of the situation that has arisen. Yes, there is. The Soviet Government has reached the conclusion that a new approach to the question of the discontinuance of nuclear weapon tests is now necessary, one which would eliminate the difficulties and obstacles which have hindered agreement in the past.

The whole experience of the three-year negotiations at Geneva shows that they could not fail to reach a deadlock because our partners were trying to secure for themselves unilateral advantages to the detriment of the security interests of the other side. This in the end blocked a solution of the question of the discontinuance of nuclear tests. On such a completely discredited basis it is, of course, impossible to achieve the discontinuance of nuclear tests, especially now when the Member States of the NATO bloc are going at full steam along the path of military preparations and threatening to reply to the conclusion of a German peace treaty by resort to war.

The question arises whether it is still possible in the situation which has come about to solve the problem of the discontinuance of nuclear tests so as to take a practical step towards the achievement of the main task -- general and complete disarmament.

Yes, it is possible.

With this end in view, the Soviet Government submits for examination by the Governments of the Western Powers the following proposal: to conclude immediately an appropriate agreement on the discontinuance of nuclear tests in the atmosphere, under water and in outer space, that is, in these environments where the implementation of control is not fraught with any serious technical difficulties.

The fulfilment of these obligations could be reciprocally verified with success and sufficient reliability by the already existing national technical systems. It is well known that national systems of detection have hitherto successfully coped with their tasks and that in practice no nuclear test, whether carried out by the Soviet Union, the United States, the United Kingdom or France, has remained unrecorded or undetected by them.

The President of the United States, Mr. J. Kennedy, and the Prime Minister of the United Kingdom, Mr. H. MacMillan, spoke of this practical possibility of exercising control in their joint statement of 3 September 1961, in which, as is well known, they proposed the prohibition of nuclear tests in the atmosphere while relying "on existing means of detection", which, in their opinion, are completely adequate and do not need any additional international machinery. This approach proposed by the leading statesmen of the United States and the United Kingdom could be extended also to nuclear weapon tests under water and in outer space, since the possibilities of control over such tests are also not limited in any way from the technical point of view and could certainly be realized by the already existing national systems of detection. Moreover, the whole world would also keep a vigilant watch on the observance of an agreement of the Powers not to conduct nuclear tests, and that, too, would be a very important restraining factor.

In regard to underground nuclear weapon tests, the Soviet Government is of the opinion that States should undertake not to conduct such tests until agreement is reached on a system of control over underground explosions as a constituent part of an international system of control over the implementation of a programme of general and complete disarmament.

The method proposed by the Soviet Union for the solution of the question of the discontinuance of nuclear tests would make it possible, without delay, to save mankind from all nuclear explosions and at the same time it would not place any State in a position of advantage, nor would it cause any detriment to the safeguarding of the national security of States. Such an approach would completely dispel all the suspicions that have legitimately been aroused in connexion with the wide opportunities for using the envisaged control system for intelligence purposes.

It goes without saying that an agreement by all nuclear States not to conduct any kind of nuclear tests while the negotiations are going on would contribute to the success of the negotiations. The Soviet Government, although it has carried out considerably fewer nuclear weapon tests than the United States, the United Kingdom and France, is nevertheless prepared to give such an undertaking, if the other States do likewise.

The Soviet Government also considers that the time has come to include France in the negotiations on the discontinuance of nuclear weapon tests. It is time to put an end to this double game of the Western Powers, in which some members of NATO negotiate on the prohibition of testing while others with the tacit approval of their allies continue to explode and develop nuclear bombs, thereby reinforcing the military potential of the NATO bloc.

Obviously, if any of the Western Powers, including France, start to carry out nuclear tests, then the Soviet Union will again be confronted with the necessity of drawing the appropriate conclusions.

Wishing to guide into a practical channel the negotiations that are about to begin in Geneva, the Soviet Government has prepared a draft agreement on the discontinuance of nuclear and thermonuclear weapons tests, which it submits for consideration by the Western Powers.

The Soviet Government expresses its confidence that the proposals it is introducing provide a practical opportunity for the prompt achievement of agreement on the discontinuance of nuclear weapon tests and will help to create a favourable atmosphere for the solution of the problem of general and complete disarmament, the relaxation of international tension, and the strengthening of peace.

Draft Agreement on the Discontinuance of Nuclear and Thermo-Nuclear Weapons Tests

The Governments of the Union of Soviet Socialist Republics, the United States of America, the United Kingdom of Great Britain and Northern Ireland and the French Republic,

Proclaiming as their principal aim the speediest possible achievement of an agreement on general and complete disarmament which would abolish for all time the threat of an outbreak of war, put an end to the armaments race and eliminate the incentive to the production and testing of all kinds of weapons, including nuclear and thermonuclear weapons,

Believing that the renunciation by States of the testing of nuclear and thermonuclear weapons would facilitate the achievement of agreement on general and complete disarmament,

Have for these purposes agreed as follows:

Article 1

The States Parties to this Agreement solemnly undertake not to conduct tests of any kind of nuclear or thermonuclear weapons in the atmosphere, in outer space or under water.

Article 2

For the purpose of exercising mutual supervision of compliance with the undertaking contained in Article 1 of this Agreement, the States Parties to this Agreement shall use their national systems of detecting nuclear and thermonuclear explosions.

Article 3

The States Parties to this Agreement undertake not to conduct any underground tests of nuclear weapons until they have agreed together on a system of control over such tests as a constituent part of an international system of control over compliance with an agreement on general and complete disarmament.

Article 4

This Agreement shall enter into force immediately upon its signature by the Governments of the Union of Soviet Socialist Republics, the United States of America, the United Kingdom of Great Britain and Northern Ireland, and the French Republic, and shall be open for adherence to it by all States.

CONFERENCE OF THE EIGHTEEN-NATION COMMITTEE
ON DISARMAMENT

Private
EJDC/58
27 August 1962
Original: ENGLISH

THE UNITED KINGDOM AND THE UNITED STATES OF AMERICA

Draft treaty banning nuclear weapon
tests in all environments

PRELIMBLE

The Governments of the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, and the United States of America, Desirous of ending permanently all nuclear weapon test explosions, Have agreed as follows:

ARTICLE I

OBLIGATIONS TO DISCONTINUE

Each of the Parties to this Treaty undertakes, subject to the provisions of this Treaty:

- a. to prohibit and prevent the carrying out of nuclear weapon test explosions at any place under its jurisdiction or control; and
- b. to refrain from causing, encouraging, or in any way participating in, the carrying out of nuclear weapon test explosions anywhere.

ARTICLE II

ESTABLISHMENT OF THE
INTERNATIONAL SCIENTIFIC COMMISSION

1. The carrying out of the obligations assumed in Articles I and II of this Treaty shall be verified by an International Scientific Commission, hereinafter referred to as the "Commission." The Commission shall include an International Staff, hereinafter referred to as the "Staff", and a Verification System, hereinafter referred to as the "System".

2. Each of the Parties undertakes to co-operate promptly and fully in the establishment and effective organization of the Commission. Each of the Parties also undertakes to co-operate promptly and fully in carrying out the measures of verification set forth in this Treaty and in any agreements which the Parties may conclude with the Commission.

ARTICLE III
FUNCTIONS OF THE
INTERNATIONAL SCIENTIFIC COMMISSION

1. The Commission shall have general responsibility for the collection of data on, and the reporting of, all events which could be suspected of being nuclear weapon test explosions, and for making positive identification of the nature and origin of such events wherever possible.

2. The Commission shall maintain supervision of all elements of the System in order to ensure that such elements function in an integrated manner. For this purpose the Commission shall establish and monitor adherence to standards for the operation, calibration and co-ordination of all elements of the System.

3. The Commission may consult with the Parties concerning the nature of any unidentified event which could be suspected of being a nuclear weapon test explosion and, on the basis of available data, may issue to all Parties a report concerning the nature and origin of any event reported to it by the Staff.

4. The Commission, by majority vote including the concurring votes of the permanent members, shall approve the total amount of its annual budget.

5. The Commission shall arrange for observers to be permanently stationed at, and to make periodic visits to, elements of the System in order to ensure that established procedures for the rapid, co-ordinated and reliable collection of data are being followed.

6. The Commission may enter into an agreement with any State or authority to aid in carrying out the provisions of this Treaty.

7. The Commission shall establish such laboratories and other facilities as it deems necessary for the carrying out of the tasks assigned to it under this Treaty.

8. The Commission, by majority vote including the concurring votes of the permanent members, shall appoint an Executive Officer to assist it in carrying out its functions.

9. The Commission shall conduct, and shall facilitate the participation of members of the Staff in, programmes of basic scientific research to improve the capability of the Commission to perform its functions under the present Treaty and to ensure the use of the most efficient and up-to-date methods of verification of the obligations undertaken by the Parties to this Treaty.

10. The permanent members of the Commission shall arrange for a conference of Parties to the Treaty to be held when, in the opinion of the permanent members, a sufficient number of States have become Parties to it, in order to hold the elections referred to in paragraph 1b of Article IV. Such conference shall be held, in any event, when _____ number of States, including the permanent members, have become Parties.

11. Approximately every three years thereafter, the Commission shall invite the Parties to a conference in order to hold subsequent elections to the Commission.

12. The Commission may arrange for a conference, at any time it deems appropriate, in order to discuss matters pertaining to the Treaty.

ARTICLE IV

ORGANIZATION AND PROCEDURES OF THE INTERNATIONAL SCIENTIFIC COMMISSION

1. The Commission shall be composed of fifteen members. They shall be selected as follows:

- a. The Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, and the United States of America, shall be permanent members.
- b. Twelve other members shall be elected by majority vote of the Parties present and voting in the conference described in paragraphs 10 and 11 of Article III, of which
 - (i) three shall be from among Parties nominated by the Union of Soviet Socialist Republics;
 - (ii) two shall be from among Parties nominated jointly by the United Kingdom of Great Britain and Northern Ireland and the United States of America;
 - (iii) seven shall be from among Parties nominated jointly by the permanent members of the Commission on as wide a geographical basis as possible.
- c. To the extent that any nominations called for in paragraph 1b of this Article are not made, the Parties to the Treaty shall elect, at the conferences described in paragraphs 10 and 11 of Article III, the remaining members of the Commission from among all of the Parties.

2. The members elected to the first Commission shall serve for three years from their election. Regular elections shall be held triennially thereafter, and those members elected to the Commission shall serve until replaced or re-elected at the next triennial election.

3. Each member of the Commission shall have one vote. All decisions, unless otherwise specified in this Treaty, shall be taken by a simple majority of the members present and voting.

4. Any Party to the Treaty which is not a member of the Commission may participate, without vote, in the discussion of any question brought before the Commission whenever the latter considers that the interests of that Party are specially affected.

5. The Commission shall meet at such times as it may determine, or within twenty-four hours at the request of any member.

6. The permanent members shall carry out the functions of the Commission until it has been established pursuant to paragraph 1 of this Article. In doing so, the permanent members shall act by unanimous agreement. They shall co-operate in encouraging other States to become Parties and they shall take prompt action to nominate Parties, as provided in paragraph 1b of this Article, for the purpose of ensuring selection of membership in the Commission at the earliest possible date.

7. The headquarters of the Commission shall be located at _____.

ARTICLE V

FUNCTIONS OF THE INTERNATIONAL STAFF

1. The Staff shall assist the Commission in carrying out its functions.

2. The Staff shall supervise the collection of data by all elements of the System and shall provide the observers who are to be stationed at and make visits to elements of the System for the purposes specified in paragraph 5 of Article III.

3. The Staff shall provide the personnel for the manning of such international elements of the System as may be established by the Commission.

4. The Staff shall analyse data collected by the System in accordance with such standards as are set forth in this Treaty and as may be set forth by the Commission, and shall forward to the Commission reports on all such data. Such data and reports shall be available for the inspection of any Party upon request.

5. The System shall, in accordance with procedures and standards prescribed by the Commission, collect and report to the Staff, within 24 hours after detection of any event which could be suspected of being a nuclear weapon test explosion, all data received relating to the detection, location and identification of the event. Thereafter, additional data, if any, relating to the event shall be reported to the Staff as it becomes available.

6. The Staff shall provide technical instruction for personnel operating elements of the System.

ARTICLE VI

ORGANIZATION OF THE INTERNATIONAL STAFF

1. The Executive Officer shall be responsible to the Commission and, under its supervision, shall carry out its policy directives. His appointment shall extend for a period of four years. The Executive Officer shall be subject to removal from office by the Commission if, as a result of failure on his part to comply with the directives of the Commission or for any other reason, the Commission decides that it no longer has confidence in him. Any such decision, and the exercise of the power of removal, shall require the concurring votes of eleven members of the Commission.

2. Subject to regulations approved by the Commission the Executive Officer shall recruit, organize and oversee the functioning of the Staff.

3. The Staff shall include such qualified scientific, technical and other personnel as may be required to fulfil its functions, and paramount consideration shall be given to obtaining officials of the highest standards, efficiency, technical competence and integrity. Subject to this principle, the Executive Officer shall also give consideration to the selection of personnel who are nationals of States which have participated in, or intend to participate in, the establishment of elements of the System.

4. The Executive Officer shall also be guided by the considerations that the permanent Staff shall be kept to the minimum necessary to perform its assigned tasks and that personnel should be obtained on as wide a geographical basis as possible.

5. In the performance of their duties, the Executive Officer and the Staff shall not seek or receive instructions from any government or from any other authority external to the Commission. Each Party undertakes to respect the exclusively international character of the responsibilities of the Executive Officer and the Staff and not to seek to influence them in the discharge of their responsibilities.

ARTICLE VII
ORGANIZATION OF THE VERIFICATION SYSTEM

1. The System shall consist of the integrated elements described in the Annex on Verification, together with such additions as the Commission deems desirable. It shall be designed to ensure the rapid and reliable collection and reporting of data. It shall include the following classes of stations:

- a. Stations to be constructed at sites listed in the Verification Annex. Each such station shall be maintained and manned, in accordance with specifications established by the Commission, by nationals of the State in whose territory such station is located. The construction of and equipment for each such station shall be paid for by the Commission and the personnel for each such station shall be trained by the Commission. All Parties in whose territories such stations are located agree to accept observers at such stations for the purposes specified in paragraph 5 of Article III.
- b. Existing stations to be provided, maintained and manned by individual Parties as requested by and in agreement with the Commission.
- c. Stations to be constructed, maintained and manned by the Commission in agreement with individual Parties if the Commission deems such stations desirable.
- d. Such detection instruments in outer space, in the atmosphere, and on and beneath the surface of the earth (including the waters thereof) as the Commission may deem desirable. These may be provided, maintained and manned by the Commission or by particular Parties, as the Commission may determine.

2. The Parties to this Treaty agree to co-operate in the establishment (including the provision of suitable sites), operation, expansion, calibration and standardization of all elements of the System and in providing the Commission with such assistance, equipment or data as may be useful to the Commission in performing its functions.

3. The Parties to this Treaty agree to ensure that within six months from the entry into force of this Treaty, all existing stations referred to in paragraph 1 b of this Article will commence operation in accordance with the

provisions of this Treaty. They also agree to ensure that within twelve months the stations referred to in paragraph 1a of this Article will be constructed and commence operation in accordance with such provisions.

4. In accordance with standards set forth by the Commission, stations referred to in paragraph 1a of this Article shall maintain continuous operation of such equipment as the Commission deems desirable for each station including the following: apparatus for the collection of radioactive debris and for the recording of fluorescence of the upper atmosphere, visible light, cosmic noise absorption, telluric currents, resonance scattering of sunlight, acoustic waves, seismic waves and electromagnetic signals. Stations on islands or near the shorelines of oceans shall, in addition, maintain continuous operation of apparatus for the recording of hydroacoustic waves as deemed desirable by the Commission. Stations aboard ships shall include and continuously operate equipment for the recording of hydroacoustic waves, fluorescence of the upper atmosphere and visible light as deemed desirable by the Commission.

ARTICLE VIII

ON-SITE INSPECTION

1. The Executive Officer shall certify immediately by public notice at the Headquarters of the Staff whenever he determines that a seismic event has been located pursuant to paragraph 2 of this Article and not eliminated from consideration pursuant to paragraph 3. The Executive Officer shall make every effort to make this certification within seventy-two hours after the location of the event.

2. A seismic event shall be considered located when seismic signals, whose frequencies, amplitudes, durations, and velocities are consistent with those of waves from earthquakes or explosions, are recorded at a sufficient number of stations to establish the approximate time and position of the event. This requires at least four clearly measurable arrival times of identifiable phases which are mutually consistent to within plus or minus three seconds. These four mutually consistent arrival times must include P-wave arrival times at three different detection stations.

3. A located seismic event shall not be suspected of being a nuclear weapon test explosion if it fulfils one or more of the following criteria:

- a. Its depth of focus is established as below sixty kilometers;
- b. Its epicentral location is established in the deep ocean, and the event is unaccompanied by a hydroacoustical signal consistent with the seismic epicenter and origin time;

- c. It is established to be a foreshock or aftershock of a seismic event of at least magnitude six which has clearly been identified as an earthquake by the criteria in sub-paragraphs a and b of this paragraph. For this purpose a foreshock must occur as part of a sequence of earthquakes less than forty-eight hours before the main shock, and an after-shock must occur as part of a sequence of earthquakes less than a week after the main shock, and their epicenters must have been located within ten kilometers of the epicenter of the main shock.

4. Data provided by stations in territory under the jurisdiction or control of a State in which the event may be located may not be used to render it ineligible for inspection but may be used to assist in establishing its eligibility for inspection.

5. When a seismic event has been certified pursuant to paragraph 1 of this Article, the Executive Officer shall designate an area lying within the circumference of a circle, the radius of which is ___ kilometers, and the center of which is the location of the epicenter of that event.

6. On-site inspection of areas designated by the Executive Officer pursuant to paragraph 5 of this article shall be carried out pursuant to this Article:

- a. on territory under the jurisdiction or control of the United States of America or the United Kingdom of Great Britain and Northern Ireland, if requested by the Union of Soviet Socialist Republics;
- b. on territory under the jurisdiction or control of the Union of Soviet Socialist Republics, if requested by the United States of America or the United Kingdom of Great Britain and Northern Ireland;
- c. on territory under the jurisdiction or control of any other Party, if directed by the Commission.

7. Any Party having jurisdiction or control over territory on which an on-site inspection is requested or directed pursuant to paragraph 6 of this Article shall make the necessary arrangements to facilitate the prompt on-site inspection of the area designated pursuant to paragraph 5 of this Article.

8. The maximum number of inspections which may be requested in territory under the jurisdiction or control of a permanent member of the Commission shall be _____ in each annual period. The maximum number of inspections which may be directed in territory under the jurisdiction or control of a Party not a permanent member of the Commission shall be three in each annual period, or such higher number as the Commission, after consultation with the Party, may determine by a two-thirds majority of those present and voting.

9. For territory under the jurisdiction or control of permanent members of the Commission, not more than _____ percent of the annual number of inspections provided for in paragraph 8 of this Article shall be carried out each year in the aseismic area of that territory described in the Annex on Verification.

10. The on-site inspections, when requested or directed in accordance with paragraph 6 of this Article, shall be carried out by teams organized by the Executive Officer. In forming the teams, the Executive Officer shall ensure the adequate representation of scientific and technical skills and shall avoid composition which would result in inspection of territory under the jurisdiction or control of a State by any nationals of that State. The leader of a team shall be appointed by the Executive Officer from among its members.

11. Each of the Parties undertakes to give inspection teams, despatched pursuant to this Article, immediate and undisputed access to the area in which an on-site inspection is to be conducted, to refrain from interference with any operation of an inspection team and to give such teams the assistance they may require in the performance of their mission.

ARTICLE IX

EXPLOSIONS FOR PEACEFUL PURPOSES

The explosion of any nuclear device for peaceful purposes may be conducted only:

- (1) if unanimously agreed to by the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland and the United States of America; or
- (2) if carried out in accordance with an Annex hereto.

ARTICLE X

RELATIONSHIPS WITH OTHER INTERNATIONAL ORGANIZATIONS

1. The Commission is authorized to enter into agreements establishing appropriate relationships between the Commission and the United Nations or any of its specialized agencies.
2. The Commission may make appropriate arrangements for the Commission, Staff and System to become a part of, or to enter into an appropriate relationship with, an international disarmament organization, or any international organization which may in the future be established among any of the Parties to this Treaty to supervise disarmament or related measures.

ARTICLE XI

PERIODIC REVIEW

1. One year after the coming into force of this Treaty, and annually thereafter, the Commission shall review the Treaty and the operations of the Staff and System in order to:
 - a. Evaluate their effectiveness for verifying compliance with the obligations undertaken in Articles I and IX;
 - b. Recommend any improvements in the System which the Commission deems desirable, particularly with respect to the identification of nuclear explosions;
 - c. Recommend any changes in the quotas of on-site inspections which the Commission deems desirable.
2. The Commission shall:
 - a. Communicate the results of such review to all Parties to this Treaty;
 - b. Consider any improvements proposed by any Party to this Treaty and decide upon the adoption of those which do not require amendments to this Treaty; and
 - c. Vote upon any amendments to this Treaty proposed by any Party as a result of such review in accordance with the provisions of Article XVI.

ARTICLE XII

FINANCE

1. The annual budget shall be drawn up by the Executive Officer of the Staff and approved by the Commission in accordance with paragraph 4 of Article III.

2. Parties to this Treaty shall contribute to the expenses of the annual budget in accordance with the following scale:

- a. _____ per cent contributed by the permanent members as follows:
 - (i) _____ per cent of the annual budget by the Union of Soviet Socialist Republics;
 - (ii) _____ per cent of the annual budget by the United Kingdom of Great Britain and Northern Ireland;
 - (iii) _____ per cent of the annual budget by the United States of America.
- b. _____ per cent contributed by the remaining members of the Commission in equal shares.

ARTICLE XIII

WITHDRAWAL

1. If any Party to this Treaty determines:

- a. that the obligations contained in Articles I or IX of this Treaty have not been fulfilled,
- b. that any other obligations under the Treaty, including those relating to arrangements for on-site inspections, have not been fulfilled and that such non-fulfilment might jeopardize the determining Party's national security,
- c. that nuclear explosions have been conducted by a State not a Party to this Treaty under circumstances which might jeopardize the determining Party's national security, or
- d. that nuclear explosions have occurred under circumstances in which it is not possible to identify the State conducting the explosions and that such explosions, if conducted by a Party to this Treaty, would violate the Treaty or, if not conducted by a Party, might jeopardize the determining Party's national security,

it may submit to the Depositary Government a request for the convening of a conference to which all the Parties to this Treaty shall be invited, and the Depositary Government shall convene such a conference as soon after its receipt of the request as may be practicable. The request from the determining Party to the Depositary Government shall be accompanied by a statement of the evidence on which the determination was based.

2. The conference shall, taking into account the statement of evidence provided by the determining Party and any other relevant information, examine the facts and assess the significance of the situation.

3. After the conclusion of the conference or after the expiration of a period of sixty days from the date of the receipt of the request for the conference by the Depositary Government, whichever is the earlier, any Party to this Treaty, may, if it deems withdrawal from the Treaty necessary for its national security, give notice of withdrawal to the Depositary Government. Such withdrawal shall take effect on the date specified in the notice, which shall in no event be earlier than sixty days from receipt of the notice by the Depositary Government. The notice shall be accompanied by a detailed statement of the reasons for the withdrawal.

ARTICLE XIV

PRIVILEGES AND IMMUNITIES

The privileges and immunities which the Commission, the Staff, and the representatives of Parties shall be granted by the Parties, and the legal capacity which the Commission shall enjoy in the territory of each of the Parties, shall be set forth in Annex _____ of this Treaty.

ARTICLE XV

SIGNATURE, RATIFICATION, ACCESSION, ENTRY INTO FORCE AND REGISTRATION

1. This Treaty shall be open until _____ to all States for signature. Any State which does not sign this Treaty may accede to it at any time.

2. This Treaty shall be subject to ratification by signatory States. Instruments of ratification and instruments of accession shall be deposited with the Government of _____, which is hereby designated the Depositary Government.

3. This Treaty shall enter into force on _____ for States which have deposited instruments of ratification or accession on or before that date, provided that the ratifications deposited include those of the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland and the United States of America. If ratifications by all three of the States specified in the preceding sentence are not deposited on or before _____, this Treaty shall enter into force on the date on which ratifications by all of them have been deposited.

4. Instruments of ratification or accession deposited subsequent to the entry into force of this Treaty shall become binding on the date of deposit.

5. The Depositary Government shall promptly inform all signatory and acceding States of the date of each signature, the date of deposit of each ratification of and accession to this Treaty, the date of its entry into force, and the date of receipt of any requests for conferences, or any notices of withdrawal pursuant to Article XIII.

6. This Treaty shall be registered by the Depositary Government pursuant to article 102 of the Charter of the United Nations.

ARTICLE XVI

AMENDMENTS

Any amendment to this Treaty must be approved by a vote of two-thirds of the Commission including the concurring votes of the permanent members, and shall enter into force for all Parties upon the deposit of ratifications by two-thirds of the Parties, including ratification by the permanent members of the Commission.

ARTICLE XVII

ANNEXES

The Annexes to the present Treaty constitute an integral part thereof, and any signature, ratification of, or accession to this Treaty shall apply to both the Treaty and the Annexes. The phrase "this Treaty" shall include all annexes hereto.

ARTICLE XVIII

AUTHENTIC TEXTS

This Treaty, done in the English and Russian languages, each version being equally authentic, shall be deposited in the archives of the Depositary Government, which shall transmit certified copies thereof to the Governments of the signatory and acceding States.

ENDC/58
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IN WITNESS WHEREOF the undersigned, duly authorized, have signed this
Treaty,

DONE at _____, this _____ day of
_____, one thousand nine hundred and sixty-two.

CONFERENCE OF THE EIGHTEEN-NATION COMMITTEE
ON DISARMAMENT

PRIVATE
ENDC/59
27 August 1962
Original: ENGLISH

UNITED KINGDOM AND UNITED STATES OF AMERICA

Draft Treaty

Banning Nuclear Weapon Tests
in the
Atmosphere, Outer Space, and Underwater

PREAMBLE

The Governments of the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, and the United States of America, hereinafter referred to as the "original Parties",

Desirous of bringing about the permanent discontinuance of all nuclear weapon test explosions, and determined to continue negotiations to this end,

Confident that immediate discontinuance of nuclear weapon test explosions in the atmosphere, in outer space, and in the oceans will facilitate progress toward the early agreement providing for the permanent and verified discontinuance of nuclear weapon test explosions in all environments,

Have agreed as follows:

ARTICLE I

OBBLIGATIONS

1. Each of the Parties to this Treaty undertakes to prohibit and prevent the carrying out of any nuclear weapon test explosion at any place under its jurisdiction or control:
 - (a) in the atmosphere, above the atmosphere, or in territorial or high seas; or
 - (b) in any other environment if such explosion causes radioactive debris to be present outside the territorial limits of the State under whose jurisdiction or control such explosion is conducted.

2. Each of the Parties to this Treaty undertakes furthermore to refrain from causing, encouraging, or in any way participating in, the carrying out of any nuclear weapon test explosion anywhere which would take place in any of the environments described, or have the effect prescribed, in paragraph 1 of this Article.

ARTICLE II

EXPLOSIONS FOR PEACEFUL PURPOSES

The explosion of any nuclear device for peaceful purposes which would take place in any of the environments described, or would have the effect prescribed, in paragraph 1 of Article I may be conducted only:

- (1) if unanimously agreed to by the original Parties; or
- (2) if carried out in accordance with an Annex hereto, which Annex shall constitute an integral part of this Treaty.

ARTICLE III

WITHDRAWAL

1. If any Party to this Treaty determines
 - (a) that any other Party has not fulfilled its obligations under this Treaty,
 - (b) that nuclear explosions have been conducted by a State not a Party to this Treaty under circumstances which might jeopardize the determining Party's national security, or
 - (c) that nuclear explosions have occurred under circumstances in which it is not possible to identify the State conducting the explosions and that such explosions, if conducted by a Party to this Treaty, would violate the Treaty or, if not conducted by a Party, might jeopardize the determining Party's national security,

it may submit to the Depository Government a request for the convening of a conference to which all the Parties to this Treaty shall be invited, and the Depository Government shall convene such a conference as soon after its receipt of the request as may be practicable. The request from the determining Party to the Depository Government shall be accompanied by a statement of the evidence on which the determination was based.

2. The conference shall, taking into account the statement of evidence provided by the determining Party, and any other relevant information, examine the facts and assess the significance of the situation.

3. After the conclusion of the conference or after the expiration of a period of sixty days from the date of the receipt of the request for the conference by the Depositary Government, whichever is the earlier, any Party to this Treaty may, if it deems withdrawal from the Treaty necessary for its national security, give notice of such withdrawal to the Depositary Government. Such withdrawal shall take effect on the date specified in the notice, which shall in no event be earlier than sixty days from receipt of the notice by the Depositary Government. The notice shall be accompanied by a detailed statement of the reasons for the withdrawal.

ARTICLE IV

AMENDMENTS

1. Any Party may propose amendments to this Treaty. The text of any proposed amendment shall be submitted to the Depositary Government which shall circulate it to all Parties. Thereafter, if requested to do so by one-third or more of the Parties, the Depositary Government shall convene a conference, to which it shall invite all the Parties, to consider such amendment.

2. Any amendment to this Treaty or its Annex must be approved by a vote of two-thirds of the Parties, including all of the original Parties to this Treaty. It shall enter into force for all Parties upon the deposit of ratifications by two-thirds of the Parties, including ratification by the original Parties.

ARTICLE V

SIGNATURE, RATIFICATION, ACCESSION, ENTRY INTO FORCE AND REGISTRATION

1. This Treaty shall be open until _____ to all States for signature. Any State which does not sign this Treaty may accede to it at any time.

2. This Treaty shall be subject to ratification by signatory States. Instruments of ratification and instruments of accession shall be deposited with the Government of _____, which is hereby designated the Depositary Government.

3. This Treaty shall enter into force on _____ for States which have deposited instruments of ratification or accession on or before that date, provided that the ratifications deposited include those of the original Parties. If ratifications by all three original Parties are not deposited on or before _____, this Treaty shall enter into force on the date on which ratifications by all of them have been deposited.

4. Instruments of ratification or accession deposited subsequent to the entry into force of this Treaty shall become binding on the date of deposit.

5. The Depositary Government shall promptly inform all signatory and acceding States of the date of each signature, the date of deposit of each ratification of and accession to this Treaty, the date of its entry into force, and the date of receipt of any requests for conferences or notices of withdrawals.

6. This Treaty shall be registered by the Depositary Government pursuant to Article 102 of the Charter of the United Nations.

ARTICLE VI

AUTHENTIC TEXTS

This Treaty, of which the English and Russian texts are equally authentic, shall be deposited in the archives of the Depositary Government. Duly certified copies of this Treaty shall be transmitted by the Depositary Government to the Governments of the signatory and acceding States.

IN WITNESS WHEREOF the undersigned, duly authorized, have signed this Treaty.

DONE at _____, this _____ day
of _____, one thousand nine hundred and sixty-two.

CONFERENCE OF THE EIGHTEEN-NATION COMMITTEE ENDC/100/Rev.1^{*/}
ON DISARMAMENT 30 July 1963

ENGLISH

Original: ENGLISH/RUSSIAN

UNION OF SOVIET SOCIALIST REPUBLICS;
UNITED KINGDOM, AND UNITED STATES OF AMERICA

Treaty banning nuclear weapon tests
in the atmosphere, in outer space,
and under water

The Governments of the United States of America, the United Kingdom of Great Britain and Northern Ireland, and the Union of Soviet Socialist Republics, hereinafter referred to as the "Original Parties",

Proclaiming as their principal aim the speediest possible achievement of an agreement on general and complete disarmament under strict international control in accordance with the objectives of the United Nations, which would put an end to the armaments race and eliminate the incentive to the production and testing of all kinds of weapons, including nuclear weapons,

Seeking to achieve the discontinuance of all test explosions of nuclear weapons for all time, determined to continue negotiations to this end, and desiring to put an end to the contamination of man's environment by radioactive substances,

Have agreed as follows:

Article I

1. Each of the Parties to this Treaty undertakes to prohibit, to prevent, and not to carry out any nuclear weapon test explosion, or any other nuclear explosion, at any place under its jurisdiction or control:

(a) in the atmosphere; beyond its limits, including outer space; or underwater, including territorial waters or high seas; or

(b) in any other environment if such explosion causes radioactive debris to be present outside the territorial limits of the State under whose jurisdiction or control such explosion is conducted. It is

*/ Issued in English, French and Spanish

understood in this connection that the provisions of this subparagraph are without prejudice to the conclusion of a treaty resulting in the permanent banning of all nuclear test explosions, including all such explosions underground, the conclusions of which, as the Parties have stated in the Preamble to this Treaty, they seek to achieve.

2. Each of the Parties to this Treaty undertakes furthermore to refrain from causing, encouraging, or in any way participating in, the carrying out of any nuclear weapon test explosion, or any other nuclear explosion, anywhere which would take place in any of the environments described, or have the effect referred to, in paragraph 1 of this Article.

Article II

1. Any Party may propose amendments to this Treaty. The text of any proposed amendment shall be submitted to the Depositary Governments which shall circulate it to all Parties to this Treaty. Thereafter, if requested to do so by one-third or more of the Parties, the Depositary Governments shall convene a conference, to which they shall invite all the Parties, to consider such amendment.

2. Any amendment to this Treaty must be approved by a majority of the votes of all the Parties to this Treaty, including the votes of all of the Original Parties. The amendment shall enter into force for all Parties upon the deposit of instruments of ratification by a majority of all the Parties, including the instruments of ratification of all of the Original Parties.

Article III

1. This Treaty shall be open to all States for signature. Any State which does not sign this Treaty before its entry into force in accordance with paragraph 3 of this article may accede to it at any time.

2. This Treaty shall be subject to ratification by signatory States. Instruments of ratification and instruments of accession shall be deposited with the Governments of the Original Parties -- the United States of America, the United Kingdom of Great Britain and Northern Ireland, and the Union of Soviet Socialist Republics -- which are hereby designated the Depositary Governments.

3. This Treaty shall enter into force after its ratification by all the Original Parties and the deposit of their instruments of ratification.

4. For States whose instruments of ratification or accession are deposited subsequent to the entry into force of this Treaty, it shall enter into force on the date of the deposit of their instruments of ratification or accession.

5. The Depositary Governments 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 to this Treaty, the date of its entry into force, and the date of receipt of any requests for conferences or other notices.

6. This Treaty shall be registered by the Depositary Governments pursuant to Article 102 of the Charter of the United Nations.

Article IV

This Treaty shall be of unlimited duration.

Each Party shall in exercising its national sovereignty have the right to withdraw from the Treaty if it decides that extraordinary events, related to the subject matter of this Treaty, have jeopardized the supreme interests of its country. It shall give notice of such withdrawal to all other Parties to the Treaty three months in advance.

Article V

This Treaty, of which the English and Russian texts are equally authentic, shall be deposited in the archives of the Depositary Governments. Duly certified copies of this Treaty shall be transmitted by the Depositary Governments to the Governments of the signatory and acceding States.

IN WITNESS WHEREOF the undersigned, duly authorized, have signed this Treaty.

DONE in triplicate at the city of Moscow the day of ,
one thousand nine hundred and sixty-three.

* * * * *

CCD/431 USSR and USA Treaty between the United 16.7.74
States of America and the
Union of Soviet Socialist
Republics on the Limitation
of Underground Nuclear
Weapon Tests

Not Reproduced: See CD/1066

CCD/496
and
Corr.1

USSR and USA

Treaty between the United
States of America and the
Union of Soviet Socialist
Republics on Underground
Nuclear Explosions for
Peaceful Purposes

23.6.76

Not Reproduced: See CD/1067

UNION OF SOVIET SOCIALIST REPUBLICS

Draft treaty on the complete and general
prohibition of nuclear weapon tests

Union of Soviet Socialist Republics. Draft treaty on the
complete and general prohibition of nuclear weapon tests

The States Parties to this Treaty,

Proclaiming their intention to bring about, as speedily as possible, the cessation of the nuclear arms race, the adoption of effective measures towards nuclear disarmament and the conclusion of an agreement on general and complete disarmament under strict and effective international control,

Taking into account the appeals by the General Assembly of the United Nations to put an end to nuclear weapon tests in all environments,

Noting that the prohibition of all nuclear weapon tests would be in the interests of strengthening peace and slowing the arms race and would be a contribution to the process of international détente,

Reaffirming that the potential benefits of any peaceful application of nuclear explosions should be available to nuclear as well as non-nuclear States in conformity with the provisions of the Treaty on the Non-Proliferation of Nuclear Weapons and of the present Treaty,

Noting the great positive significance of the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and under Water, signed in Moscow on 5 August 1963,

Stressing the importance of strict compliance with the above-mentioned Treaty up to the time of the entry into force of this Treaty,

Seeking to achieve the permanent cessation of all test explosions of nuclear weapons by all States,

Having agreed on the following:

Article I

1. Each State Party to this Treaty undertakes to prohibit, to prevent and to refrain from carrying out any test explosions of nuclear weapons anywhere under its jurisdiction or control in all environments - in the atmosphere, in outer space, under water and underground.

2. Each State Party to this Treaty undertakes to refrain from encouraging, inciting, or in any way participating in the carrying out of nuclear explosions prohibited by paragraph 1 of this article.

Article II

1. Control over compliance with this Treaty shall be conducted by the States Parties, through their own national technical means of control, in accordance with the generally recognized rules of international law.

2. In order to promote the objectives of and ensure compliance with the provisions of this Treaty, the Parties to the Treaty shall co-operate in an international exchange of seismic data.

3. In case a State Party to this Treaty has doubts regarding the nature of a seismic event that occurred in the territory of another State Party to this Treaty, it has the right to raise the question of carrying out an on-site inspection in order to ascertain the true nature of that event. The State Party to the Treaty that raised this question must cite appropriate grounds in support of the necessity of carrying out the inspection. The State Party to the Treaty which is the object of doubts regarding its compliance with the Treaty, recognizing the importance of this question, may take a favourable position regarding the carrying out of an inspection in its territory, provided it finds the grounds convincing, or it may take another decision. Such an inspection shall be carried out according to rules established by the inviting State Party.

4. In order to promote the objectives of and to ensure compliance with the provisions of this Treaty, the Parties shall, when necessary, consult one another, make inquiries and receive appropriate information in connexion with such inquiries.

5. Any State Party to this Treaty which ascertains that any other State Party is acting in violation of obligations deriving from the provisions of the Treaty may lodge a complaint with the Security Council of the United Nations. Such a complaint must contain all possible evidence confirming its validity and a request for its consideration by the Security Council. The Council shall inform the States Parties to the Treaty of the results of its consideration.

Article III

1. The provisions of article I shall not apply to any underground nuclear explosions conducted by nuclear-weapon States for peaceful purposes on the territory under their jurisdiction and in compliance with the agreements under which, in accordance with article V of the Treaty of the Non-Proliferation of Nuclear Weapons, non-nuclear-weapon States are to benefit from any peaceful applications of nuclear explosions.

2. The explosions referred to in paragraph 1 of this article shall be conducted as follows:

(a) In the case of non-nuclear-weapon States, in conformity with the provisions of article V of the Treaty on the Non-Proliferation of Nuclear Weapons;

(b) In the case of nuclear-weapon States, in conformity with a procedure to be established under a special agreement concerning which the nuclear-weapon States will conduct negotiations with due regard for the recommendations of the International Atomic Energy Agency on the subject and which will be concluded as speedily as possible.

Article IV

The provisions of this Treaty shall not affect obligations assumed by the States Parties to the Treaty under other international agreements.

Article V

1. Any Party to this Treaty may propose amendments to the Treaty. The text of any proposed amendment shall be submitted to the depositary Governments, which shall circulate it to all Parties to the Treaty. Thereupon, if requested to do so by one third or more of the Parties to the Treaty, the depositary Governments shall convene a conference, to which they shall invite all the Parties to the Treaty, for the purpose of considering such amendment.

2. Any amendment to this Treaty must be approved by a majority of the votes of all the Parties to the Treaty, including the votes of all nuclear-weapon States Parties to the Treaty. The amendment shall enter into force for each Party depositing its instrument of ratification of the amendment upon the deposit of such instruments of ratification by a majority of all the Parties, including the nuclear-weapon States Parties to the Treaty. Thereafter, it shall enter into force for any other Party upon the deposit of its instrument of ratification of the amendment.

Article VI

1. This Treaty shall be open to all States for signature. Any State which does not sign the Treaty before its entry into force in accordance with paragraph 3 of this article may accede to it at any time.
2. This Treaty shall be subject to ratification by signatory States. Instruments of ratification and accession shall be deposited with the Governments of ..., which are hereby designated the depositary Governments.
3. This Treaty shall enter into force upon the deposit of the instruments of ratification by ... Governments, including the Governments of all nuclear-weapon States.
4. For States whose instruments of ratification or accession are deposited subsequent to the entry into force of this Treaty, the Treaty shall enter into force on the date of the deposit of their instruments of ratification or accession.
5. The depositary Governments 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, the date of the entry into force of this Treaty, and the date of receipt of any requests for convening a conference of Parties to the Treaty or of other notifications.
6. This Treaty shall be registered by the depositary Governments pursuant to Article 102 of the Charter of the United Nations.

Article VII

1. This Treaty shall be of unlimited duration.
2. Each State Party shall, in the exercise of its national sovereignty, have the right to withdraw from the Treaty if it decides that extraordinary circumstances, connected with the subject-matter of this Treaty, have jeopardized its supreme interests. It shall give three months' notice of such withdrawal to all other Parties to the Treaty and to the Security Council of the United Nations. Such notice shall include a statement of the extraordinary circumstances which it regards as having jeopardized its supreme interests.

Article VIII

This Treaty, the Chinese, English, French, Russian and Spanish texts of which are equally authentic, shall be deposited in the archives of the depositary Governments. Duly certified copies of this Treaty shall be transmitted by the depositary Governments to the Governments of the signatory and acceding States.

IN WITNESS WHEREOF the undersigned, duly authorized for the purpose, have signed this Treaty.

DONE in ... copies, at ... on the ... day of ...,

SWEDEN

Draft Treaty Banning Nuclear Weapon Test Explosions in all Environments

The States Parties to this Treaty,
Declaring their intention to achieve at the earliest possible date the cessation of the nuclear arms race and to undertake effective measures towards nuclear disarmament,
Urging the co-operation of all States in the attainment of this objective,
Have agreed as follows:

ARTICLE I

1. Each Party to this Treaty undertakes not to carry out any nuclear weapon test explosion, or any explosion of other nuclear devices, in any environment.
2. Each Party to this Treaty undertakes, furthermore, to refrain from causing, encouraging, assisting or in any way participating in the carrying out of any nuclear weapon test explosion or of any explosion of other nuclear devices.
3. Each Party to this Treaty undertakes to take any measures it considers necessary in accordance with its constitutional process to prohibit and prevent any activity in violation of the provisions of the Treaty anywhere under its jurisdiction or control.

(Optional provision for a transitional arrangement - if needed - another alternative is found in Article VII, para.4.)

-
4. As regards the period ending on the provisions of Protocol I annexed to this Treaty shall be applicable to the Governments of the United States of America and the Union of Soviet Socialist Republics.
-

ARTICLE II

The provisions of Article I of this Treaty do not apply to those nuclear explosions for peaceful purposes which might be carried out under international supervision and control and which take place in conformity with Protocol II annexed to this Treaty.

ARTICLE III

1. Each Party to this Treaty undertakes to co-operate in good faith to ensure the full observance and implementation of this Treaty.
2. For the purpose set forth in this Article, the Parties to the Treaty shall engage the services of a consultative committee. The depositary shall either on his own initiative or within one month of the receipt of a request from any Party convene the committee. Any Party may appoint a representative to this committee whose functions and rules of procedures are set out in Protocol III annexed to this Treaty.

ARTICLE IV

1. Each Party to this Treaty undertakes to co-operate in good faith in an effective international exchange of seismological data in order to facilitate the detection, identification and location of underground events. The arrangements for technical supervision of the compliance with this Treaty are laid down in Protocol IV annexed to this Treaty.
2. Each Party to this Treaty undertakes to consult one another and to co-operate in good faith for the clarification of all events pertaining to the subject-matter of this Treaty. In accordance with this provision, each Party to the Treaty is entitled:
 - (a) to make inquiries and to receive information as a result of such inquiries,
 - (b) to invite inspection on its territory or territory under its jurisdiction, such inspection to be carried out in the manner prescribed by the inviting Party,

(c) to make proposals, if it deems the information available or made available to it under all or any of the preceding provisions inadequate, as to suitable methods of clarification.

3. If after consultation and co-operation pursuant to this Article there remains a serious question concerning the fulfilment of the obligations assumed under this Treaty, a Party may, in accordance with the provisions of the Charter of the United Nations, bring the matter to the attention of the Security Council and to other Parties to the Treaty.

ARTICLE V

The protocols annexed to this Treaty constitute an integral part of the Treaty.

ARTICLE VI

Any Party may propose amendments to this Treaty. Amendments shall enter into force for each Party accepting the amendments upon their acceptance by a majority of the Parties to the Treaty and thereafter for each remaining Party on the date of acceptance by it.

ARTICLE VII

Five years after the entry into force of this Treaty, a conference of Parties to the Treaty shall be held in Geneva, Switzerland, in order to review the operation of this Treaty with a view to assuring that the purposes and the provisions of the Treaty are being realized. The review conference shall determine in accordance with the views of a majority of those Parties attending whether and when additional review conferences shall be convened.

ARTICLE VIII

1. This Treaty shall be open to all States for signature. Any State which does not sign the Treaty before its entry into force in accordance with paragraph 3 of this Article may accede to it at any time.

2. This Treaty shall be subject to ratification by Signatory States. Instruments of ratification and instruments of accession shall be deposited with the Secretary-General of the United Nations, who shall be the Depositary of this Treaty.

3. This Treaty shall enter into force upon the deposit with the Depositary of instruments of ratification by x Governments including the Governments of the United States of America and the Union of Soviet Socialist Republics.

(Optional provision for a transitional arrangement - if needed - another alternative is found in Article I, para.4.)

4. Pending the entry into force of this Treaty the Governments of the United States of America and the Union of Soviet Socialist Republics undertake to apply the provisions of Protocol I as from the date on which this Treaty has been signed by these two Governments.

(following subparagraphs would be renumbered accordingly if the above provision were to be inserted)

4. For those States whose instruments of ratification or accession are deposited after the entry into force of this Treaty it shall enter into force on the date of the deposit of their instruments of ratification or accession.

5. 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 of accession and the date of the entry into force of this Treaty and of any amendments thereto, any notice of withdrawal, as well as of the receipt of other notices. He shall also inform the Security Council of the United Nations of any notice of withdrawal.

6. This Treaty shall be registered by the Depositary in accordance with Article 102 of the Charter of the United Nations.

ARTICLE IX

This Treaty shall be of unlimited duration. Each Party shall in exercising its national sovereignty have the right to withdraw from the Treaty, if it decides that extraordinary events, related to the subject-matter of this Treaty, have jeopardized the supreme interests of its country. It shall give notice of such withdrawal to the Depositary three months in advance. Such notice shall include a statement of the extraordinary events it regards as having jeopardized its supreme interests.

ARTICLE X

If this Treaty has not been adhered to by all nuclear-weapon States x years after its entry into force, each Party shall by giving notice to the Depositary have the right to withdraw from the Treaty with immediate effect.

ARTICLE XI

This Treaty, 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 who shall send certified copies thereof to the Governments of the signatory and acceding States.

In witness whereof, the undersigned, duly authorized thereto, have signed this Treaty.

Done at on

CD/150
30 July 1980

ENGLISH
Original: ENGLISH/RUSSIAN

LETTER DATED 30 JULY 1980 FROM THE PERMANENT REPRESENTATIVES OF
THE UNION OF SOVIET SOCIALIST REPUBLICS, THE UNITED KINGDOM OF
GREAT BRITAIN AND NORTHERN IRELAND AND THE UNITED STATES OF
AMERICA TRANSMITTING A DOCUMENT ENTITLED "TRIPARTITE REPORT TO
THE COMMITTEE ON DISARMAMENT"

We have the honour to transmit the attached document entitled "Tripartite Report to the Committee on Disarmament". We request that it be circulated for the information of the Committee on Disarmament.

(Signed) V.I. Issraelyan
Representative of the
Union of Soviet Socialist
Republics

(Signed) D. Summerhayes
Representative of the
United Kingdom of Great Britain
and Northern Ireland

(Signed) C.C. Flowerree
Representative of the
United States of America

TRIPARTITE REPORT TO THE COMMITTEE ON DISARMAMENT

1. This report on the status of the negotiations between the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland and the United States of America on a treaty prohibiting nuclear weapon test explosions in all environments and its protocol covering nuclear explosions for peaceful purposes has been jointly prepared by the three parties to the negotiations.
2. The three negotiating parties are well aware of the deep and long-standing commitment to the objective of this treaty that has been demonstrated by the Committee on Disarmament and its predecessor bodies. They recognize the strong and legitimate interest of the Committee on Disarmament in their activities, and they have reported to the Committee on Disarmament previously, most recently on 31 July 1979. They welcome the opportunity to do so again, just as they welcome the continued support and encouragement that their negotiations derive from the interest of the Committee on Disarmament.
3. Since the last report to the Committee on Disarmament, the three delegations have completed two rounds of negotiations. The negotiations reconvened on 16 July 1980.
4. The negotiating parties are seeking a treaty that for decades has been given one of the highest priorities in the field of arms limitation, and the Soviet Union, the United Kingdom and the United States continue to attach great importance to it. The desire to achieve an early agreement, which is so widely shared by the international community, has been repeatedly expressed at the highest level of all three governments.
5. Global interest in the cessation of nuclear weapon tests by all States has been recorded by a succession of resolutions of the United Nations General Assembly and by the Final Document of the Special Session on Disarmament of the United Nations General Assembly. It has been stated in the preambles to a number of international arms limitation treaties now in force, and its significance will again be underlined in the forthcoming second Review Conference of the Treaty on the Non-Proliferation of Nuclear Weapons.
6. The objectives which the negotiating parties seek to achieve as a result of this treaty are important to all mankind. Specifically, they seek to attain a treaty which will make a major contribution to the shared objectives of constraining the nuclear arms race, curbing the spread of nuclear weapons, and strengthening international peace and security.
7. Given the importance of these objectives, it is understandable that the international community has repeatedly called for the earliest possible conclusion of the treaty. At the same time, it is important to note that this treaty is, in many respects, a difficult one to negotiate. Many of the issues are novel, sensitive and intricate. The treaty directly affects vital national security concerns and the process of negotiation requires considerable and painstaking work.
8. In spite of these challenges, however, the Soviet Union, the United Kingdom and the United States have made considerable progress in negotiating the treaty.

9. The negotiating parties have agreed that the treaty will require each party to prohibit, prevent and not to carry out any nuclear weapon test explosion at any place under its jurisdiction or control in any environment; and to refrain from causing, encouraging or in any way participating in the carrying out of any nuclear weapon test explosion anywhere.

10. The negotiating parties have agreed that the treaty will be accompanied by a protocol on nuclear explosions for peaceful purposes, which will be an integral part of the treaty. The protocol will take into account the provisions of Article V of the Treaty on the Non-Proliferation of Nuclear Weapons. In the protocol, the parties will establish a moratorium on nuclear explosions for peaceful purposes and accordingly will refrain from causing, encouraging, permitting or in any way participating in, the carrying out of such explosions until arrangements for conducting them are worked out which would be consistent with the treaty being negotiated, the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water and the Treaty on the Non-Proliferation of Nuclear Weapons. Without delay after entry into force of the treaty, the parties will keep under consideration the subject of arrangements for conducting nuclear explosions for peaceful purposes, including the aspect of precluding military benefits. Such arrangements, which could take the form of a special agreement or agreements, would be made effective by appropriate amendment to the protocol.

11. To ensure that the treaty does not detract from previous arms limitation agreements, there will be a provision stating that the treaty does not affect obligations compatible with it that have been assumed by parties under other international agreements. Such other agreements include the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water and the Treaty on the Non-Proliferation of Nuclear Weapons. The three negotiating parties have agreed that the treaty will provide procedures for amendment, and that any amendments will require the approval of a majority of all parties, which majority shall include all parties that are permanent members of the Security Council of the United Nations. They have also agreed that, as in other arms limitation agreements, there will be provision for withdrawal from the treaty on the grounds of supreme national interests. They have also agreed that the treaty should enter into force upon ratification by twenty signatory governments, including those of the Soviet Union, the United Kingdom and the United States.

12. The parties are considering formulations relating to the duration of the treaty. They envisage that a conference will be held at an appropriate time to review the operation of the treaty. Decisions at the conference will require a majority of the parties to the treaty, which majority shall include all parties that are permanent members of the Security Council of the United Nations.

13. The negotiating parties, recognizing the importance of verification, have agreed that a variety of verification measures should be provided to enhance confidence that all parties to the treaty are in strict compliance with it. Such measures in the treaty itself, and the additional measures under negotiation to facilitate verification of compliance with the treaty, must first be agreed in principle, and then drafted in detail, which is of course a laborious process. It must be done with care because the implementation of these measures will have important impact not only on ensuring compliance with the treaty, but also on political relations among its parties.

14. It has been agreed that the parties will use national technical means of verification at their disposal in a manner consistent with generally recognized principles of international law to verify compliance with the treaty, and that each party will undertake not to interfere with such means of verification.
15. It has long been recognized that co-operative seismic monitoring measures can make an important contribution to verifying compliance with the treaty. The Committee on Disarmament and its predecessors have played a leading role in developing such measures. On the basis of the work done in the past few years under those auspices, the negotiating parties have agreed to provisions establishing an International Exchange of Seismic Data. Each treaty party will have the right to participate in this exchange, to contribute data from designated seismic stations on its territory, and to receive all the seismic data made available through the International Exchange. Seismic data will be transmitted through the Global Telecommunications System of the World Meteorological Organization or through other agreed communications channels. International seismic data centres will be established in agreed locations, taking into account the desirability of appropriate geographical distribution.
16. A Committee of Experts will be established to consider questions related to the International Seismic Data Exchange and all treaty parties will be entitled to appoint representatives to participate in the work of the Committee. The Committee of Experts will be responsible for developing detailed arrangements for establishing and operating the International Exchange, drawing on the recommendations of the Ad Hoc Group of Scientific Experts, which was established under the auspices of the Conference of the Committee on Disarmament and has continued its work under the Committee on Disarmament. Arrangements for establishing and operating the International Exchange will include the development of standards for the technical and operational characteristics of participating seismic stations and international seismic data centres, for the form in which data are transmitted to the centres, and for the form and manner in which the centres make seismic data available to the participants and respond to their requests for additional seismic data regarding specified seismic events.
17. In addition to its role in setting up the International Exchange, the Committee of Experts will have ongoing responsibility for facilitating the implementation of the International Exchange, for reviewing its operation and considering improvements to it, and for considering technological developments that have a bearing on its operation. The Committee will serve as a forum in which treaty parties may exchange technical information and co-operate in promoting the effectiveness of the International Exchange. The Committee of Experts will hold its first meeting not later than 90 days after the entry into force of the treaty and will meet thereafter as it determines.
18. The negotiating parties have agreed to other co-operative measures as well. There will be provision in the treaty for direct consultations, and for the exchange of inquiries and responses among treaty parties in order to resolve questions that may arise concerning treaty compliance. If a party has questions regarding an event on the territory of any other party, it may request an on-site inspection for the purpose of ascertaining whether or not the event was a nuclear explosion. The requesting party shall state the reasons for its request, including appropriate evidence. The party which receives the request, understanding

the importance of ensuring confidence among parties that treaty obligations are being fulfilled, shall state whether or not it is prepared to agree to an inspection. If the party which receives the request is not prepared to agree to an inspection on its territory, it shall provide the reasons for its decision. Tripartite agreement on these general conditions with regard to on-site inspections represents an important achievement by the negotiating parties in resolving issues regarding verification of compliance with the treaty.

19. The three negotiating parties believe that the verification measures being negotiated — particularly the provisions regarding the International Exchange of Seismic Data, the Committee of Experts, and on-site inspections — break significant new ground in international arms limitation efforts and will give all treaty parties the opportunity to participate in a substantial and constructive way in the process of verifying compliance with the treaty.

20. The treaty will also contain a provision permitting any two or more treaty parties, because of special concerns or circumstances, to agree by mutual consent upon additional measures to facilitate verification of compliance with the treaty. The three negotiating parties have agreed that it is necessary to develop such additional measures for themselves in connexion with the treaty under negotiation.

21. The additional measures to facilitate verification of compliance with the treaty, while paralleling those of the treaty itself, will specify in greater detail the procedures under which on-site inspection would be conducted, and will incorporate a list of the rights and functions of the personnel carrying out the inspection. They will also contain a description of the role to be played by the host party during an inspection.

22. In addition, the three parties are negotiating an exchange of supplemental seismic data. This would involve the installation and use by the three parties of high-quality national seismic stations of agreed characteristics.

23. Despite significant accomplishments, there are important areas where substantial work is still to be done.

24. The three negotiating parties have demonstrated their strong political commitment to completion of this treaty by achieving solutions to problems that for many years made a treaty difficult to attain. Most notable in this regard are the agreements concerning the prohibition of any nuclear weapon test explosion in any environment, the moratorium on nuclear explosions for peaceful purposes, the general conditions with regard to on-site inspections, and a number of important seismic verification issues.

25. The negotiating parties are mindful of the great value for all mankind that the prohibition of nuclear weapon test explosions in all environments will have, and they are conscious of the important responsibility placed upon them to find solutions to the remaining problems. The three negotiating parties have come far in their pursuit of a sound treaty and continue to believe that their trilateral negotiations offer the best way forward. They are determined to exert their best efforts and necessary will and persistence to bring the negotiations to an early and successful conclusion.

COMMITTEE ON DISARMAMENT

CD/346
15 February 1983
ENGLISH
Original: RUSSIAN

LETTER DATED 14 FEBRUARY 1983 FROM THE REPRESENTATIVE OF
THE UNION OF SOVIET SOCIALIST REPUBLICS TO THE COMMITTEE
ON DISARMAMENT TRANSMITTING THE "BASIC PROVISIONS OF A
TREATY ON THE COMPLETE AND GENERAL PROHIBITION OF
NUCLEAR-WEAPON TESTS"

I am sending you herewith the "Basic provisions of a treaty on the complete and general prohibition of nuclear-weapon tests".

I should be grateful if you would circulate this text as an official document of the Committee on Disarmament.

(Signed)

V.L. Issraelyan
Representative of the USSR
to the Committee on Disarmament

Basic provisions of a treaty on the complete and
general prohibition of nuclear-weapon tests

The objective of averting nuclear war towards which the efforts of the Union of Soviet Socialist Republics and of other peace-loving States are directed, makes it imperative to take inter alia, such measures, as would impede the development of ever newer types and systems of nuclear weapons.

One effective measure of this kind would be the immediate cessation and prohibition of nuclear-weapon tests by all States and in all environments, which would at the same time promote the non-proliferation of nuclear weapons.

Motivated by these goals, the Soviet Union is submitting to States Members of the United Nations, for their consideration, the following basic provisions of a treaty on the complete and general prohibition of nuclear-weapon tests.

A. Scope of the prohibition

1. Each State Party to this Treaty shall undertake to prohibit, to prevent, and not to carry out any nuclear-weapon test explosions at any place under its jurisdiction or control, in any environment - in the atmosphere, beyond its limits, including outer space, under water or underground.
2. No party shall cause, encourage or in any way participate in the conduct of any nuclear-weapon test explosions anywhere.
3. A moratorium shall be declared on nuclear explosions for peaceful purposes, under which the parties to this Treaty shall refrain from causing, encouraging, or in any way participating in the carrying out of such explosions until an appropriate procedure has been elaborated.
4. Promptly after the entry into force of this Treaty, consideration shall be given to the question of the procedure for the carrying out of nuclear explosions for peaceful purposes. Such a procedure, to be agreed upon, may take the form of a special agreement or agreements constituting an integral part of this Treaty.

B. Ensuring compliance with the Treaty

1. General provisions on verification

5. The States parties to this Treaty shall base their activities in verifying compliance with the provisions of this Treaty on a combination of national and international measures.

6. For the purpose of verifying compliance by other States parties with the provisions of this Treaty, any State party shall have the right to use the national technical means of verification which it has at its disposal, in a manner consistent with the generally recognized principles of international law.

7. States parties which possess national technical means of verification may, where necessary, place the information which they obtained through those means, and which is important for the purposes of this Treaty, at the disposal of other parties.

8. The States parties to this Treaty undertake not to interfere with the national technical means of verification of other States parties.

9. International measures of verification shall be carried out through international procedures within the framework of the United Nations in accordance with its Charter, and through consultations and co-operation between States parties, as well as through the services of the Committee of Experts of States parties to this Treaty.

2. Consultations and co-operation

10. The States parties to this Treaty shall, where necessary, consult each other, make inquiries and provide information in connection with such inquiries with a view to resolving any questions that may arise with regard to compliance with the provisions of this Treaty.

11. The States parties shall exchange, bilaterally or through the Committee of Experts, information which they consider necessary to provide assurance of compliance with the obligations assumed under this Treaty.

12. Consultations and co-operation may also be undertaken through appropriate international procedures within the framework of the United Nations and in accordance with its Charter.

13. In the interests of increasing the effectiveness of the Treaty, the States parties to the Treaty shall agree in an appropriate way on the prevention of any actions aimed at deliberately falsifying the actual state of affairs with regard to compliance with this Treaty by other States parties.

3. International exchange of seismic data

14. For the purposes of better assuring compliance with obligations under this Treaty, each party may participate in an international exchange of seismic data. Such international exchange shall be carried out in accordance with the following guidelines.

4. Guidelines for the international exchange of seismic data

15. Each State party to this Treaty shall have the right to participate in the international exchange of seismic data, to contribute data from seismic stations on its territory which it designates for participation in the international exchange, and to receive all the seismic data made available through the international exchange.
16. Each party that decides to participate in the international exchange shall designate an appropriate body through which it will communicate with the international exchange.
17. Seismic data shall be transmitted through the Global Telecommunication System of the World Meteorological Organization or through any other agreed communication channels.
18. International seismic data centres shall be established at agreed locations, taking into account the desirability of appropriate geographical distribution. These centres shall receive all seismic data contributed to the international exchange by its participants, process seismic data without interpreting the nature of seismic events, make the processed seismic data available to all participants and maintain records of all seismic data contributed by participants and processed by the centre. Each centre shall be under the jurisdiction of the party on whose territory it is located.
19. The Committee of Experts whose establishment is provided for in this Treaty shall in its work, draw upon the recommendations contained in the report of the Ad Hoc Group of Scientific Experts to Consider International Co-operative Measures to Detect and Identify Seismic Events established by the Committee on Disarmament. ^{2/} Such measures include the elaboration of standards for the technical and operational characteristics of participating seismic stations and international seismic data centres; for the form in which data are transmitted to the centres, and for the form and manner in which the centres make seismic data available to participants and respond to their requests for additional seismic data regarding specific seismic events.

5. International Committee of Experts of States parties to the Treaty

20. A Committee of Experts of States parties to this Treaty shall be established to consider questions relating to the international exchange of seismic data. Any State party shall have the right to appoint a representative to this Committee.
21. The Committee, which will function on the basis of consensus, shall hold its first meeting not later than 90 days after the entry into force of this Treaty and shall meet thereafter as necessary.
22. The Committee shall elaborate, in accordance with the Guidelines, detailed arrangements regulating the establishment and operation of the international exchange, it shall facilitate its implementation and co-operation between States parties to enhance the effectiveness of such exchange.
23. The Committee shall facilitate more extensive international consultations and co-operation, the exchange of information and the provision of assistance in verification in the interests of compliance with the provisions of this Treaty.

^{2/} Official Records of the General Assembly, thirty-seventh session, Supplement No. 27 (A/37/27 and Corr.1), sect. III.A. para. 42.

24. Other questions relating to the organization and procedures of the Committee of Experts, its possible subsidiary bodies, their functions, rights, duties and proceedings, its role in promoting international exchange and in on-site inspection, as well as other matters, are to be elaborated.

6. Fact-finding procedure regarding compliance with the Treaty:
on-site inspection

25. Each State party to this Treaty, if it has doubts regarding an event on the territory of another State which may have been a nuclear explosion, may send that party a request for an on-site inspection. The request should state the reasons why it is being made, including relevant seismic and other physical data that could be associated with a possible nuclear explosion, its time and its location.

26. The party which has received the request, being aware of the importance of providing assurance of compliance with the obligations under this Treaty, shall state whether or not it is prepared to agree to an inspection. If the party which has received the request is not prepared to agree to an inspection on its territory, it shall communicate the reasons for its decision to the requesting State and inform the Committee of Experts of them.

27. If the requesting State party is not satisfied with the explanation received and the information provided on a bilateral basis, it may ask the Committee of Experts for additional information and consultation regarding that request and for assistance in ascertaining the facts in the form of scientific and technical expertise.

28. For the purpose of conducting inspection on the territory of States parties which may give their agreement, procedures shall be elaborated for such inspections and the manner in which they are to be conducted, including the list of rights and functions of the inspecting personnel and the definition of the role of the receiving party during the inspection.

29. This Treaty shall also contain a provision enabling any two or more of the States parties to agree, by mutual consent, in view of special interests or special circumstances, on additional measures which would facilitate verification of compliance with this Treaty.

7. Procedure for lodging complaints with the Security Council

30. Any State party which has reason to believe that any other State party has acted or may be acting in violation of the obligations deriving from the provisions of this Treaty shall have the right to lodge a complaint with the Security Council. Such a complaint should include all relevant information, as well as all possible evidence supporting the validity of the complaint.

31. Each State party undertakes to co-operate in the conduct of any investigation which the Security Council may initiate, in accordance with the provisions of the Charter of the United Nations, on the basis of a complaint received by the Security Council. The Security Council shall inform the States parties of the results of the investigation.

32. Each State party to this Treaty undertakes to provide or support assistance, in accordance with the provisions of the Charter of the United Nations, to any State party which requests it, if the Security Council decides that such party has been exposed to danger or is perhaps being exposed to danger as a result of violations by another State party of the obligations assumed under this Treaty.

C. Concluding provisions of the Treaty

33. This Treaty shall be of unlimited duration. It shall enter into force upon the deposit of instruments of ratification by 20 Governments, including the Governments of all States permanent members of the Security Council.

34. However, the States parties may agree that this Treaty should enter into force for an agreed limited period, given the participation of three States permanent members of the Security Council — the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland and the United States of America.

35. Provision should be made for the procedure for the signing and ratification of this Treaty, for the depositary, for accession by States to this Treaty and for amendments.

COMMITTEE ON DISARMAMENT

CD/381*
14 June 1983

Original: ENGLISH

SWEDEN

DRAFT TREATY BANNING ANY NUCLEAR WEAPON TEST EXPLOSION IN ANY ENVIRONMENT

The States Parties to this Treaty,

Declaring their intention to achieve at the earliest possible date the cessation of the nuclear arms race and to undertake effective measures towards nuclear disarmament,

Urging the co-operation of all States in the attainment of this objective,

Have agreed as follows:

Article I

1. Each Party to this Treaty undertakes not to carry out any nuclear weapon test explosion in any environment at any place under its jurisdiction or control.
2. Each Party to this Treaty undertakes, furthermore, to refrain from causing, encouraging, assisting, permitting or in any other way participating in the carrying out of any nuclear weapon test explosion anywhere.
3. Each Party to this Treaty undertakes to take any measures it considers necessary in accordance with its constitutional process to prohibit and prevent any activity in violation of the provisions of the Treaty anywhere under its jurisdiction or control.

Article II

1. Each Party to this Treaty undertakes not to carry out any nuclear explosion for peaceful purposes and accordingly to refrain from causing, encouraging, assisting, permitting or in any other way participating in the carrying out of any such explosion until international arrangements for conducting them are worked out which would be consistent with this Treaty and the obligations of each Party under other relevant international treaties.
2. The Parties undertake to keep under consideration the question of arrangements for conducting nuclear explosions for peaceful purposes on a non-discriminatory basis, including the aspect of precluding military benefits. Such arrangements may take the form of a special agreement or agreements constituting an integral part of this Treaty.

Article III

This Treaty does not affect obligations which have been assumed by Parties under other international agreements, including the Treaty banning nuclear weapon tests in the atmosphere, in outer space and under water.

*Reissued for technical reasons.

Article IV

1. Each Party to this Treaty will use national technical means of verification at its disposal in a manner consistent with generally recognized principles of international law to verify compliance with the Treaty and undertakes not to interfere with such means of verification.

2. Each Party to this Treaty undertakes to co-operate in good faith in an effective international exchange of seismological data in order to facilitate the monitoring of this Treaty.

Each Party to this Treaty undertakes to co-operate in good faith in order to achieve an effective international exchange of data on atmospheric radioactivity and other measures for facilitating the monitoring of this Treaty.

The arrangements for these international co-operative measures, which are laid down in Protocol I annexed to this Treaty, shall be operative at the time of the entry into force of this Treaty.

3. The Parties to this Treaty undertake to consult one another and to co-operate in good faith for the clarification of all events pertaining to the subject matter of this Treaty. In accordance with this provision, each Party to the Treaty is entitled:

(a) to request and receive information from any other Party;

(b) to request an on-site inspection in the territory of any other Party for the purpose of ascertaining whether or not a specified event was a nuclear explosion. The requesting Party shall state the reasons for its request, including available evidence. Recognizing the importance of ensuring confidence among Parties that treaty obligations are being fulfilled, the Party which receives the request shall state whether or not it is prepared to agree to an inspection. If the Party which receives the request does not agree to an inspection in its territory, it shall state the reason for its refusal. Procedures for such inspections and the manner of their conduct, including the rights and functions of the inspecting personnel, are laid down in Protocol II annexed to this Treaty.

4. In order to avoid unfounded accusations or misinterpretations of large non-nuclear explosions the Party conducting such an explosion may invite an inspection at the site of the explosion. The rules and procedures for such inspections are laid down in Protocol II.

5. For the purpose set forth in this article a Consultative Committee shall be established to oversee the implementation of the Treaty and of the international verification arrangements. A Technical Expert Group and a permanent Secretariat shall be established to assist the Consultative Committee. The functions and rules of procedure of the Consultative Committee, the Technical Expert Group and the Secretariat are set out in Protocol III annexed to this Treaty.

Article V

The Protocols annexed to this Treaty constitute an integral part of the Treaty.

Article VI

Any Party may propose amendments to this Treaty. Such proposals shall be submitted to the Depository, who shall, in consultation with States Parties, take appropriate action. Amendments shall enter into force for each Party accepting them upon their acceptance by a majority of the Parties to the Treaty and thereafter for each remaining Party on the date of acceptance by it.

Article VII

Five years after the entry into force of this Treaty, a conference of Parties to the Treaty shall be held in Geneva, Switzerland, in order to review the operation of this Treaty with a view to assuring that the purposes of the preamble and the provisions of the Treaty are being realized. At intervals of five years thereafter, a majority of the Parties to the Treaty may obtain, by submitting a proposal to this effect to the Depository, the convening of further conferences with the same objective of reviewing the operation of the Treaty.

Article VIII

1. This Treaty shall be open to all States for signature. Any State which does not sign the Treaty before its entry into force in accordance with paragraph 3 of this article may accede to it at any time.
2. This Treaty shall be subject to ratification by signatory States. Instruments of ratification and instruments of accession shall be deposited with the Secretary-General of the United Nations, who shall be the Depository of this Treaty.
3. This Treaty shall enter into force upon the deposit with the Depository of instruments of ratification by twenty Governments, including the Governments of the United States of America, the United Kingdom of Great Britain and Northern Ireland and the Union of Soviet Socialist Republics.
4. For those States whose instruments of ratification or accession are deposited after the entry into force of this Treaty it shall enter into force on the date of the deposit of their instruments of ratification or accession.
5. The Depository shall promptly inform all signatory and acceding States of the date of each signature, the date of deposit of each instrument of ratification or of accession and the date of the entry into force of this Treaty and of any amendments thereto, any notice of withdrawal, as well as of the receipt of other notices. He shall also inform the Security Council of the United Nations of any notice of withdrawal.
6. This Treaty shall be registered by the Depository in accordance with Article 102 of the Charter of the United Nations.

Article IX

This Treaty shall be of unlimited duration. Each Party shall in exercising its national sovereignty have the right to withdraw from the Treaty, if it decides that extraordinary events, related to the subject matter of this Treaty, have jeopardized the supreme interests of its country. It shall give notice of such withdrawal to the Depositary three months in advance. Such notice shall include a statement of the extraordinary events it regards as having jeopardized its supreme interests.

Article X

If this Treaty has not been adhered to by all Permanent Members of the United Nations Security Council five years after its entry into force, each Party shall by giving notice to the Depositary have the right to withdraw from the Treaty with immediate effect.

Article XI

This Treaty, 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 who shall send certified copies thereof to the Governments of the signatory and acceding States.

In witness whereof, the undersigned, duly authorized thereto, have signed this Treaty.

Done at on.....

PROTOCOL I

International co-operative measures to facilitate the
verification of a Treaty banning any nuclear weapon
test explosion in any environment

1. Each Party to this Treaty undertakes to co-operate in good faith in an effective international exchange of seismological and other data. The purpose of these international measures is to assist the Parties in the verification of the Treaty by providing additional technical information for their national assessment. These international co-operative measures include designated seismological stations in participating countries and in other territories, efficient systems for the exchange of seismological data, and especially established International Data Centres.

2. Each Party to this Treaty shall have the right to participate in the international exchange of seismological data by contributing data from designated seismological stations and by receiving all the seismological data made available through the international exchange. To ensure that seismological stations having the necessary geographical coverage will be incorporated in the exchange, the States given in table 1 have agreed to provide data from the stations specified in the same table.

Each Party participating in the international data exchange shall provide geographical co-ordinates, geological site description and a description of the instrumentation of each designated station. Any changes in these data shall be immediately reported. Data on designated stations are collected, compiled and regularly reported by the Secretariat of the Consultative Committee.

3. Each Party participating in the international data exchange shall for this purpose designate an appropriate National Body through which it will communicate.

This body shall handle the exchange of seismological data and contacts with International Data Centres, the Consultative Committee and its Secretariat on matters related to the operation of the data exchange.

4. The seismological stations designated for participation in the international exchange shall have the basic equipment as specified in the Operational Manual for Seismological Stations. These stations shall be operated, calibrated and maintained as specified in the same manual. Information on the operation and the calibration of the stations shall regularly be sent to the Secretariat of the Consultative Committee.

5. Seismological data from each designated station shall routinely and regularly be reported through the appropriate National Body. The seismological data to be reported, the reporting format and time schedule are specified in the Operational Manual for Data Exchange. The seismological stations shall, through the appropriate National Body, co-operate with the International Data Centres to clarify any technical question in connection with reported data.

In addition to routinely submitted data each Party participating in the international data exchange shall provide any additional seismological data from its designated stations requested through International Data Centres by any Party to the Treaty. The procedures for making such requests and the format and time schedule for responding are laid down in the Operational Manual for Data Exchange.

6. Seismological data shall be transmitted through the Global Telecommunication System of the World Meteorological Organization, WMO/GTS, or through other agreed communication channels. The detailed procedures for exchanging data are laid down in the Operational Manual on Data Exchange.

7. International Data Centres shall be established at the following locations:

.....

Each Centre shall be under the jurisdiction of the State in whose territory it is located, and the cost of establishing and operating it shall be borne by that State. Easy and free access for representatives from all Parties to the Treaty and for Officers of the Secretariat of the Consultative Committee shall be guaranteed to all facilities of all International Data Centres.

Each International Data Centre shall receive all seismological data contributed to the international exchange by its participants, process these seismological data without interpreting the nature of seismological events, make the processed seismological data available to all participants and maintain all seismological data contributed by participants as well as the results of the processing at the Centres. The procedures to be used at International Data Centres to receive and compile reported data, to conduct necessary computation, to interact with other International Data Centres in the analysis and to transmit the results of the computations to participating States are laid down in the Operational Manual for International Data Centres.

International Data Centres shall also co-ordinate requests for additional seismological data from one Party to another and redistribute data obtained as a result of such requests.

8. In addition to the exchange of seismological data specified in paragraphs 2 - 7 of this Protocol, a similar exchange of data on atmospheric radioactivity shall be established. This exchange shall include equipment for collecting atmospheric radioactivity operated by each contributing State, an exchange of collected data and International Data Centres where data are processed, compiled and redistributed as described in paragraph 7 of this Protocol. The additional rules and procedures needed to establish and operate this exchange, are laid down in an Operational Manual for the Exchange of Atmospheric Radioactivity.

9. International Co-operative Measures described in this Protocol and in the Operational Manuals annexed to it, shall be established and be operative at the time of entry into force of this Treaty.

10. The Consultative Committee and its Secretariat have the task of overseeing the over-all operation of the international data exchange as is set forth in Protocol III.

The Committee, its Technical Expert Group and Secretariat have the responsibility to maintain the efficiency of the exchange by improving and amending the equipment and the operational procedures. The Parties to the Treaty undertake to implement such changes of the data exchange which may be agreed upon.

11. With a view to improving the verification of this Treaty, negotiations on additional international measures such as the exchange of data on atmospheric radioactivity, hydro-acoustic signals in the oceans and infrasound and micro-barographic signals in the atmosphere, shall be undertaken by the Parties to the Treaty. Such additional measures shall as closely as possible be integrated in the co-operative measures specified in this Protocol and an agreement on such additional measures shall be annexed to this Protocol.

TABLE I

(Text to be elaborated.)

PROTOCOL II

Procedures for International On-Site Inspection

1. The Parties to this Treaty undertake to consult one another and to co-operate in good faith for the clarification of all events pertaining to the subject-matter of this Treaty. If any Party sees the need to further clarify any event observed in the territory of another Party to the Treaty it shall seek such clarification through bilateral consultations. These consultations may include the exchange of additional technical information and other measures, such as on-site inspections, which the two Parties concerned may agree upon.

If the event cannot be satisfactorily clarified through such bilateral consultations, the Party seeking further clarification can request an international on-site inspection. Requests for such international on-site inspection shall be made through the Consultative Committee. The requesting Party shall state the reasons for its request, including appropriate technical and other evidence.

The requesting Party shall further specify the area to be inspected. This area must be continuous and not exceed 1,000 km² or a length of 50 km in any direction.

2. If a Party receiving a request agrees to an international on-site inspection of the requested area, or part thereof, the practical arrangements for the inspection shall be worked out by the Secretariat of the Consultative Committee in co-operation with the Party to be inspected. Such arrangements shall be worked out within one month after a Party has agreed to an inspection. The inspection shall be conducted by experts chosen by the Chairman of the Consultative Committee among experts made available for this purpose by the Parties to the Treaty. The experts shall be selected taking into account available expertise and the desire to obtain equitable geographical and political representation. The International Inspection Team shall be headed by an officer from the Secretariat and contain ... additional experts. The International Inspection Team shall further comprise necessary technicians, interpreters and secretaries provided by the Secretariat.

The total number of such support personnel shall not exceed

At all times while the inspecting personnel are in the territory of the Party to be inspected, their persons, property, personal baggage, archives and documents as well as their temporary official and living quarters shall be accorded the same privileges and immunities as provided in Articles 22, 23, 24, 29, 30, 31, 34 and 36 of the Vienna Convention on Diplomatic Relations to the persons, property, personal baggage, archives and documents of diplomatic agents as well as to the premises of diplomatic missions and private residences of diplomatic agents.

Without prejudice to their privileges and immunities it shall be the duty of the inspecting personnel to respect the laws and regulations of the State in whose territory the inspection is to be carried out, in so far as they do not impede in any way whatsoever the proper exercising of the rights and functions provided for by the Treaty and this Protocol.

3. The purpose of an international on-site inspection is purely fact-finding and the International Inspection Team shall not make any assessment as to the nature of the inspected event. The Inspection Team shall present a factual report of the observations made during the inspection. This report shall as far as possible present the consensus view of the participating experts. In case consensus cannot be achieved, the report shall reflect the views of all the participating experts.

The report shall be made available to all Parties to the Treaty through the Consultative Committee.

4. (This paragraph should contain a specification of the techniques to be used and the procedures to be followed when conducting on-site inspections. As these issues have not been properly discussed, there is at present no basis for preparing an appropriate text. To facilitate further discussions some more or less intrusive techniques are presented that might be considered in connection with on-site inspections. More technical data must be collected and compiled on the various inspection techniques and their potential usefulness. Rules and procedures have to be worked out for the conduct of these inspections, for the selection and the acceptance or refusal of more intrusive techniques and for the transportation of people and material.

The following inspection techniques might be useful to consider:

- visual inspection from the air and on the ground including rules and procedures for taking photographs;
- measurement of radioactive radiation in the atmosphere above the area, at ground level and in waters;
- temporary seismological measurements in the area to record possible aftershocks and also events at larger distances to improve the possibilities to interpret the recordings of the event that lead to the inspection;
- seismological reflection measurements, in limited areas, to provide data for detection of possible subsurface activities;
- measurement of temperature anomalies;
- drilling and measurements in boreholes to obtain subsurface data at selected points.)

5. If the Party which receives the request does not agree to the inspection of the requested area or part of it, it shall provide the reasons for its decision.

6. As stated in Article IV, paragraph 4, of this Treaty, a Party conducting a large non-nuclear explosion may invite an inspection at the site of the explosion. An Inspection Team, established as in paragraph 2 of this Protocol and headed by an officer of the Secretariat of the Consultative Committee, containing ... experts, shall be established. The privileges and immunities of members of this Inspection Team shall be the same as specified in paragraph 2 of this Protocol. The Inspection Team shall be present before the explosion takes place and stay until the explosion has been conducted. Only visual observations shall be made. The Inspection Team shall provide a factual report of the observations during the inspection. This report shall be distributed to all Parties to the Treaty.

PROTOCOL III

The Consultative Committee, its functions
and rules of procedures

1. A Consultative Committee shall be established to oversee the over-all functioning of the Treaty and its verification arrangements. The Consultative Committee shall also serve as a forum to discuss and resolve disputes concerning the Treaty and its verification arrangements which might occur between Parties to the Treaty. The Consultative Committee and its subsidiary bodies, the Technical Expert Group and the Secretariat shall be established when the Treaty enters into force.

In performing its duties the Consultative Committee shall:

- oversee the implementation of the Treaty;
- prepare review conferences in accordance with Article VII of this Treaty;
- review the verification arrangements of the Treaty on the basis of material provided by the Technical Expert Group and the Secretariat;
- decide on changes in the equipment and technical procedures used to verify compliance with the Treaty;
- be a forum in which any Party can make inquiries and receive information as a result of such inquiries;
- be a forum in which any Party can request an international on-site inspection and the factual results of such inspections are presented;
- guide and oversee the work of the Technical Expert Group and the Secretariat;
- decide on the annual budget of the Secretariat and elect the Director and the Deputy Director of the Secretariat.

2. Each Party to the Treaty shall have the right to be a member of the Consultative Committee.

3. The Depositary of the Treaty or his representative shall act as Chairman of the Consultative Committee.

4. The Committee shall meet annually and, in addition, upon the request of any Party when an extraordinary meeting is considered necessary to oversee the implementation of the Treaty or to settle disputes between Parties to the Treaty concerning its compliance.

The Consultative Committee shall work on the basis of consensus on the following matters;

- review and analysis of the over-all operation of the Treaty and its verification arrangements;
- decisions on changes in the equipment and technical procedures used to verify compliance with the Treaty.

The Consultative Committee shall take decisions by a majority of the members present and voting on the following issues:

- decisions on the annual budget of the Secretariat;
- election of the Director and the Deputy Director of the Secretariat.

5. The Consultative Committee shall establish a Technical Expert Group open to governmental experts from all Parties to the Treaty. The Technical Expert Group shall evaluate the technical performance of the international verification measures, including the techniques and procedures for on-site inspections, propose changes in the equipment and technical procedures used to verify compliance with the Treaty and to undertake any technical studies that the Consultative Committee may request. The Technical Expert Group shall further be a forum for technical discussions of events for which a Party seeks clarification through international measures.

The Technical Expert Group shall meet at least once a year. The Group shall establish its own rules of procedure and elect its own Chairman. The Group shall try to achieve consensus. In case consensus cannot be achieved, reports from the Group shall reflect the views of all the participating experts.

The Technical Expert Group shall report to the Consultative Committee on an annual basis or when requested.

6. To support the work of the Consultative Committee and the Technical Expert Group a permanent Secretariat shall be established.

The Secretariat shall:

- support the work of the Consultative Committee and the Technical Expert Group by organizing their meetings and by preparing requested background material and studies;
- supervise that the participating seismological stations are operated and data are reported as specified in paragraphs 4 and 5 of Protocol I of this Treaty;
- act as a contact with the WMO on matters of Data Exchange through its Global Telecommunications System and supervise and review, in co-operation with WMO, the data exchange specified in paragraph 6 of Protocol I of this Treaty;
- supervise the operation of the International Data Centres to ascertain that these Centres are established and operated as specified in paragraph 7 of Protocol I of this Treaty;
- supervise the exchange of data on atmospheric radioactivity to ascertain that the exchange is established and conducted as specified in paragraph 8 of Protocol I of this Treaty;
- compile and present operational statistics and reports on experiences of the International Data Exchange to the Technical Expert Group;
- organize and conduct international on-site inspections as specified in Protocol II of this Treaty, and report the result of such inspections to the Consultative Committee;

- maintain lists, in co-operation with the Parties to the Treaty, of international experts available to conduct on-site inspections and the equipment necessary for such inspections.

7. The Secretariat shall consist of a Director and a Deputy Director, elected for a period of four years by the Consultative Committee, as specified in paragraph 2 of this Protocol, and an appropriate number of officers and support personnel. The annual budget of the Secretariat shall be approved by the Consultative Committee, as specified in paragraph 2 of this Protocol. The cost shall be borne by the Parties to the Treaty in accordance with the United Nations assessment scale prorated to take into account differences between the United Nations membership and the number of Parties to this Treaty. The Secretariat shall be located at

CONFERENCE ON DISARMAMENT

CD/1066
8 March 1991

Original: ENGLISH

LETTER DATED 28 FEBRUARY 1991 FROM THE REPRESENTATIVE OF THE UNITED STATES OF AMERICA ADDRESSED TO THE PRESIDENT OF THE CONFERENCE ON DISARMAMENT TRANSMITTING THE TEXT OF THE 1974 TREATY BETWEEN THE UNITED STATES OF AMERICA AND THE UNION OF SOVIET SOCIALIST REPUBLICS ON THE LIMITATION OF UNDERGROUND NUCLEAR WEAPON TESTS, TOGETHER WITH ITS PROTOCOL */

I have the honour to forward to you the 1974 Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Underground Nuclear Weapons Tests, together with its Protocol, which entered into force following the exchange of instruments of ratification on 11 December 1990.

In accordance with past practice, Minister Batsanov, USSR Representative to the Conference on Disarmament, will transmit these documents in Russian to the Conference on Disarmament.

I ask that you take the appropriate steps to issue this treaty text as an official document of the Conference on Disarmament and have it distributed to all member delegations and non-member States participating in the work of the Conference.

(Signed) Stephen J. Ledogar
Representative of the
United States of America to
the Conference on Disarmament

*/ The official Russian text of the above-mentioned Treaty together with its Protocol is to be found in CD/1068.

Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Underground Nuclear Weapon Tests

Signed at Moscow July 3, 1974

The United States of America and the Union of Soviet Socialist Republics, hereinafter referred to as the Parties,

Declaring their intention to achieve at the earliest possible date the cessation of the nuclear arms race and to take effective measures toward reductions in strategic arms, nuclear disarmament, and general and complete disarmament under strict and effective international control,

Recalling the determination expressed by the Parties to the 1963 Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water in its Preamble to seek to achieve the discontinuance of all test explosions of nuclear weapons for all time, and to continue negotiations to this end,

Noting that the adoption of measures for the further limitation of underground nuclear weapon tests would contribute to the achievement of these objectives and would meet the interests of strengthening peace and the further relaxation of international tension,

Reaffirming their adherence to the objectives and principles of the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water and of the Treaty on the Non-Proliferation of Nuclear Weapons,

Have agreed as follows:

Article I

1. Each Party undertakes to prohibit, to prevent, and not to carry out any underground nuclear weapon test having a yield exceeding 150 kilotons at any place under its jurisdiction or control, beginning March 31, 1976.
2. Each Party shall limit the number of its underground nuclear weapon tests to a minimum.
3. The Parties shall continue their negotiations with a view toward achieving a solution to the problem of the cessation of all underground nuclear weapon tests.

Article II

1. For the purpose of providing assurance of compliance with the provisions of this Treaty, each Party shall use national technical means of verification at its disposal in a manner consistent with the generally recognized principles of international law.
2. Each Party undertakes not to interfere with the national technical means of verification of the other Party operating in accordance with paragraph 1 of this Article.
3. To promote the objectives and implementation of the provisions of this Treaty the Parties shall, as necessary, consult with each other, make inquiries and furnish information in response to such inquiries.

Article III

The provisions of this Treaty do not extend to underground nuclear explosions carried out by the Parties for peaceful purposes. Underground nuclear explosions for peaceful purposes shall be governed by an agreement which is to be negotiated and concluded by the Parties at the earliest possible time.

Article IV

This Treaty shall be subject to ratification in accordance with the constitutional procedures of each Party. This Treaty shall enter into force on the day of the exchange of instruments of ratification.

Article V

1. This Treaty shall remain in force for a period of five years. Unless replaced earlier by an agreement in implementation of the objectives specified in paragraph 3 of Article I of this Treaty, it shall be extended for successive five-year periods unless either Party notifies the other of its termination no later than six months prior to the expiration of the Treaty. Before the expiration of this period the Parties may, as necessary, hold consultations to consider the situation relevant to the substance of this Treaty and to introduce possible amendments to the text of the Treaty.

2. Each Party shall, in exercising its national sovereignty, have the right to withdraw from this Treaty if it decides that extraordinary events related to the subject matter of this Treaty have jeopardized its supreme interests. It shall give notice of its decision to the other Party six months prior to withdrawal from this Treaty. Such notice shall include a statement of the extraordinary events the notifying Party regards as having jeopardized its supreme interests.

3. This Treaty shall be registered pursuant to Article 102 of the Charter of the United Nations.

DONE at Moscow on July 3, 1974, in duplicate, in the English and Russian languages, both texts being equally authentic.

For the United States of America:

RICHARD NIXON,

The President of the United States of America

For the Union of Soviet Socialist Republics:

L. BREZHNEV,

General Secretary of the Central Committee of the CPSU.

PROTOCOL TO THE TREATY BETWEEN
THE UNITED STATES OF AMERICA AND
THE UNION OF SOVIET SOCIALIST REPUBLICS
ON THE LIMITATION OF UNDERGROUND NUCLEAR WEAPON TESTS

The United States of America and the Union of Soviet Socialist Republics, hereinafter referred to as the Parties,

Confirming the provisions of the Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Underground Nuclear Weapon Tests of July 3, 1974, hereinafter referred to as the Treaty,

Convinced of the necessity to ensure effective verification of compliance with the Treaty,

Have agreed as follows:

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SECTION I. DEFINITIONS

For the purposes of this Protocol:

1. The term "test site" means a geographical area for the conduct of underground nuclear weapon tests, specified in paragraph 1 or in accordance with paragraph 2 of Section II of this Protocol.

2. The term "underground nuclear weapon test," hereinafter "test," means either a single underground nuclear explosion conducted at a test site, or two or more underground nuclear explosions conducted at a test site within an area delineated by a circle having a diameter of two kilometers and conducted within a total period of time of 0.1 second. The yield of a test shall be the aggregate yield of all explosions in the test.

3. The term "explosion" means the release of nuclear energy from an explosive canister.

4. The term "explosive canister" means, with respect to every explosion, the container or covering for one or more nuclear explosives.

5. The term "Testing Party" means the Party conducting a test.

6. The term "Verifying Party" means the Party entitled to carry out, in accordance with this Protocol, activities related to verification of compliance with the Treaty by the Testing Party.

7. The term "Designated Personnel" means personnel appointed by the Verifying Party from among its nationals and included on its list of Designated Personnel, in accordance with Section IX of this Protocol, to carry out activities related to verification in accordance with this Protocol in the territory of the Testing Party.

8. The term "Transport Personnel" means personnel appointed by the Verifying Party from among its nationals and included on its list of Transport Personnel, in accordance with Section IX of this Protocol, to provide transportation for Designated Personnel, their baggage, and equipment of the Verifying Party between the territory of the Verifying Party and the point of entry in the territory of the Testing Party.

9. The term "point of entry" means Washington, D.C. (Dulles International Airport), for Designated Personnel and

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Transport Personnel, and Travis Air Force Base, California, for Designated Personnel and Transport Personnel and for equipment specified in Section VIII of this Protocol, with respect to the United States of America; and Moscow (Sheremetyevo-2 International Airport) for Designated Personnel and Transport Personnel and for equipment specified in Section VIII of this Protocol, and Leningrad (Pulkovo-2 International Airport) for Designated Personnel and Transport Personnel, with respect to the Union of Soviet Socialist Republics. Other locations may serve as points of entry for specific tests, as agreed by the Parties.

10. The term "hydrodynamic yield measurement method" means the method whereby the yield of a test is derived from on-site, direct measurement of the properties of the shock wave as a function of time during the hydrodynamic phase of the ground motion produced by the test.

11. The term "seismic yield measurement method" means the method whereby the yield of a test is derived from measurement of parameters of elastic ground motion produced by the test.

12. The term "on-site inspection" means activities carried out by the Verifying Party at the test site of the Testing Party, in accordance with Section VII of this Protocol, for the purposes of independently obtaining data on conditions under which the test will be conducted and for confirming the validity of data provided by the Testing Party.

13. The term "emplacement hole" means any drill-hole, shaft, adit or tunnel in which one or more explosive canisters, associated cables, and other equipment are installed for the purposes of conducting a test.

14. The term "end of the emplacement hole" means the reference point established by the Testing Party beyond the planned location of each explosive canister along the axis of the emplacement hole.

15. The term "satellite hole" means any drill-hole, shaft, adit or tunnel in which sensing elements and cables and transducers are installed by the Verifying Party for the purposes of hydrodynamic measurement of the yield of a specific test.

16. The term "standard configuration" means either the standard vertical configuration or the standard horizontal configuration of a test described in paragraph 2 or 3 of Section V of this Protocol.

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17. The term "non-standard configuration" means a configuration of a test different from that described in paragraph 2 or 3 of Section V of this Protocol.

18. The term "hydrodynamic measurement zone" means a region, the dimensions of which are specified in paragraph 1 of Section V of this Protocol, within which hydrodynamic yield measurements are carried out.

19. The term "reference test" means a test, identified by the Testing Party as a reference test, that meets the requirements of paragraph 8 of Section V of this Protocol.

20. The term "emplacement point" means the point in the emplacement hole that coincides with the center point of an emplaced explosive canister.

21. The term "choke section" means a barrier designed to restrict the flow of energy from an explosive canister.

22. The term "area of a pipe" or "area of a cableway" means the area of the external cross section of that pipe or cableway measured in a plane perpendicular to the axis of that pipe or cableway at the point within the zone specified in paragraph 2(c), 3(e), or 3(f) of Section V of this Protocol where its cross section is largest.

23. The term "sensing elements and cables" means switches, cables, and cable segments that provide direct measurement of the position of a shock front as a function of time, and are installed in a satellite hole by the Verifying Party for the purposes of use of the hydrodynamic yield measurement method.

24. The term "transducer" means a device that converts physical properties of a shock wave, such as stress and particle velocity, into a recordable signal, and is installed in a satellite hole by the Verifying Party, with associated power supplies, for the purposes of use of the hydrodynamic yield measurement method, with respect to explosions having a planned yield exceeding 50 kilotons and characteristics differing from those set forth in paragraph 2 or 3 of Section V of this Protocol.

25. The term "core sample" means an intact cylindrical sample of geologic material having dimensions no less than two centimeters in diameter and two centimeters in length.

26. The term "rock fragment" means a sample of geologic material having an irregular shape and a volume no less than 10 cubic centimeters.

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27. The term "geodetic measurements" means the determination of the geometric position of points within tunnels or cavities.

28. The term "Designated Seismic Station" means any one of the seismic stations designated by each Party, in accordance with Section VI of this Protocol, at which activities related to verification are carried out in accordance with this Protocol.

29. The term "Bilateral Consultative Commission" means the Commission established in accordance with Section XI of this Protocol.

30. The term "Coordinating Group" means a working group of the Bilateral Consultative Commission that is established for each test with respect to which activities related to verification are carried out.

31. The term "coordinated schedule" means the schedule, including the specific times and durations for carrying out activities related to verification for a specific test, established in the Coordinating Group as specified in paragraph 12 of Section XI of this Protocol.

32. The term "Nuclear Risk Reduction Centers" means the Centers located in Washington, D.C., and Moscow, established in accordance with the Agreement Between the United States of America and the Union of Soviet Socialist Republics on the Establishment of Nuclear Risk Reduction Centers of September 15, 1987.

SECTION II. TEST SITES

1. The test sites for the Parties are: the Nevada Test Site, for the United States of America; and the Northern Test Site (Novaya Zemlya) and the Semipalatinsk Test Site, for the Union of Soviet Socialist Republics. Upon entry into force of the Treaty, each Party, for each of its test sites, shall provide the other Party with:

(a) a precise written description of the boundaries; and

(b) a diagram with geographic coordinates of the boundaries to the nearest second, to a scale no smaller than 1:250,000.

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2. Following entry into force of the Treaty, if a Party decides to establish a new test site or to change the boundaries of a test site specified in paragraph 1 of this Section, the description and diagram specified in paragraph 1 of this Section shall be transmitted to the other Party no less than 12 months prior to the planned date for conducting the first test at the new test site or area of expansion of a previously specified test site.

3. A test site of a Party shall be located only within its territory. All tests shall be conducted solely within test sites specified in paragraph 1 or in accordance with paragraph 2 of this Section.

4. For the purposes of the Treaty and this Protocol, all underground nuclear explosions at test sites specified in paragraph 1 or in accordance with paragraph 2 of this Section shall be considered underground nuclear weapon tests and shall be subject to all provisions of the Treaty and this Protocol.

SECTION III. VERIFICATION MEASURES

1. For purposes of verification of compliance with the Treaty, in addition to using available national technical means, the Verifying Party shall have the right, with respect to tests that are conducted 200 days or more following entry into force of the Treaty:

(a) with respect to a test having a planned yield exceeding 50 kilotons, to carry out any or all of the verification activities associated with use of the hydrodynamic yield measurement method, in accordance with Section V of this Protocol, with respect to each explosion in the test;

(b) with respect to a test having a planned yield exceeding 50 kilotons, to carry out any or all of the verification activities associated with use of the seismic yield measurement method, in accordance with Section VI of this Protocol; and

(c) with respect to a test having a planned yield exceeding 35 kilotons, to carry out any or all of the verification activities associated with on-site inspection, in accordance with Section VII of this Protocol, with respect to each explosion in the test, except that such activities may be carried out with respect to a test having a planned yield exceeding 50

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kilotons only if the Verifying Party does not use the hydrodynamic yield measurement method.

2. In addition to the rights specified in paragraph 1 of this Section, for the purposes of building confidence in the implementation of this Protocol and improving its national technical means of verification, the Verifying Party shall have the right:

(a) if, in each of the five calendar years immediately following entry into force of the Treaty, the Testing Party does not conduct at least two tests having a planned yield exceeding 50 kilotons, to use the hydrodynamic yield measurement method, in accordance with Section V of this Protocol, with respect to two tests from among those having the highest planned yields that the Testing Party conducts in that calendar year;

(b) if, in the sixth calendar year following entry into force of the Treaty and in each calendar year thereafter, unless the Parties otherwise agree, the Testing Party does not conduct at least one test having a planned yield exceeding 50 kilotons, to use the hydrodynamic yield measurement method, in accordance with Section V of this Protocol, with respect to one test from among those having the highest planned yield that the Testing Party conducts in that calendar year;

(c) if, in any calendar year, the Testing Party postpones a test having a planned yield of 50 kilotons or less to the following calendar year, after having been notified by the Verifying Party of its intent to use the hydrodynamic yield measurement method with respect to that test, to use such method with respect to that test in the following calendar year. This right shall be additional to the rights specified in paragraph 1(a) of this Section and in subparagraphs (a) and (b) of this paragraph; and

(d) in addition to the rights specified in subparagraphs (a), (b), and (c) of this paragraph, if, in each of the five calendar years beginning with the conduct of the first test by the Testing Party at a new test site, the Testing Party does not conduct at least two tests having a planned yield exceeding 50 kilotons at the new test site, the Verifying Party shall have the right to use the hydrodynamic yield measurement method, in accordance with Section V of this Protocol, with respect to two tests from among those having the highest planned yields that the Testing Party conducts at the new test site in that calendar year.

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3. If the Verifying Party has notified the Testing Party that it intends to use the hydrodynamic yield measurement method with respect to a specific test including more than one explosion, unless the Parties agree on verification measures with respect to such a test:

(a) the distance between the closest points of any two adjacent explosive canisters shall be no less than 50 meters; and

(b) the time of each explosion shall be established by the Testing Party so as to permit the carrying out of hydrodynamic yield measurements for each explosion for a distance of no less than 30 meters in the satellite hole closest to the emplacement hole with which it is associated.

4. If the Verifying Party has notified the Testing Party that it intends to use the hydrodynamic yield measurement method with respect to a specific test, and if that test is conducted in more than one emplacement hole, the Testing Party shall have the right to conduct that test only if no more than one emplacement hole has characteristics or contains explosive canisters having characteristics differing from those set forth in paragraph 2 or 3 of Section V of this Protocol with respect to a test of standard configuration, unless the Parties agree on verification measures with respect to such a test.

5. The Testing Party shall have the right to conduct a test having a planned yield exceeding 35 kilotons within a time period of less than two seconds of any other test having a planned yield exceeding 35 kilotons only if the Parties agree on verification measures with respect to such tests. No test shall be conducted within 15 minutes prior to or following a reference test, unless the Parties otherwise agree.

6. The Testing Party shall have the right to conduct a test having a planned yield exceeding 35 kilotons in a cavity having a volume exceeding 20,000 cubic meters only if the Parties agree on verification measures with respect to such a test.

7. The Verifying Party, by notifying the Testing Party that it intends to use the hydrodynamic yield measurement method with respect to a test of non-standard configuration having a planned yield exceeding 50 kilotons, shall have the right to require a reference test for this non-standard test, in order to compare the yields measured through its national technical means for these two associated tests with the yield obtained by carrying out hydrodynamic yield measurement of the reference test. The right of the

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Verifying Party to a reference test shall be independent of whether or not it actually carries out hydrodynamic yield measurements of the test of non-standard configuration.

8. With respect to the requirement for a reference test:

(a) if the Testing Party, at the time it provides notification of a test, identifies that test as a reference test for a future test of non-standard configuration, and if the Verifying Party does not use the hydrodynamic yield measurement method with respect to the identified reference test, the Verifying Party shall forfeit its right to require a reference test for that test of non-standard configuration and for any subsequent test of non-standard configuration that would be associated with that reference test, if the Testing Party conducts the identified reference test;

(b) the Testing Party shall have the right to identify only one test of standard configuration as a reference test not associated with any specific test of non-standard configuration until it has conducted an associated test of non-standard configuration for which this test serves as a reference test, or unless it simultaneously provides notification of the associated test of non-standard configuration; and

(c) if the Testing Party, at the time it provides notification of a test of standard configuration, indicates that the test will satisfy a requirement for a reference test for a previously conducted test of non-standard configuration, and if the Verifying Party notifies the Testing Party of its intent not to use the hydrodynamic yield measurement method with respect to that reference test, the Verifying Party shall forfeit its right to require a reference test for the previously conducted test of non-standard configuration. In that case, the Testing Party shall have the right to cancel that reference test.

9. Following notification by the Verifying Party, in accordance with paragraph 5 of Section IV of this Protocol, of whether or not it intends to carry out any of the activities related to verification for a specific test, and, if so, which activities, the Verifying Party shall forfeit its right to revise that notification unless the Testing Party changes the previously declared location of that test by more than one minute of latitude or longitude or changes the planned yield of a test from 50 kilotons or less to a planned yield exceeding 50 kilotons. If the Testing Party makes any such change, the Verifying Party shall have the right to revise its previous notification and to carry out

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any of the activities specified in paragraph 1 or 2 of this Section and, if the Verifying Party notifies the Testing Party that it intends to carry out activities related to verification with respect to that test, in accordance with paragraph 20 of Section IV of this Protocol, the Testing Party shall not conduct the test less than 180 days following the date of the revised notification by the Verifying Party, unless the Parties otherwise agree.

10. Designated Personnel shall have the right to carry out activities related to verification in accordance with this Protocol, 24 hours a day, provided such activities are consistent with the safety requirements of the Testing Party at the test site or Designated Seismic Station. All operations and procedures that require the participation of Designated Personnel and personnel of the Testing Party shall be carried out in accordance with the technical operations and practices at the test site or Designated Seismic Station of the Testing Party, and in this connection:

(a) Designated Personnel:

(i) shall not interfere with activities of personnel of the Testing Party at the test site or Designated Seismic Station; and

(ii) shall be responsible for the working of their equipment, its timely installation and operation, participation in such operations, including dry runs, as the Testing Party may request, and recording of data; and

(b) the Testing Party:

(i) shall be under no obligation to delay the test because of any malfunction of the equipment of the Verifying Party or inability of Designated Personnel to carry out their functions, unless the Testing Party caused such a situation to arise; and

(ii) shall bear full responsibility for the preparation and conduct of the test and shall have exclusive control over it.

11. If the Verifying Party has notified the Testing Party that it intends to carry out activities related to verification for a specific test, the Testing Party shall have the right to make changes in the timing of its operations related to the conduct of that test, except that the Testing Party shall not make changes in the timing of its operations related to the conduct of that test that would preclude Designated Personnel from carrying out their rights related to verification provided in this Protocol.

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If the Testing Party notifies the Verifying Party of a change in the timing of its operations that the Verifying Party deems would either preclude or significantly limit the exercise of such rights, the Coordinating Group shall meet at the request of the Representative of the Verifying Party to the Coordinating Group, to consider the change in order to ensure that the rights of the Verifying Party are preserved. If the Coordinating Group cannot agree on a revision to the coordinated schedule that will ensure the rights of both Parties as provided in this Protocol, there shall be no advancement of events within the coordinated schedule due to such a change. Either Party may request that the Bilateral Consultative Commission consider any such change in timing of operations or in the coordinated schedule, in accordance with paragraph 15 of Section XI of this Protocol.

SECTION IV. NOTIFICATIONS AND INFORMATION RELATING TO TESTS

1. Unless otherwise provided in this Protocol, all notifications required by this Protocol shall be transmitted through the Nuclear Risk Reduction Centers. The Nuclear Risk Reduction Centers may also be used, as appropriate, to transmit other information provided in accordance with this Protocol.

2. Not later than the June 1 immediately following entry into force of the Treaty, and not later than June 1 of each year thereafter, each Party shall provide the other Party with the following information on tests that it intends to conduct in the following calendar year:

(a) the projected number of tests having a planned yield exceeding 35 kilotons;

(b) the projected number of tests having a planned yield exceeding 50 kilotons; and

(c) if the number of tests declared in accordance with subparagraphs (a) and (b) of this paragraph is less than the number of tests for which rights are specified in paragraph 2 of Section III of this Protocol, whether it intends to conduct a sufficient number of other tests to permit the Verifying Party to exercise fully the rights specified in paragraph 2 of Section III of this Protocol.

3. On the date of entry into force of the Treaty each Party shall provide the other Party with the information

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specified in paragraphs 2(a) and 2(b) of this Section for the remainder of the calendar year in which the Treaty enters into force, and, if the Treaty enters into force after June 1, information specified in paragraph 2 of this Section for the following calendar year.

4. No less than 200 days prior to the planned date of any test with respect to which the Verifying Party has the right to carry out any activity related to verification in accordance with this Protocol, the Testing Party shall provide the Verifying Party with the following information to the extent and degree of accuracy available at that time:

(a) the planned date of the test and its designation;

(b) the planned date of the beginning of emplacement of explosive canisters;

(c) the location of the test, expressed in geographic coordinates to the nearest minute;

(d) whether the planned yield of the test exceeds 35 kilotons;

(e) whether the planned yield of the test exceeds 50 kilotons;

(f) if the planned yield is 50 kilotons or less, whether the test is one of the tests with respect to which the Verifying Party has the right to use the hydrodynamic yield measurement method, in accordance with paragraph 2 of Section III of this Protocol;

(g) the planned depth of each emplacement hole to the nearest 10 meters;

(h) the type or types of rock in which the test will be conducted, including the depth of the water table;

(i) whether the test will be of standard or non-standard configuration; and

(j) whether the test will serve as a reference test for:

(i) a previously conducted test of non-standard configuration with which such a reference test is associated;

(ii) a future test of non-standard configuration for which notification has been

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provided or is being simultaneously provided in accordance with paragraph 8(b) of Section III of this Protocol; or

(iii) a future test of non-standard configuration for which the Testing Party has not yet provided notification.

5. Within 20 days following receipt of information specified in paragraph 4 of this Section, the Verifying Party shall inform the Testing Party, in a single notification, whether or not it intends to carry out, with respect to this test, any activities related to verification that it has a right to carry out, in accordance with Section III of this Protocol, and, if so, whether it intends:

(a) to use the hydrodynamic yield measurement method, in accordance with Section V of this Protocol;

(b) to use the seismic yield measurement method, in accordance with Section VI of this Protocol; and

(c) to carry out on-site inspection, in accordance with Section VII of this Protocol.

6. Within 30 days following notification by the Verifying Party, in accordance with paragraph 11 of Section XI of this Protocol, that it requires a reference test for a test of non-standard configuration, the Testing Party shall notify the Verifying Party whether it will meet the requirement for a reference test through:

(a) the identification of a previously conducted reference test;

(b) the identification of a previously conducted test of standard configuration, meeting the requirements for a reference test, with respect to which the Verifying Party carried out hydrodynamic yield measurements;

(c) the identification of a previously notified test of standard configuration, meeting the requirements for a reference test, with respect to which the Verifying Party has notified the Testing Party of its intent to carry out hydrodynamic yield measurements; or

(d) the conduct of a reference test within 12 months of the non-standard test, whose identification as a reference test will be made in the notification, in accordance with paragraph 4(j) of this Section.

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7. If the Verifying Party notifies the Testing Party that it intends to use the hydrodynamic yield measurement method, the Testing Party shall provide the Verifying Party, no less than 120 days prior to the planned date of the test, with the following information:

(a) a description of the geological and geophysical characteristics of the test location, which shall include: the depth of the water table; the stratigraphic column, including the lithologic description of each formation; the estimated physical parameters of the rock, including bulk density, grain density, compressional velocity, porosity, and total water content; and information on any known geophysical discontinuities in the media within each hydrodynamic measurement zone;

(b) the planned cross-sectional dimensions of each emplacement hole in each hydrodynamic measurement zone;

(c) the location and configuration of any known voids larger than one cubic meter within each hydrodynamic measurement zone;

(d) a description of materials, including their densities, to be used to stem each emplacement hole within each hydrodynamic measurement zone;

(e) whether it is planned that each emplacement hole will be fully or partially cased, and, if so, a description of materials of this casing;

(f) whether it is planned that each satellite hole will be fully or partially cased, and, if so, a description of materials of this casing;

(g) a topographic map to a scale no smaller than 1:25,000 and a contour interval of 10 meters or less showing:

(i) an area with a radius of no less than two kilometers centered on the entrance to each emplacement hole, that shall include the area delineated by a circle having a radius of 300 meters centered directly above the planned emplacement point of each explosive canister; and

(ii) a one-kilometer wide corridor centered on the planned location of the above-ground cables of the Verifying Party;

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(h) overall drawings showing the external dimensions of each explosive canister and each choke section, and any pipes or cableways passing through a choke section, as well as any other pipes and cableways connected to that explosive canister and located within five meters of that explosive canister;

(i) the specific locations, referenced to the entrance to each vertical satellite hole or to the surface location of the entrance to each horizontal emplacement hole, at which individual gas-blocking devices shall be installed if such devices are used on the electrical cables specified in paragraphs 3(a) and 3(b) of Section VIII of this Protocol; and

(j) whether the Testing Party will provide satellite communications as specified in paragraph 13 of Section X of this Protocol for use by Designated Personnel.

8. If the Verifying Party notifies the Testing Party that it intends to use the seismic yield measurement method, the Testing Party shall provide the Verifying Party, no less than 120 days prior to the planned date of the test, with the information specified in paragraphs 9(a), 9(b), and 9(c) of this Section.

9. If the Verifying Party notifies the Testing Party that it intends to carry out on-site inspection, the Testing Party shall provide the Verifying Party, no less than 120 days prior to the planned date of the test, with the following information:

(a) a description of the geological and geophysical characteristics of the test location, which shall include: the depth of the water table; the stratigraphic column, including the lithologic description of each formation; the estimated physical parameters of the rock, including bulk density, grain density, compressional velocity, porosity, and total water content; and information on any known geophysical discontinuities in the media within a radius of 300 meters of the planned emplacement point of each explosive canister;

(b) the planned cross-sectional dimensions of each emplacement hole in the portion within 300 meters of the planned emplacement point of each explosive canister;

(c) the location and configuration of any known voids larger than 1000 cubic meters within a radius of

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300 meters of the planned emplacement point of each explosive canister;

(d) whether it is planned that each emplacement hole will be fully or partially cased, and, if so, a description of materials of this casing;

(e) a topographic map to a scale no smaller than 1:25,000 and a contour interval of 10 meters or less showing an area with a radius of no less than two kilometers centered on the entrance to each emplacement hole, that shall include the area delineated by a circle having a radius of 300 meters centered directly above the planned emplacement point of each explosive canister; and

(f) whether the Testing Party will provide satellite communications as specified in paragraph 13 of Section X of this Protocol for use by Designated Personnel.

10. The Testing Party shall immediately notify the Verifying Party of any change in any information provided in accordance with paragraph 2, 3, 4(a), 4(c), 4(d), 4(e), 4(f) or 4(j) of this Section, and:

(a) if the Verifying Party has notified the Testing Party that it intends to carry out activities related to verification in accordance with Section V of this Protocol, of any change in any information provided in accordance with paragraph 4(b), 4(g), 4(h), 4(i), 6 or 7 of this Section, or paragraph 10 of Section XI of this Protocol;

(b) if the Verifying Party has notified the Testing Party that it intends to carry out activities related to verification in accordance with Section VI of this Protocol, of any change in any information provided in accordance with paragraph 4(g), 4(h) or 8 of this Section; and

(c) if the Verifying Party has notified the Testing Party that it intends to carry out activities related to verification in accordance with Section VII of this Protocol, of any change in any information provided in accordance with paragraph 4(b), 4(g), 4(h) or 9 of this Section, or paragraph 10(a) of Section XI of this Protocol.

11. If the Testing Party makes changes in the information specified in paragraph 4(a), 10(a), 10(b) or 10(c) of this Section related to a specific test for which Designated Personnel are present in the territory of the

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Testing Party, it shall also immediately notify, in writing, the Designated Personnel Team Leader carrying out activities related to verification of that test at the test site and at each Designated Seismic Station of such changes.

12. The Testing Party shall immediately inform the Verifying Party of any change in the timing of its operations related to the conduct of a specific test that affects the coordinated schedule, and if Designated Personnel are present in the territory of the Testing Party, it shall also immediately notify, in writing, the Designated Personnel Team Leader carrying out activities related to verification of that test at the test site and at each Designated Seismic Station.

13. If, in carrying out activities related to verification of a specific test, Designated Personnel are present at the test site or any Designated Seismic Station:

(a) no less than 48 hours prior to the initial planned time of the test, the Testing Party shall notify each Designated Personnel Team Leader, in writing, of the time for beginning the period of readiness for the test and the planned time of the test, to the nearest second. This and all subsequent notifications shall be referenced to Universal Time Coordinated and to local time at the test site or the Designated Seismic Station;

(b) except as otherwise provided in this Section, if the Testing Party changes the planned time of the test, it shall immediately notify each Designated Personnel Team Leader, in writing, of the new planned time of the test;

(c) the Testing Party shall conduct the test only within a period of readiness;

(d) unless the Parties otherwise agree, the period of readiness shall begin:

(i) no less than six days following completion of stemming of the hydrodynamic measurement zone of all satellite holes, if verification activities in accordance with Section V of this Protocol are carried out; and

(ii) no more than five days prior to the planned date of the test, if verification activities in accordance with Section VI of this Protocol are carried out;

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(e) the Testing Party may terminate the period of readiness at any time. The Testing Party shall then immediately notify each Designated Personnel Team Leader, in writing, that the period of readiness has been terminated; and

(f) if the Testing Party terminates the period of readiness or changes the time for beginning the period of readiness, it shall provide notice of the time for beginning a new period of readiness to each Designated Personnel Team Leader, in writing, no less than 12 hours prior to beginning this new period of readiness.

14. Following notification in accordance with paragraph 13(a) or 13(b) of this Section, the Testing Party, without further notification, may advance the time of the test by no more than five minutes.

15. After the event readiness signal specified in paragraph 10(b) of Section V of this Protocol has been started:

(a) if the Testing Party delays the test and terminates the event readiness signal at least one second prior to the planned time of the test, it may carry out the test, without further notification, at any time within no more than 60 minutes after the planned time of the test, provided it generates a new event readiness signal; and

(b) if the Testing Party subsequently delays the test without ending the event readiness signal at least one second prior to the planned time of the test, the Testing Party shall end the event readiness signal and shall not begin a new event readiness signal within 20 minutes following that planned time of the test. The Testing Party shall notify each Designated Personnel Team Leader, in writing, of the new planned time of the test, at least 10 minutes prior to the beginning of the new event readiness signal for that test.

16. Following notification in accordance with paragraph 13(a) or 13(b) of this Section, if the test is delayed by more than 60 minutes the Testing Party shall notify each Designated Personnel Team Leader, in writing, of the new planned time of the test no less than 30 minutes prior to the new planned time of the test.

17. During the period of readiness, if a test is delayed by more than three hours from the last notification of the planned time of the test, the Testing Party shall notify each Designated Personnel Team Leader, in writing, of the period during which the test will not be conducted.

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18. No less than one hour following the test, the Testing Party shall notify each Designated Personnel Team Leader, in writing, of the actual time of the test to the nearest 0.1 second.

19. For each test for which notification has been provided in accordance with paragraph 4 of this Section, no less than 48 hours prior to the initial planned time of the test, the Testing Party shall notify the Verifying Party of the planned time of the test to the nearest one second. If the Testing Party subsequently delays the planned time of the test by more than 24 hours, it shall immediately notify the Verifying Party of the new planned time of the test to the nearest one second. No less than three days following the test, the Testing Party shall notify the Verifying Party of the actual time of the test, referenced to Universal Time Coordinated, to the nearest 0.1 second.

20. The Testing Party shall immediately notify the Verifying Party of a change in the location of a test by more than one minute of latitude or longitude or of a change in the planned yield of a test from 50 kilotons or less to a planned yield exceeding 50 kilotons. The Verifying Party shall notify the Testing Party, within 20 days following receipt of notification of such a change in the location or planned yield of the test, whether it intends to carry out for this test any activities related to verification in accordance with paragraph 9 of Section III of this Protocol. If the Verifying Party, in this revised notification, notifies the Testing Party that it intends to carry out any of the activities related to verification that it has a right to carry out in accordance with Section III of this Protocol, the Testing Party shall provide the Verifying Party with the information that it is required to provide in accordance with paragraphs 7, 8, and 9 of this Section and paragraph 10 of Section XI of this Protocol.

21. If the Verifying Party has notified the Testing Party that it intends to use the hydrodynamic yield measurement method, the beginning of emplacement of sensing elements and cables shall not occur less than 90 days after notification of any change in the location of the test by more than one minute of latitude or longitude, unless the Parties otherwise agree.

22. If the Verifying Party has notified the Testing Party that it does not intend to carry out hydrodynamic yield measurements for a specific test, the Testing Party shall have the right to change the configuration of that test from standard to non-standard or vice versa, without notifying the Verifying Party of such change.

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23. If the Verifying Party has notified the Testing Party that it intends to carry out hydrodynamic yield measurements for a specific test, the Testing Party shall immediately notify the Verifying Party of a change in the configuration of that test from standard to non-standard, or vice versa, or of any increase in the number of emplacement holes or explosive canisters of the test. The Verifying Party shall, within five days of notification of any such change, notify the Testing Party whether it will revise its initial notification and whether it deems that this change would either preclude or significantly limit the exercise of its rights provided in this Protocol. If so, the Coordinating Group shall immediately meet to consider a revision in the coordinated schedule that will ensure the rights of both Parties provided in this Protocol. If the Parties cannot agree on a revised coordinated schedule within 15 days following notification by the Testing Party of such a change, the date of notification of the change shall be deemed the initial notification of a test in accordance with paragraph 4 of this Section, and the test shall be conducted no less than 180 days following the date of notification of the change.

24. If the Verifying Party has notified the Testing Party that it intends to carry out on-site inspection with respect to a specific test, and if the Testing Party notifies the Verifying Party of an increase in the number of explosive canisters or an increase in the number of emplacement holes, the Verifying Party shall, within five days of notification of any such change, notify the Testing Party whether it deems that this change would significantly limit the exercise of its rights provided in this Protocol. If so, the Coordinating Group shall immediately meet to consider a revision in the coordinated schedule that will ensure the rights of both Parties provided in this Protocol. If the Parties cannot agree on a revised coordinated schedule within 15 days following notification by the Verifying Party that it deems that, as a result of such an increase, its rights would be significantly limited, the date of that notification shall be deemed notification by the Verifying Party that it intends to carry out on-site inspection in accordance with paragraph 5 of this Section, and the test shall be conducted no less than 165 days following the date of such notification.

25. The Verifying Party may at any time, but no later than one year following the test, request from the Testing Party clarification of any point of information provided in accordance with this Section. Such clarification shall be provided in the shortest possible time, but no later than 30 days following receipt of the request.

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SECTION V. HYDRODYNAMIC YIELD MEASUREMENT METHOD

1. The hydrodynamic measurement zone is:

(a) with respect to a test of standard configuration, described in paragraph 2 or 3 of this Section, as well as with respect to any explosion having a planned yield of 50 kilotons or less:

(i) if an emplacement hole is vertical, the cylindrical region 25 meters in diameter whose axis is midway between the axes of the emplacement hole and the satellite hole, extending from a point 30 meters below the end of the emplacement hole to a point 100 meters from the end of the emplacement hole in the direction of the entrance to the emplacement hole; or

(ii) if an emplacement hole is horizontal, the cylindrical region 25 meters in diameter whose axis is midway between the axes of the emplacement hole and the satellite hole, extending from a point 15 meters beyond the end of the emplacement hole to a point 65 meters from the end of the emplacement hole in the direction of the entrance to the emplacement hole; and

(b) with respect to a test of non-standard configuration having a planned yield exceeding 50 kilotons:

(i) if an emplacement hole is vertical, the cylindrical region 200 meters in diameter coaxial with the emplacement hole, extending from a point 30 meters below the end of the emplacement hole to a point 100 meters from the center point of the explosive canister in the direction of the entrance to the emplacement hole; or

(ii) if an emplacement hole is horizontal, the cylindrical region 130 meters in diameter whose axis is coaxial with the emplacement hole, extending from a point 15 meters beyond the end of the emplacement hole to a point 65 meters from the center point of the explosive canister in the direction of the entrance to the emplacement hole.

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2. For the purposes of the use of the hydrodynamic yield measurement method, a test shall be deemed of standard vertical configuration if:

(a) each emplacement hole is vertical and cylindrical, and is drilled or excavated with a diameter no greater than four meters;

(b) the bottom of each emplacement hole is filled with stemming material having a bulk density no less than 60 percent of the average density of the surrounding rock, to form a plug no less than three meters thick, and the top of this plug of stemming material is the end of the emplacement hole for the explosive canister emplaced farthest from the entrance to the emplacement hole;

(c) any pipe or cableway connected to an explosive canister passes through a choke section. This choke section is installed on the top of the explosive canister and has the following characteristics:

(i) the diameter of the choke section is no less than that of the explosive canister;

(ii) the choke section is no less than one meter thick;

(iii) the sum of the areas of all pipes and cableways within the choke section does not exceed 0.5 square meters;

(iv) the area of each pipe or cableway within the choke section does not exceed 0.3 square meters;

(v) the part of the choke section in contact with the explosive canister consists of a steel plate having a thickness no less than 0.005 meters; and

(vi) the choke section, except for pipes and cableways, is filled, prior to emplacement, with stemming material having a bulk density no less than 60 percent of the average density of the surrounding rock, and has a product of density and thickness no less than 250 grams per square centimeter;

(d) the length of each explosive canister does not exceed 12 meters and, after an explosive

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canister is emplaced, the lowest part of the choke section is no more than 12 meters above the end of the emplacement hole;

(e) the diameter of each explosive canister does not exceed three meters;

(f) each emplacement hole has been drilled or excavated with a diameter, within each hydrodynamic measurement zone, no more than one meter greater than the diameter of each explosive canister; or, if an emplacement hole has been cased, the inside diameter of the casing, within each hydrodynamic measurement zone, is no more than one meter greater than the diameter of each explosive canister. Within the 15-meter segment above the end of each emplacement hole for each explosive canister, no washouts penetrate more than one meter into the wall of the emplacement hole;

(g) all voids in or connected to an emplacement hole, within each hydrodynamic measurement zone, external to:

- (i) any explosive canister;
- (ii) any choke sections;
- (iii) any diagnostic canisters; and
- (iv) associated cables and pipes

are filled with stemming material having a bulk density no less than 60 percent of the average density of the surrounding rock;

(h) within each hydrodynamic measurement zone, all voids greater than 10 cubic meters, external and unconnected to an emplacement hole or a satellite hole, and all voids greater than one cubic meter, within two meters of the wall of a satellite hole or any part of an explosive canister, are filled with stemming material having a bulk density no less than 70 percent of the average density of the surrounding rock; and

(i) within each hydrodynamic measurement zone, the distance between a satellite hole and any other drilled hole or excavation is no less than the distance between that satellite hole and the emplacement hole with which it is associated.

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3. For the purposes of the use of the hydrodynamic yield measurement method, a test shall be deemed of standard horizontal configuration if:

(a) each emplacement hole is horizontal, with an excavated cross section, measured in the plane perpendicular to its axis, no greater than five meters by five meters for the first 65 meters from the end of the emplacement hole for each explosive canister, except that any diagnostic canister associated with it shall occupy, in an emplacement hole, space having a cross section no greater than 3.5 meters by 3.5 meters for the first 50 meters of the emplacement hole from the choke section of each explosive canister in the direction of the entrance to the emplacement hole;

(b) the end of each emplacement hole is either:

(i) unsupported native rock, the surface of which is essentially perpendicular to the axis of the emplacement hole; or

(ii) the surface of a plug no less than three meters thick, formed of stemming material having a bulk density no less than 60 percent of the average density of the surrounding rock;

(c) the length of each explosive canister does not exceed 12 meters and, after it is emplaced, the end of the explosive canister farthest from the entrance to the emplacement hole is no less than one meter and no more than two meters from the end of the emplacement hole;

(d) the cross section of each explosive canister measured in the plane perpendicular to the axis of the emplacement hole does not exceed three meters by three meters;

(e) any pipe or cableway connected to an explosive canister and lying entirely within the emplacement hole passes through a choke section. This choke section is installed at the end of the explosive canister nearest to the entrance of the emplacement hole and has the following characteristics:

(i) the dimensions of the choke section perpendicular to the axis of the emplacement hole are no less than those of the explosive canister;

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(ii) the choke section is no less than one meter thick;

(iii) the sum of the areas of all pipes and cableways within the choke section, plus the sum of the areas of pipes and cableways specified in subparagraph (f) of this paragraph, does not exceed 0.5 square meters;

(iv) the area of each pipe or cableway within the choke section does not exceed 0.3 square meters; and

(v) the choke section, except for pipes and cableways meeting the requirements of subparagraphs (e)(iii) and (e)(iv) of this paragraph, is filled with stemming material having a bulk density no less than 60 percent of the average density of the surrounding rock, and has a product of density and thickness no less than 250 grams per square centimeter;

(f) any pipe or cableway connected to any surface of an explosive canister and not lying entirely within the emplacement hole has the following characteristics:

(i) the area of each pipe or cableway within five meters of the explosive canister does not exceed 0.05 square meters; and

(ii) the sum of the areas of all such pipes and cableways within five meters of the explosive canister does not exceed 0.1 square meters;

(g) any diagnostic canister connected to the pipes or cableways specified in subparagraph (f) of this paragraph lies entirely outside the hydrodynamic measurement zone;

(h) all voids in or connected to an emplacement hole, including any bypass or access tunnels within the hydrodynamic measurement zone, external to:

(i) any explosive canister;

(ii) any choke sections;

(iii) any diagnostic canisters; and

(iv) associated cables and pipes

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are filled with stemming material having a bulk density no less than 60 percent of the average density of the surrounding rock;

(i) within each hydrodynamic measurement zone, all voids greater than 10 cubic meters, external and unconnected to an emplacement hole or a satellite hole, and all voids greater than one cubic meter, within two meters of the wall of a satellite hole or any part of an explosive canister, are filled with stemming material having a bulk density no less than 70 percent of the average density of the surrounding rock; and

(j) within the portion of each hydrodynamic measurement zone extending from the end of the emplacement hole in the direction of the entrance to the emplacement hole, the distance between a satellite hole and any other tunnel or excavation is no less than the distance between that satellite hole and the emplacement hole with which it is associated.

4. With respect to a test of standard configuration, as well as with respect to any explosion having a planned yield of 50 kilotons or less:

(a) personnel of the Testing Party, using their own equipment, shall drill or excavate a satellite hole associated with each emplacement hole, at a time of their own choosing. The Testing Party shall have the right to complete drilling or excavation of a satellite hole for a specific test prior to the arrival of Designated Personnel at the test site to carry out activities related to use of the hydrodynamic yield measurement method for that test. Each satellite hole shall meet the following requirements:

(i) if an emplacement hole is vertical, the axis of the associated satellite hole shall be located 11 meters, plus or minus three meters, from the axis of the emplacement hole within each hydrodynamic measurement zone. If an emplacement hole is horizontal, the axis of the associated satellite hole shall be located 11 meters, plus or minus two meters, from the axis of the emplacement hole within each hydrodynamic measurement zone, and it may be drilled or excavated either as a single continuous hole or in separate consecutive segments associated with each hydrodynamic

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measurement zone. The axis of any satellite hole shall be no less than six meters from the wall of any drilled or excavated cavity or hole;

(ii) its end shall be no less than 30 meters below the level of the end of the associated vertical emplacement hole farthest from the entrance to the emplacement hole, or no less than 15 meters beyond the point at which the satellite hole is closest to the end of the associated horizontal emplacement hole farthest from the entrance to the emplacement hole;

(iii) if it is prepared by drilling, it shall be drilled no less than 0.3 meters and no more than 0.5 meters in diameter. Within each hydrodynamic measurement zone, no washouts shall penetrate more than one meter into the wall of the hole; and

(iv) if it is prepared by excavation, it shall have an excavated cross section, measured in the plane perpendicular to its axis, no greater than 2.5 meters by 2.5 meters within each hydrodynamic measurement zone;

(b) Designated Personnel shall have the right to observe the activities of the personnel of the Testing Party carried out to meet the specifications set forth in paragraph 2(b) of this Section and, if applicable, set forth in paragraph 3(b)(ii) of this Section. A representative sample of no less than 1000 cubic centimeters in volume of the stemming material used to form the plugs specified in paragraphs 2(b) and 3(b)(ii) of this Section shall be provided to Designated Personnel for retention;

(c) Designated Personnel shall have the right to carry out, under observation of personnel of the Testing Party and with their assistance, if such assistance is requested by Designated Personnel, directional surveys and geodetic measurements of each satellite hole and emplacement hole prior to the planned date of the beginning of emplacement of sensing elements and cables;

(d) equipment specified in paragraph 3 of Section VIII of this Protocol shall be operated by Designated Personnel and shall be installed, in accordance with installation instructions provided in accordance with paragraph 6(c) of Section VIII of

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this Protocol, by Designated Personnel under observation of personnel of the Testing Party and with their assistance, if such assistance is requested by Designated Personnel. The location of each hydrodynamic recording facility and the command and monitoring facility of the Verifying Party and the instrumentation facility of the Testing Party specified in paragraph 10(1) of this Section shall be determined by the Testing Party in consultation with the Verifying Party in the Coordinating Group no less than 90 days prior to the beginning of emplacement of sensing elements and cables. Areas for the installation of these facilities, cable supports, and cableways for protection of cables of the Verifying Party, specified in paragraphs 3(b), 3(f), and 3(g) of Section VIII of this Protocol, shall be prepared by the Testing Party in accordance with requirements agreed upon in the Coordinating Group. Only cables of the Verifying Party shall be installed in these cableways. Designated Personnel shall have access, under observation of personnel of the Testing Party, to the cables specified in paragraphs 3(f) and 3(g) of Section VIII of this Protocol and to the cableways in which they are installed, at all times. Personnel of the Testing Party shall have access to these cableways only under observation of Designated Personnel;

(e) Designated Personnel shall have the right to use their own primary electrical power sources to supply electrical power to hydrodynamic equipment specified in paragraph 3 of Section VIII of this Protocol. At the request of the Verifying Party, the Testing Party shall supply electrical power from the standard electrical network of its test site through converters provided by the Verifying Party or, by agreement of the Parties, by the Testing Party;

(f) for each test, the only equipment installed in a satellite hole shall be that of the Verifying Party specified in paragraphs 3(a) and 3(h) of Section VIII of this Protocol. If an emplacement hole is vertical, the end point of the equipment farthest from the entrance to the satellite hole shall be installed no less than 30 meters below the level of the end of the emplacement hole farthest from the entrance to the emplacement hole. If an emplacement hole is horizontal, the end point of this equipment shall be installed no less than 15 meters beyond the point at which a satellite hole is closest to the end of the emplacement hole

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farthest from the entrance to the emplacement hole. For each satellite hole, Designated Personnel shall have the right to install no more than six sensing elements and cables, without regard to the number of switches. Personnel of each Party shall have the right to measure the location of the installed sensing elements and cables;

(g) Designated Personnel shall have the right to conduct a final directional survey and geodetic measurements of each satellite hole upon completion of installation of sensing elements and cables;

(h) personnel of the Testing Party, under observation of Designated Personnel, shall fill all voids in or connected to each satellite hole within each hydrodynamic measurement zone with a stemming material agreed upon by the Parties, having a bulk density no less than 70 percent of the average density of the surrounding rock. A representative sample of no less than 1000 cubic centimeters in volume of each stemming material used in each hydrodynamic measurement zone shall be provided to Designated Personnel for retention. The methods and materials used for stemming satellite holes and any hydrodynamic measurement equipment emplacement pipe shall:

(i) be consistent with the containment practices of the Testing Party;

(ii) be chosen to minimize voids around sensing elements and cables; and

(iii) be chosen to avoid damage to the sensing elements and cables;

(i) Designated Personnel shall have the right to observe the stemming of the hydrodynamic measurement zones of each emplacement hole in accordance with paragraphs 2(g) and 3(h) of this Section. A representative sample of no less than 1000 cubic centimeters in volume of each stemming material used in each hydrodynamic measurement zone shall be provided to Designated Personnel for retention;

(j) the Testing Party shall have the right to case or line each emplacement hole; and

(k) the Testing Party shall have the right to case or line each satellite hole, provided that:

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(i) sensing elements and cables can be installed as specified in subparagraph (f) of this paragraph;

(ii) casing or lining material in each hydrodynamic measurement zone is agreed upon by the Parties; and

(iii) casing or lining in each hydrodynamic measurement zone is affixed to the surrounding formation with material agreed upon by the Parties.

5. In preparation for the use of the hydrodynamic yield measurement method with respect to a test of standard configuration, as well as with respect to any explosion having a planned yield of 50 kilotons or less:

(a) upon their arrival at the test site, no less than 10 days prior to the planned date of the beginning of emplacement of sensing elements and cables, Designated Personnel shall provide the Testing Party with a description of the recording format and the computer program, to enable the Testing Party to read digital data if digital recordings of hydrodynamic data will be made by Designated Personnel;

(b) the Testing Party shall provide Designated Personnel upon their arrival at the test site with the results of any studies of core samples and rock fragments extracted from each emplacement hole and satellite hole and any exploratory holes and tunnels, and the results of logging and geodetic measurements carried out in each emplacement hole, each satellite hole, and any exploratory holes and tunnels, relevant to the geology and geophysics of each hydrodynamic measurement zone, if the Testing Party carried out such studies and measurements;

(c) using their own equipment and under observation of personnel of the Testing Party, Designated Personnel shall have the right to carry out:

(i) if an emplacement hole is vertical, in the emplacement hole and associated satellite hole, caliper logs, directional surveys, geodetic measurements, and depth or distance measurements to determine the dimensions and the relative locations of the emplacement hole and satellite hole, as well as measurements to

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determine the location and volume of all voids within each hydrodynamic measurement zone, using, in a non-destructive way, such methods as electromagnetic measurements, radar, and acoustic sounding;

(ii) if an emplacement hole is vertical, within the hydrodynamic measurement zones of either the emplacement hole or, at the option of the Testing Party, of the satellite hole, gamma-gamma, gamma, neutron, electrical resistivity, magnetic susceptibility, gravity, acoustic, and television logging;

(iii) if an emplacement hole is horizontal, in the emplacement hole and associated satellite hole, as well as in the drilled holes specified in subparagraph (e)(ii) of this paragraph, caliper logs, directional surveys, geodetic measurements, and distance measurements to determine the dimensions and relative location of these holes, as well as measurements to determine the location and volume of all voids within each hydrodynamic measurement zone using, in a non-destructive way, such methods as electromagnetic measurements, radar, and acoustic sounding; and

(iv) if an emplacement hole is horizontal, in the drilled holes specified in subparagraph (e)(ii) of this paragraph, and within the hydrodynamic measurement zones of the emplacement hole, or, at the option of the Testing Party, of the satellite hole, gamma-gamma, gamma, neutron, electrical resistivity, magnetic susceptibility, gravity, and acoustic logging;

(d) all logging data and geometrical measurements obtained by Designated Personnel, in accordance with subparagraph (c) of this paragraph, including calibration data, shall be duplicated, and a copy of the data shall be provided to personnel of the Testing Party prior to departure from the test site of Designated Personnel who have carried out these measurements. Calibration data shall include information necessary to confirm the sensitivity of logging equipment under the conditions in which it is used;

(e) Designated Personnel shall have the right to receive:

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(i) if an emplacement hole is vertical, core samples or, at the option of Designated Personnel, rock fragments from the emplacement hole or, at the option of the Testing Party, from the satellite hole, extracted at no more than 10 depths within each hydrodynamic measurement zone, specified by Designated Personnel. The total volume of core samples or rock fragments extracted at each depth shall be no less than 400 cubic centimeters and no more than 3000 cubic centimeters, unless the Parties otherwise agree; and

(ii) if an emplacement hole is horizontal, core samples or, at the option of Designated Personnel, rock fragments from the emplacement hole or, at the option of the Testing Party, the satellite hole within each hydrodynamic measurement zone. If core samples are extracted from the emplacement hole or, at the option of the Testing Party, from an excavated satellite hole, they shall be extracted during drilling from each of no more than 10 holes drilled at stations specified by Designated Personnel. The diameter of each drilled hole shall be no less than 0.09 meters and no more than 0.15 meters, and the depth of each hole shall be no more than the diameter of the emplacement hole or satellite hole at this station. Core samples shall be extracted at locations specified by Designated Personnel along each drilled hole. If core samples are extracted from a drilled satellite hole, they shall be extracted by personnel of the Testing Party during the drilling of the satellite hole, within each hydrodynamic measurement zone, at no more than 10 stations specified by Designated Personnel and under their observation. Rock fragments shall be extracted from the emplacement hole or an excavated satellite hole at each of no more than 10 stations specified by Designated Personnel. Core samples and rock fragments may be taken from no more than a total of 10 stations. If an emplacement hole or an excavated satellite hole is lined at any station specified by Designated Personnel for extracting core samples or rock fragments, personnel of the Testing Party shall enable Designated Personnel to extract core samples or rock fragments at such a station from native rock. The total volume of core samples or rock fragments

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extracted at each station shall be no less than 400 cubic centimeters and no more than 3000 cubic centimeters, unless the Parties otherwise agree;

(f) core samples or rock fragments may be extracted in accordance with subparagraph (e) of this paragraph by personnel of the Testing Party, under observation of Designated Personnel, or by Designated Personnel, at the option of the Testing Party;

(g) if personnel of the Testing Party do not extract core samples or rock fragments in accordance with subparagraph (e) of this paragraph, Designated Personnel shall have the right, using their own equipment, to extract such core samples or rock fragments in accordance with subparagraph (e) of this paragraph, under observation of personnel of the Testing Party;

(h) if an emplacement hole is vertical, and if the Testing Party, prior to arrival of Designated Personnel at the test site:

(i) has cased a total of 20 meters or more of the emplacement hole or the satellite hole within any hydrodynamic measurement zone, Designated Personnel shall have the right to carry out, in the uncased hole, the activities specified in subparagraph (c)(ii) of this paragraph and to receive core samples or rock fragments from the uncased hole, extracted in accordance with subparagraphs (e), (f), and (g) of this paragraph; or

(ii) has cased a total of 20 meters or more of both the emplacement hole and the satellite hole within any hydrodynamic measurement zone, the Testing Party shall provide an uncased hole with respect to which Designated Personnel shall have the same rights as those specified for the emplacement hole and the satellite hole in subparagraphs (c), (e), (f), and (g) of this paragraph. The axis of this uncased hole shall be within 22 meters of the axes of the emplacement hole and the satellite hole within each hydrodynamic measurement zone. If personnel of the Testing Party, under observation of Designated Personnel, extract core samples through coring during the drilling of this uncased hole, the diameter of the hole

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shall be no less than 0.09 meters. If Designated Personnel, under observation of personnel of the Testing Party, extract core samples from this uncased hole following drilling, the diameter of the uncased hole shall be no less than 0.3 meters;

(i) Designated Personnel shall have the right to retain core samples and rock fragments specified in subparagraphs (e), (f), (g), and (h) of this paragraph. Any such core samples or rock fragments shall be prepared in accordance with procedures agreed upon by the Parties for shipment to the territory of the Verifying Party; and

(j) logging, directional surveys, geodetic measurements, and extracting of core samples or rock fragments carried out in accordance with subparagraphs (c), (e), (f), (g), (h), and (i) of this paragraph shall begin at times chosen by the Testing Party and specified in the coordinated schedule. Designated Personnel shall have the right, within a period not to exceed 21 days, to carry out logging, directional surveys, geodetic measurements, and coring activities, unless the Parties otherwise agree and so specify in the coordinated schedule. The Testing Party shall not emplace any explosive until the activities specified in this paragraph have been completed.

6. With respect to any explosion having a planned yield exceeding 50 kilotons and characteristics differing from those set forth in paragraph 2 or 3 of this Section with respect to a test of standard configuration:

(a) personnel of the Testing Party, using their own equipment and at a time of their own choosing, shall drill or excavate up to three satellite holes associated with the emplacement hole. The location of the satellite holes shall be determined in accordance with paragraph 11(b)(i) of Section XI of this Protocol. The Testing Party shall have the right to complete drilling or excavation of satellite holes for the specific test prior to the arrival of Designated Personnel at the test site for that test. The satellite holes shall meet the following requirements:

(i) with respect to the first satellite hole, its length shall be as specified in paragraph 4(a)(ii) of this Section;

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(ii) with respect to the second and third satellite holes, if such are required by the Verifying Party, the axis of each satellite hole shall be within three meters of the axis specified by the Verifying Party. Its length shall be specified by the Verifying Party and in no case shall it extend beyond the hydrodynamic measurement zone associated with that explosion;

(iii) within each hydrodynamic measurement zone, the axis of each satellite hole shall be essentially parallel to the axis of the emplacement hole, if the emplacement hole is vertical, or shall be essentially straight, if the emplacement hole is horizontal. Within each hydrodynamic measurement zone, its axis shall be no less than eight meters from the axis of the emplacement hole, if the emplacement hole is vertical, or no less than 10 meters from the axis of the emplacement hole, if the emplacement hole is horizontal, and no less than six meters from the wall of any drilled or excavated cavity or hole;

(iv) with respect to a drilled satellite hole, it shall be drilled no less than 0.3 meters and no more than 0.5 meters in diameter, unless the Parties otherwise agree. Within each hydrodynamic measurement zone, no washouts shall penetrate more than one meter into the wall of the hole;

(v) with respect to an excavated satellite hole, it shall have a cross section, measured in the plane perpendicular to its axis, no greater than 2.5 meters by 2.5 meters within each hydrodynamic measurement zone; and

(vi) within each hydrodynamic measurement zone, except for any drilled or excavated cavity or hole, all voids, external and unconnected to any satellite hole, greater than 10 cubic meters in volume, within six meters of the axis of any satellite hole, and all voids greater than one cubic meter in volume, within two meters of the axis of any satellite hole, shall be filled with stemming material having a bulk density no less than 70 percent of the average density of the surrounding rock;

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(b) Designated Personnel shall have the right to carry out, under observation of personnel of the Testing Party and with their assistance, if such assistance is requested by Designated Personnel, directional surveys and geodetic measurements of each satellite hole and emplacement hole prior to the beginning of emplacement of sensing elements and cables and transducers;

(c) equipment specified in paragraph 3 of Section VIII of this Protocol shall be operated by Designated Personnel and shall be installed, in accordance with installation instructions provided in accordance with paragraph 6(c) of Section VIII of this Protocol, by Designated Personnel under observation of personnel of the Testing Party and with their assistance, if such assistance is requested by Designated Personnel. The location of each hydrodynamic recording facility and the command and monitoring facility of the Verifying Party and the instrumentation facility of the Testing Party specified in paragraph 10(1) of this Section shall be determined by the Testing Party in consultation with the Verifying Party in the Coordinating Group no less than 90 days prior to the beginning of emplacement of sensing elements and cables. Areas for the installation of these facilities, cable supports, and cableways for protection of cables of the Verifying Party specified in paragraphs 3(b), 3(f), and 3(g) of Section VIII of this Protocol shall be prepared by the Testing Party in accordance with requirements agreed upon in the Coordinating Group. Only cables of the Verifying Party shall be installed in these cableways. Designated Personnel shall have access, under observation of personnel of the Testing Party, to the cables specified in paragraphs 3(f) and 3(g) of Section VIII of this Protocol and to the cableways in which they are installed, at all times. Personnel of the Testing Party shall have access to these cableways only under observation of Designated Personnel;

(d) Designated Personnel shall have the right to use their own primary electrical power sources to supply electrical power to hydrodynamic equipment specified in paragraph 3 of Section VIII of this Protocol. At the request of the Verifying Party, the Testing Party shall supply electrical power from the standard electrical network of its test site through converters provided by the Verifying Party or, upon agreement of the Parties, by the Testing Party;

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(e) for each test, the only equipment installed in each satellite hole shall be that of the Verifying Party specified in paragraphs 3(a) and 3(h) of Section VIII of this Protocol. This equipment shall be installed in each satellite hole at the locations specified by Designated Personnel. Designated Personnel shall have the right to install in each satellite hole no more than six sensing elements and cables, without regard to the number of switches, and no more than six transducers together with no more than 14 cables for information transmission and power supply. The total number of cables in each satellite hole shall not exceed 20. Personnel of each Party shall have the right to measure the location of the installed sensing elements and cables and transducers;

(f) Designated Personnel shall have the right to conduct a final directional survey and geodetic measurements of each satellite hole upon completion of installation of sensing elements and cables and transducers;

(g) personnel of the Testing Party, under observation of Designated Personnel, shall fill all voids in or connected to each satellite hole within each hydrodynamic measurement zone with a stemming material agreed upon by the Parties, having a bulk density no less than 70 percent of the average density of the surrounding rock. A representative sample of no less than 1000 cubic centimeters in volume of each stemming material used in each hydrodynamic measurement zone shall be provided to Designated Personnel for retention. The methods and materials used for stemming satellite holes and any hydrodynamic measurement equipment emplacement pipe shall:

(i) be consistent with the containment practices of the Testing Party;

(ii) be chosen to minimize voids around sensing elements and cables and transducers; and

(iii) be chosen to avoid damage to the sensing elements and cables and transducers;

(h) Designated Personnel shall have the right to observe the stemming of the hydrodynamic measurement zones of each emplacement hole in accordance with paragraph 9(d) of this Section. A

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representative sample of no less than 1000 cubic centimeters in volume of each stemming material used in each hydrodynamic measurement zone shall be provided to Designated Personnel for retention;

(i) the Testing Party shall have the right to case or line each emplacement hole; and

(j) the Testing Party shall have the right to case or line each satellite hole, provided that:

(i) sensing elements and cables and transducers can be installed as specified in subparagraph (e) of this paragraph;

(ii) casing or lining material in each hydrodynamic measurement zone is agreed upon by the Parties; and

(iii) casing or lining in each hydrodynamic measurement zone is affixed to the surrounding formation with material agreed upon by the Parties.

7. In preparation for the use of the hydrodynamic yield measurement method with respect to any explosion having a planned yield exceeding 50 kilotons and characteristics differing from those set forth in paragraph 2 or 3 of this Section with respect to a test of standard configuration:

(a) upon their arrival at the test site, no less than 10 days prior to the planned date of the beginning of emplacement of sensing elements and cables and transducers, Designated Personnel shall provide the Testing Party with a description of the recording format and the computer program, to enable the Testing Party to read digital data if digital recordings of hydrodynamic data will be made by Designated Personnel;

(b) the Testing Party shall provide Designated Personnel upon their arrival at the test site with the results of any studies of core samples and rock fragments extracted from each emplacement hole and satellite hole and any exploratory holes and tunnels, and the results of logging and geodetic measurements carried out in each emplacement hole, each satellite hole, and any exploratory holes and tunnels, relevant to the geology and geophysics of each hydrodynamic measurement zone, if the Testing Party carried out such studies and measurements;

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(c) using their own equipment and under observation of personnel of the Testing Party, Designated Personnel shall have the right to carry out:

(i) if an emplacement hole is vertical, in the emplacement hole and each associated satellite hole, caliper logs, directional surveys, geodetic measurements, and depth or distance measurements to determine the dimensions and the relative locations of the emplacement hole and each satellite hole, as well as measurements to determine the location and volume of all voids within each hydrodynamic measurement zone, using, in a non-destructive way, such methods as electromagnetic measurements, radar, and acoustic sounding;

(ii) if an emplacement hole is vertical, within the hydrodynamic measurement zones of the emplacement hole and each associated satellite hole, gamma-gamma, gamma, neutron, electrical resistivity, magnetic susceptibility, gravity, acoustic, and television logging;

(iii) if an emplacement hole is horizontal, in the emplacement hole and each associated satellite hole, as well as in the drilled holes specified in subparagraph (e)(ii) of this paragraph, caliper logs, directional surveys, geodetic measurements, and distance measurements to determine the dimensions and relative location of these holes, as well as measurements to determine the location and volume of all voids in each hydrodynamic measurement zone using, in a non-destructive way, such methods as electromagnetic measurements, radar, and acoustic sounding;

(iv) if an emplacement hole is horizontal, in the drilled holes specified in subparagraph (e)(ii) of this paragraph, and within the hydrodynamic measurement zones of the emplacement hole and each associated satellite hole, gamma-gamma, gamma, neutron, electrical resistivity, magnetic susceptibility, gravity, and acoustic logging; and

(v) magnetic surveys, in vertical satellite holes and drilled horizontal

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satellite holes, to obtain information necessary for the installation and positioning of transducers;

(d) all logging data and geometrical measurements obtained by Designated Personnel, in accordance with subparagraph (c) of this paragraph, including calibration data, shall be duplicated, and a copy of the data shall be provided to personnel of the Testing Party prior to departure from the test site of Designated Personnel who have carried out these measurements. Calibration data shall include information necessary to confirm the sensitivity of logging equipment under the conditions in which it is used;

(e) Designated Personnel shall have the right to receive:

(i) if an emplacement hole is vertical, core samples or, at the option of Designated Personnel, rock fragments from the emplacement hole and from each satellite hole, extracted at no more than 10 depths within each hydrodynamic measurement zone, specified by Designated Personnel. The total volume of core samples or rock fragments extracted at each depth shall be no less than 400 cubic centimeters and no more than 3000 cubic centimeters, unless the Parties otherwise agree; and

(ii) if an emplacement hole is horizontal, core samples or, at the option of Designated Personnel, rock fragments from the emplacement hole and each satellite hole within each hydrodynamic measurement zone. If core samples are extracted from the emplacement hole or an excavated satellite hole, they shall be extracted during drilling from each of no more than 10 holes drilled at stations specified by Designated Personnel. The diameter of each drilled hole shall be no less than 0.09 meters and no more than 0.15 meters, and the depth of each hole shall be no more than the diameter of the emplacement hole or satellite hole at this station. Core samples shall be extracted at locations specified by Designated Personnel along each drilled hole. If core samples are extracted from a drilled satellite hole, they shall be extracted by personnel of the Testing Party during the drilling of the satellite hole, within each hydrodynamic measurement

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zone, at no more than 10 stations specified by Designated Personnel and under their observation. Rock fragments shall be extracted from the emplacement hole or an excavated satellite hole at each of no more than 10 stations specified by Designated Personnel. Core samples and rock fragments may be taken from no more than a total of 10 stations for each hole. If an emplacement hole or an excavated satellite hole is lined at any station specified by Designated Personnel for extracting core samples or rock fragments, personnel of the Testing Party shall enable Designated Personnel to extract core samples or rock fragments at such a station from native rock. The total volume of core samples or rock fragments extracted at each station shall be no less than 400 cubic centimeters and no more than 3000 cubic centimeters, unless the Parties otherwise agree;

(f) core samples or rock fragments may be extracted in accordance with subparagraph (e) of this paragraph by personnel of the Testing Party, under observation of Designated Personnel, or by Designated Personnel, at the option of the Testing Party;

(g) if personnel of the Testing Party do not extract core samples or rock fragments in accordance with subparagraph (e) of this paragraph, Designated Personnel shall have the right, using their own equipment, to extract such core samples or rock fragments in accordance with subparagraph (e) of this paragraph, under observation of personnel of the Testing Party;

(h) if an emplacement hole is vertical, and if the Testing Party, prior to arrival of Designated Personnel at the test site, has cased a total of 20 meters or more of the emplacement hole or any satellite hole within any hydrodynamic measurement zone, and if within 22 meters from this cased hole there is no uncased hole with a diameter no less than 0.3 meters, the Testing Party shall provide an uncased hole for each hole so cased, with respect to which the Verifying Party shall have the same rights as those specified in subparagraphs (c), (e), (f), and (g) of this paragraph. Within each hydrodynamic measurement zone the axis of each uncased hole shall be no less than 11 and no more than 22 meters from such a cased hole. If personnel of the Testing

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Party, under observation of Designated Personnel, extract core samples through coring during the drilling of this uncased hole, the diameter of the hole shall be no less than 0.09 meters. If Designated Personnel, under observation of personnel of the Testing Party, extract core samples from this uncased hole following drilling, the diameter of the uncased hole shall be no less than 0.3 meters;

(i) Designated Personnel shall have the right to retain core samples and rock fragments specified in subparagraphs (e), (f), (g), and (h) of this paragraph. Any such core samples or rock fragments shall be prepared in accordance with procedures agreed upon by the Parties for shipment to the territory of the Verifying Party; and

(j) logging, directional surveys, magnetic surveys, geodetic measurements, and extracting of core samples or rock fragments carried out in accordance with subparagraphs (c), (e), (f), (g), (h), and (i) of this paragraph shall begin at times chosen by the Testing Party and specified in the coordinated schedule. Designated Personnel shall have the right, within a period not to exceed 25 days, to carry out logging, directional surveys, magnetic surveys, geodetic measurements, and coring activities, unless the Parties otherwise agree and so specify in the coordinated schedule. The Testing Party shall not emplace any explosive until the activities specified in this paragraph have been completed.

8. If the Verifying Party has notified the Testing Party that it intends to use the hydrodynamic yield measurement method with respect to a test of non-standard configuration having a planned yield exceeding 50 kilotons, and that it requires a reference test in accordance with paragraph 7 of Section III of this Protocol, the Testing Party shall provide for such a reference test for the non-standard test. To serve as a reference test, a test shall:

- (a) have a planned yield exceeding 50 kilotons;
- (b) be of standard configuration;
- (c) have a single explosive canister;
- (d) meet the following spacing criteria:

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(i) the horizontal separation between the emplacement point of the reference test and each emplacement point of the non-standard test at which any explosive canister or its emplacement conditions differ from those specified for a test of standard configuration shall be no less than 300 meters and no more than 2000 meters;

(ii) each explosive canister of the test of non-standard configuration and the explosive canister of the associated reference test shall all be emplaced above the water table or shall all be emplaced below the water table; and

(iii) the depth of all emplacement points of the test of non-standard configuration shall be within 150 meters of the depth of the emplacement point of its associated reference test; and

(e) be conducted either prior to, or within 12 months following, the conduct of the test of non-standard configuration for which it serves as a reference test.

9. Designated Personnel shall have the right:

(a) to have access along agreed routes to the location of the test to carry out activities related to use of the hydrodynamic yield measurement method;

(b) to have access to their equipment associated with the hydrodynamic yield measurement method from the time of its delivery to Designated Personnel at the test site, until it is transferred to personnel of the Testing Party in accordance with paragraph 7(i) of Section VIII of this Protocol, unless otherwise provided in this Protocol;

(c) with respect to a test of standard configuration, as well as with respect to any explosion having a planned yield of 50 kilotons or less:

(i) if an emplacement hole is vertical, prior to the lowering of the explosive canister into the emplacement hole, to confirm by direct measurement the external dimensions of each explosive canister; to inspect visually the entire external structure of that canister and the choke section; to confirm by direct

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measurement that the choke section conforms to the specifications set forth in paragraph 2(c) of this Section; to observe continuously the explosive canister and any choke section from the time inspections and measurements, carried out in accordance with this subparagraph, begin; to observe the emplacement of the explosive canister into the emplacement hole and stemming of the emplacement hole from the time the entire explosive canister is last visible above the entrance of the emplacement hole until completion of stemming of each hydrodynamic measurement zone of the emplacement hole; to determine by direct measurement the depth of emplacement of the bottom part of any choke section; and to observe the stemming of the entire satellite hole; and

(ii) if an emplacement hole is horizontal, following placement of explosive canisters in the emplacement hole, and prior to the beginning of stemming around explosive canisters, to confirm by direct measurement the external dimensions of each explosive canister; to inspect visually the entire external structure of each explosive canister; to confirm by direct measurement that each choke section conforms to the specifications set forth in paragraph 3(e) of this Section; to observe continuously each explosive canister and each choke section from the time inspections and measurements, carried out in accordance with this subparagraph, begin, until the completion of stemming around each explosive canister and choke section, or, at the option of the Testing Party, until the explosive canister and choke section are fixed in place with solidified stemming material, in which case, after a period of no more than 24 hours for placement of explosives, to observe the explosive canister, the choke section, and the completion of stemming around each explosive canister and choke section; and to observe the stemming of each hydrodynamic measurement zone of the emplacement hole, the stemming of any access or bypass drifts, the stemming of any voids in each hydrodynamic measurement zone connected to the emplacement hole; and to observe the entire stemming of each associated satellite hole;

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(d) with respect to any explosion having a planned yield exceeding 50 kilotons and characteristics differing from those set forth in paragraph 2 or 3 of this Section with respect to a test of standard configuration:

(i) if an emplacement hole is vertical, prior to the lowering of an explosive canister into the emplacement hole, to confirm by direct measurement the external dimensions of each explosive canister; to inspect visually the external structure of each canister and each choke section; to confirm by direct measurement that each choke section conforms to any specifications provided by the Testing Party in accordance with paragraph 10(c)(iii) of Section XI of this Protocol; to observe continuously each explosive canister and each choke section from the time inspections and measurements, carried out in accordance with this subparagraph, begin; to observe the emplacement of each explosive canister into the emplacement hole and stemming of the emplacement hole from the time an entire explosive canister is last visible above the entrance of the emplacement hole until completion of stemming of each hydrodynamic measurement zone of the emplacement hole; to determine by direct measurement the depth of emplacement of the upper surface of each explosive canister; and to observe the entire stemming of each associated satellite hole;

(ii) if an emplacement hole is horizontal, following placement of all explosive canisters in the emplacement hole and prior to the beginning of stemming around the explosive canister, to confirm by direct measurement the external dimensions of each explosive canister; to inspect visually the entire external structure of each explosive canister; to confirm by direct measurement that each choke section conforms to any specifications provided by the Testing Party in accordance with paragraph 10(c)(iii) of Section XI of this Protocol; to observe continuously each explosive canister and each choke section from the time inspections and measurements, carried out in accordance with this subparagraph, begin, until the completion of stemming around each explosive canister and choke section, or, at the option of the Testing Party, until the

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explosive canister and choke section are fixed in place with solidified stemming material, in which case, after a period of no more than 24 hours for placement of explosives, to observe the explosive canister, the choke section, and the completion of stemming around each explosive canister and choke section; to observe the stemming of each hydrodynamic measurement zone of the emplacement hole, the stemming of any access or bypass drifts, the stemming of any voids in each hydrodynamic measurement zone connected to the emplacement hole, except those voids and any access or bypass drifts designated by the Testing Party to remain unstemmed in accordance with paragraph 10(c) of Section XI of this Protocol; and to observe the entire stemming of each associated satellite hole; and

(iii) if a test is conducted in a cavity, to measure the shape and volume of the cavity after excavation and once again immediately prior to placement of explosive canisters with explosives or placement of explosives into explosive canisters. After placement of explosive canisters with explosives or placement of explosives into explosive canisters, Designated Personnel shall have the right to observe explosive canisters and to observe the stemming of each hydrodynamic measurement zone of the emplacement hole and any access or bypass drifts, and of any voids connected to the emplacement hole, within each hydrodynamic measurement zone, except those voids and any access or bypass drifts designated by the Testing Party to remain unstemmed, in accordance with paragraph 10(c) of Section XI of this Protocol; and to observe the entire stemming of each associated satellite hole;

(e) with respect to a test of standard configuration, as well as with respect to any explosion having a planned yield of 50 kilotons or less:

(i) if an emplacement hole is vertical, to unobstructed visual observation of the entrance to the emplacement hole and associated satellite hole from completion of stemming of the satellite hole and of the hydrodynamic measurement zones of the emplacement hole until

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departure of all personnel from the test location prior to the test; and

(ii) if an emplacement hole is horizontal, to unobstructed visual observation of sensing elements and cables until completion of stemming of each associated satellite hole, and of cables specified in paragraph 3(b) of Section VIII of this Protocol until completion of their installation in protective cableways specified in paragraph 4(d) of this Section, as well as observation of the entrance to the emplacement hole from completion of stemming of each satellite hole and of the hydrodynamic measurement zones of the emplacement hole until departure of all personnel from the test location prior to the test;

(f) with respect to any explosion having a planned yield exceeding 50 kilotons and characteristics differing from those set forth in paragraph 2 or 3 of this Section with respect to a test of standard configuration:

(i) if an emplacement hole is vertical, to unobstructed visual observation of the entrance to the emplacement hole and each satellite hole from completion of stemming of all satellite holes and the hydrodynamic measurement zones of the emplacement hole until departure of all personnel from the test location prior to the test; and

(ii) if an emplacement hole is horizontal, to unobstructed visual observation of the sensing elements and cables and transducers until completion of stemming of all associated satellite holes, and of cables specified in paragraph 3(b) of Section VIII of this Protocol until completion of their installation in protective cableways specified in paragraph 6(c) of this Section of the Protocol, as well as the entrance to the emplacement hole from completion of stemming of all satellite holes and the hydrodynamic measurement zones of the emplacement hole until departure of all personnel from the test location prior to the test;

(g) to monitor electrically the integrity and performance of their equipment specified in paragraphs 3(a), 3(b), 3(c), 3(d), 3(e), 3(f), and

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3(g) of Section VIII of this Protocol and to observe continuously the cables specified in paragraphs 3(f) and 3(g) of Section VIII of this Protocol and the cableways in which they are installed as specified in paragraphs 4(d) and 6(c) of this Section, from the time emplacement of sensing elements and cables and transducers begins until departure of all personnel from the test location. Following departure of personnel and until reentry of personnel to the test location following the test, Designated Personnel shall have the right to observe remotely, by means of closed-circuit television, the surface area containing their hydrodynamic yield measurement equipment;

(h) to monitor electrically the integrity and performance of their equipment specified in paragraphs 3(a), 3(b), 3(c), 3(d), 3(f), and 3(g) of Section VIII of this Protocol from the command and monitoring facility specified in paragraph 3(e) of Section VIII of this Protocol, from commencement of its use by Designated Personnel until completion of the activities specified in paragraphs 9(m) and 14(b) of this Section;

(i) to transmit from the command and monitoring facility to each hydrodynamic recording facility the commands required for operation of that hydrodynamic recording facility;

(j) to use channels provided by the Testing Party within its telemetry system for transmission of information specified in subparagraphs (h), (i), (k), and (l) of this paragraph, if such a system is used at the test site of the Testing Party, or to use for these purposes its own cables, specified in paragraph 3(g) of Section VIII of this Protocol;

(k) to carry out hydrodynamic yield measurements and to record the hydrodynamic data;

(l) to transmit the hydrodynamic yield measurement data from each hydrodynamic recording facility to the command and monitoring facility; and

(m) to reenter the area containing each hydrodynamic recording facility at the same time as personnel of the Testing Party, and to have access, in accordance with procedures agreed upon by the Parties and accompanied by personnel of the Testing Party, to each hydrodynamic recording facility, for the purposes of retrieving and verifying the

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authenticity of recorded data and assessing the performance of the equipment of the Verifying Party during data recording and transmission.

10. During the carrying out of hydrodynamic yield measurements:

(a) the Representative of the Testing Party shall notify, in writing, the Designated Personnel Team Leader at the test site of the beginning of the period of readiness and the planned time of the test, in accordance with paragraph 13 of Section IV of this Protocol;

(b) the Testing Party shall produce an event readiness signal in the interval from seven to 15 minutes prior to the planned time of the test, as specified by the Verifying Party, with an accuracy of plus or minus 100 milliseconds. The parameters for this signal, produced by the Testing Party, and procedures for its transmission and reception shall be agreed upon by the Parties;

(c) Designated Personnel shall have the right to generate, using the trigger conditioner devices approved by the Parties, a timing reference signal using an electromagnetic pulse from their sensing elements and cables. This timing reference signal shall be generated, transmitted, and used by Designated Personnel without intervention by personnel of the Testing Party. For each explosion in a test, the trigger conditioner shall receive signals from one or two hydrodynamic yield measurement cables;

(d) Designated Personnel, under observation of personnel of the Testing Party, shall have the right to install the trigger conditioner devices. From the time of installation of these devices until the time of the test:

(i) Designated Personnel shall have the right to test and monitor the operation of the devices;

(ii) personnel of the Testing Party shall have the right to monitor the operation of the devices and to monitor and record the timing reference signal; and

(iii) neither Designated Personnel nor personnel of the Testing Party shall have

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physical access to the devices, except under observation of personnel of the other Party;

(e) the Testing Party shall provide, at the request of the Verifying Party, an electrical pulse corresponding to the nuclear explosion zero-time, with an accuracy of plus or minus one microsecond, for each explosion. The parameters for this signal and procedures for its transmission and reception shall be agreed upon by the Parties;

(f) the Testing Party shall have exclusive control over the generation of signals specified in subparagraphs (b) and (e) of this paragraph;

(g) Designated Personnel, under observation of personnel of the Testing Party, shall install in each cable from each satellite hole to a hydrodynamic recording facility an anti-intrusiveness device for interrupting the transmission, from the sensing elements and cables and transducers to the hydrodynamic recording facility of the Verifying Party, of any signal unrelated to hydrodynamic yield measurements. These devices shall be provided by the Testing Party from among those approved by both Parties and shall not interfere with the ability of Designated Personnel to record data required for hydrodynamic yield measurements of each explosion in a test. From the time of installation of these devices until the final dry run, personnel of each Party shall have the right to test and monitor the operation of the devices and to have physical access to them only under observation of personnel of the other Party. Sole control over the triggering of these devices shall be transferred to the Testing Party at the time of departure of all personnel from the test location prior to the test;

(h) each hydrodynamic recording facility shall have an independent grounding loop with an impedance no greater than 10 ohms;

(i) the shields of all cables associated with sensing elements and cables and transducers of the Verifying Party shall be grounded:

(i) at the input to each hydrodynamic recording facility of the Verifying Party;

(ii) at the output of each anti-intrusiveness device;

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(iii) at the input of each trigger conditioner device; and

(iv) in those cables associated with sensing elements and cables in which no trigger conditioner device is installed, at the input of the anti-intrusiveness device;

(j) grounding of each hydrodynamic recording facility, as well as grounding of cables associated with the sensing elements and cables and transducers of the Verifying Party, shall be carried out by Designated Personnel under observation of personnel of the Testing Party. The grounding system of each hydrodynamic recording facility, as well as of cables associated with the sensing elements and cables and transducers shall be under the joint control of the Parties;

(k) Designated Personnel shall have the right to install, under observation of personnel of the Testing Party, an isolation transformer at the input of each anti-intrusiveness device or trigger conditioner device. From the time of installation of these devices until the time of the test, neither Designated Personnel nor personnel of the Testing Party shall have physical access to these devices, except under observation of personnel of the other Party;

(l) the Testing Party shall have the right to install, at a distance of no less than 50 meters from each hydrodynamic recording facility, a facility containing instrumentation for monitoring and recording the timing reference signal, for controlling and monitoring the operation of the anti-intrusiveness devices, and for the transmission of control and trigger signals. Signals between the instrumentation facility of the Testing Party and each hydrodynamic recording facility shall be transmitted over fiber optic cables. The Testing Party shall provide for the installation, in each hydrodynamic recording facility, of terminal devices for converting optical signals into electrical signals produced in accordance with subparagraphs (b) and (e) of this paragraph, and for monitoring the interval of interruption and for monitoring the power supply of the anti-intrusiveness device, in accordance with subparagraph (g) of this paragraph. The Verifying Party shall provide for the installation in the facility of the Testing Party of a terminal device for converting an optical signal

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into an electrical time referencing signal provided in accordance with subparagraph (d)(ii) of this paragraph. These provided devices shall be installed under observation of personnel of both Parties and sealed by the Party providing the device. The instrumentation facilities specified in this subparagraph shall be under the exclusive control of the Testing Party; and

(m) upon arrival at the test site, Designated Personnel shall provide the Testing Party with a copy of the block diagram of the equipment configuration for hydrodynamic yield measurements for the test together with notification of any changes from the block diagram approved during the familiarization process provided in paragraph 6(d)(i) of Section VIII of this Protocol. No less than two days prior to the final dry run, Designated Personnel shall notify the Testing Party, in writing, of any additional changes in this block diagram. In the event of any changes in the block diagram, the Testing Party shall have the right, within one day following such notification, to disapprove any changes it finds inconsistent with its non-intrusiveness, containment, safety, or security requirements. Such disapproval shall be provided, in writing, to the Designated Personnel Team Leader, stating the specific reasons for disapproval. Any changes not disapproved shall be deemed accepted. If a change is disapproved, Designated Personnel shall configure the equipment in accordance with the block diagram previously approved in accordance with paragraph 6(d)(i) of Section VIII of this Protocol, unless the Testing Party otherwise agrees.

11. Personnel of the Testing Party shall have the right to observe use of equipment by Designated Personnel at the test site, with access to each hydrodynamic recording facility and the command and monitoring facility of the Verifying Party subject to the following:

(a) at any time prior to the test that Designated Personnel are not present in these facilities, these facilities shall be sealed by the seals of both Parties. Seals shall be removed only under observation of personnel of both Parties;

(b) prior to the test, except for periods specified in subparagraphs (c) and (d) of this paragraph, personnel of the Testing Party may enter

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these facilities only with the agreement of the Designated Personnel Team Leader and when accompanied by the Team Leader or his designated representative;

(c) for the period of two hours prior to the final dry run, and for the period of two hours prior to the time fixed for withdrawal of all personnel to the area designated for occupation during the test, personnel of the Testing Party, not to exceed two, shall have the right to join Designated Personnel in each hydrodynamic recording facility, to observe final preparations of the equipment and to confirm the agreed configuration of that equipment. All personnel shall leave the facility together; and

(d) for a period beginning two hours prior to a test and ending upon completion of the activities specified in paragraphs 9(m) and 14(b) of this Section, personnel of the Testing Party, not to exceed two, shall have the right to join Designated Personnel in the command and monitoring facility to observe final command and monitoring of the recording equipment and acquisition and duplication of data, and to receive a copy of these data.

12. Designated Personnel shall have the right to obtain photographs taken by personnel of the Testing Party using photographic cameras of the Testing Party or, at the option of the Testing Party, photographic cameras provided by the Verifying Party. These photographs shall be taken under the following conditions:

(a) the Testing Party shall identify those of its personnel who will take photographs;

(b) photographs shall be taken at the request and under observation of Designated Personnel. If requested by Designated Personnel, such photographs shall show the size of an object by placing a measuring scale, provided by Designated Personnel, alongside that object during the photographing;

(c) Designated Personnel shall determine whether photographs conform to those requested, and, if not, repeat photographs shall be taken; and

(d) before completion of any photographed operation related to emplacement, and prior to the time at which an object that is being photographed becomes permanently hidden from view, Designated Personnel shall determine whether requested

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photographs are adequate. If they are not adequate, before the operation shall proceed additional photographs shall be taken until the Designated Personnel determine that the photographs of that operation are adequate. This photographic process shall be undertaken as expeditiously as possible, and in no case shall the cumulative delay resulting from this process exceed two hours for each of the operations specified in paragraphs 13(a), 13(b), 13(d), 13(e), and 13(f) of this Section, unless the Parties otherwise agree, except that stemming shall not be interrupted as a result of the photographic process.

13. Designated Personnel shall have the right to obtain photographs, taken in accordance with paragraph 12 of this Section, of the following:

(a) the emplacement and installation of equipment associated with the hydrodynamic yield measurement method, including all sensing elements and cables and transducers and their connections, each hydrodynamic recording facility, the command and monitoring facility, anti-intrusiveness devices, and trigger conditioner devices;

(b) the stemming of all satellite holes;

(c) all choke sections and the exterior of each explosive canister;

(d) if an emplacement hole is vertical, the emplacement of each explosive canister and the stemming of the hydrodynamic measurement zones of the emplacement hole;

(e) if an emplacement hole is horizontal, the interior of the emplacement hole within 20 meters of the emplacement point of each installed explosive canister and the stemming of hydrodynamic measurement zones of the emplacement hole;

(f) core samples and rock fragments obtained in accordance with paragraphs 5(e), 5(f), 5(g), 5(h), 7(e), 7(f), 7(g), and 7(h) of this Section, the equipment and activities associated with extracting such samples, as well as the interior of the emplacement hole, if an emplacement hole is horizontal, at the stations where core samples or rock fragments were extracted; and

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(g) with the agreement of the Testing Party, other activities of Designated Personnel directly related to the use of the hydrodynamic yield measurement method.

14. The following procedures shall apply to the recovery and transfer of data:

(a) no later than the final dry run, Designated Personnel shall inform personnel of the Testing Party of the procedures for recovering and verifying the authenticity of data and shall advise personnel of the Testing Party, at the time of data recovery, of any changes Designated Personnel make in those procedures and the reasons for such changes;

(b) following the test, Designated Personnel, in the presence of personnel of the Testing Party, shall enter the hydrodynamic recording facility and recover all recordings of data taken at the time of the test. Designated Personnel shall prepare two identical copies of such data. Personnel of the Testing Party shall select one of the two identical copies. Designated Personnel shall retain the other copy, but no other such data; and

(c) following the completion of the activities specified in paragraph 9(m) of this Section and subparagraph (b) of this paragraph, Designated Personnel shall leave the hydrodynamic recording facility and the command and monitoring facility at the same time as personnel of the Testing Party. Designated Personnel shall have no further access to their hydrodynamic recording facility, command and monitoring facility, or equipment until these are returned to the Verifying Party in accordance with paragraph 7(1)(ii) of Section VIII of this Protocol, unless the Parties otherwise agree, in which case access by Designated Personnel to their facilities and equipment shall be under observation of personnel of the Testing Party.

15. Designated Personnel shall not be present in areas from which all personnel of the Testing Party have been withdrawn in connection with the test, but shall have the right to reenter those areas, as provided in this Protocol, at the same time as personnel of the Testing Party.

16. All hydrodynamic yield measurement activities shall be carried out in accordance with the coordinated schedule. Designated Personnel who will carry out the

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activities specified in this Section and in paragraph 7(e) of Section VIII of this Protocol shall arrive at the test site in accordance with the coordinated schedule, but no less than three days prior to the date specified by the Testing Party for the beginning of these activities.

17. The number of Designated Personnel carrying out hydrodynamic yield measurements with respect to a test of standard configuration conducted in a single emplacement hole, without regard to the number of ends of that emplacement hole, as these are specified in paragraph 3(b) of this Section, shall not exceed, at any time, 35 individuals, and the number of Designated Personnel, at any time, carrying out hydrodynamic yield measurements with respect to a test of non-standard configuration or a test conducted in more than one emplacement hole shall not exceed, at any time, 45 individuals, unless the Parties otherwise agree. Within these totals, the coordinated schedule shall be developed so as to ensure that the number of Designated Personnel for carrying out hydrodynamic yield measurements with respect to a specific test shall not exceed:

(a) if a test is of standard configuration, for carrying out activities related to hydrodynamic yield measurements, other than activities specified in paragraph 5(j) of this Section, 26 individuals and, for carrying out activities specified in paragraph 5(j) of this Section:

(i) if an emplacement hole is vertical, 18 individuals; or

(ii) if an emplacement hole is horizontal, 22 individuals; or

(b) if a test is of non-standard configuration or is conducted in more than one emplacement hole, for carrying out activities related to hydrodynamic yield measurements other than activities specified in paragraph 5(j) or 7(j) of this Section, 35 individuals and, for carrying out activities specified in paragraph 5(j) or 7(j) of this Section, 26 individuals; and

(c) Designated Personnel shall include at least two individuals fluent in the language of the Testing Party.

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SECTION VI. SEISMIC YIELD MEASUREMENT METHOD

1. For the purposes of the use of the seismic yield measurement method, the Verifying Party shall have the right to carry out independent seismic measurements at three Designated Seismic Stations in the territory of the Testing Party, in accordance with this Section. Designated Seismic Stations of each Party shall meet the following criteria:

(a) be located within its continental territory;

(b) each shall have an Lg-wave signal-to-noise ratio not less than nine for any test in its territory having a yield of 150 kilotons. The signal-to-noise ratio shall be defined as one-half of the maximum peak amplitude of the Lg-wave signal divided by the root-mean-square value of the seismic noise in the recording segment immediately preceding the arrival of the P-wave signal and having a duration of no less than one minute. The signals and the noise shall be measured on a vertical component of the recording in the frequency range typical of Lg-waves recorded at the Designated Seismic Station;

(c) ensure wide azimuthal coverage of each of its test sites, insofar as permitted by their geographic location; and

(d) be chosen from those existing seismic stations that provide earthquake and other seismic event data, including tests, to archives in the territory of the Testing Party, accessible to the Verifying Party.

2. The United States of America designates the following three seismic stations as meeting the criteria specified in paragraph 1 of this Section: Tulsa, Oklahoma (TUL) (35°55'N; 095°48'W); Black Hills, South Dakota (RSSD)(44°07'N; 104°02'W); and Newport, Washington (NEW) 48°16'N; 117°07'W).

3. The Union of Soviet Socialist Republics designates the following three seismic stations as meeting the criteria specified in paragraph 1 of this Section: Arti (ARU)(56°26'N; 058°34'E); Novosibirsk (NVS)(54°51'N; 083°16'E); and Obninsk (OBN)(55°07'N; 036°34'E).

4. Upon entry into force of the Treaty each Party shall provide the other Party with the following information on each of its Designated Seismic Stations:

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(a) a site diagram of the station showing the areas assigned for use by Designated Personnel;

(b) elevation above mean sea level to the nearest 10 meters; and

(c) types of rock on which it is located.

5. The Testing Party shall have the right to replace one or more of its Designated Seismic Stations, provided:

(a) the new Designated Seismic Station meets all the criteria specified in paragraph 1 of this Section;

(b) notification of the decision of the Testing Party to select a new Designated Seismic Station, together with the station name and its reference code, the station coordinates to the nearest one minute of geographic latitude and longitude, and the information and site diagram for the new station specified in paragraph 4 of this Section, is provided to the Verifying Party no less than 90 days prior to the planned date of any test with respect to which the Verifying Party has notified the Testing Party that it intends to use the seismic yield measurement method and for which this Designated Seismic Station would be used; and

(c) seismic data, for the period from entry into force of the Treaty until the new Designated Seismic Station begins use as a Designated Seismic Station, are placed in archives in the territory of the Testing Party, accessible to the Verifying Party. If a Designated Seismic Station is replaced within the first four years following entry into force of the Treaty, seismic data for at least four years of operation of the new Designated Seismic Station shall be placed in archives in the territory of the Testing Party, accessible to the Verifying Party.

6. If any Designated Seismic Station does not meet the criteria specified in paragraph 1 of this Section, the Verifying Party shall have the right to request its replacement with another Designated Seismic Station that meets such criteria. Any request by the Verifying Party for replacement shall state the reasons this Designated Seismic Station does not meet the criteria specified in paragraph 1 of this Section, and shall be transmitted to the Testing Party through the Nuclear Risk Reduction Centers. If the Parties are unable to resolve the issue of replacement of a Designated Seismic Station, it shall immediately be referred

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to the Bilateral Consultative Commission in accordance with paragraph 1(a) of Section XI of this Protocol for resolution.

7. The Testing Party shall bear the costs of replacing any Designated Seismic Station in its territory, including any costs of eliminating the previous Designated Seismic Station and the costs of preparing a new Designated Seismic Station in accordance with paragraph 6 of this Section.

8. If requested by the Verifying Party, the Testing Party shall provide, according to agreed technical specifications, at each Designated Seismic Station, for the exclusive use of Designated Personnel:

(a) a surface vault and pier for the installation of seismic sensors, to be located not less than 100 meters and not more than 200 meters from the seismometers of the Testing Party, unless the Parties otherwise agree;

(b) a borehole for installation of seismic sensors, to be located not less than 100 meters and not more than 200 meters from the seismometers of the Testing Party, unless the Parties otherwise agree;

(c) a working facility with an area not less than 20 square meters, for the installation and operation of equipment by Designated Personnel and situated not less than 75 meters and not more than 125 meters from the seismometers of the Verifying Party, unless the Parties otherwise agree;

(d) a covered cableway that will allow Designated Personnel to connect devices in the facilities specified in subparagraphs (a), (b), and (c) of this paragraph;

(e) a facility for the storage of shipping containers and spare parts for the use of Designated Personnel while carrying out their activities at the Designated Seismic Stations; and

(f) electrical power from its standard electrical network through converters provided by the Verifying Party or, by agreement of the Parties, by the Testing Party.

9. At each Designated Seismic Station, personnel of the Testing Party shall:

(a) have the right to observe the installation and calibration of equipment by Designated Personnel,

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but at all other times they may be present only at the invitation of the Designated Personnel Team Leader and when accompanied by the Designated Personnel Team Leader or his designated representative;

(b) not interfere with the activities of Designated Personnel with regard to the installation, calibration, adjustment, and operation of equipment; and

(c) provide assistance and logistical support to Designated Personnel in accordance with paragraph 13 of Section XI of this Protocol, and, by agreement of the Parties, other assistance and logistical support requested by Designated Personnel.

10. In carrying out seismic measurements at the Designated Seismic Stations, Designated Personnel shall have the right to:

(a) confirm that the agreed technical specifications for the installation and operation of the equipment have been met during the time periods specified in the coordinated schedule;

(b) have access to their equipment from the time of the arrival of Designated Personnel at, and until their departure from, each Designated Seismic Station, unless otherwise provided in this Protocol;

(c) install, calibrate, adjust, and continuously operate their equipment;

(d) record seismic signals and universal time signals continuously from the time their equipment is installed until two hours after the test, as well as process data to monitor the quality of recorded data and retrieve and copy all recorded data;

(e) use their own electrical sources to supply electrical power to their equipment specified in paragraph 4 of Section VIII of this Protocol;

(f) install and operate tamper-detection equipment and observe the cableway and the exterior of the facility in which the seismic sensors are installed;

(g) assess the integrity and performance of their equipment and confirm that there has been no interference with seismic measurements and the recording of such measurements; and

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(h) lock and seal the facilities specified in paragraphs 8(a), 8(b), 8(c), and 8(e) of this Section with their own seals.

11. The Representative of the Testing Party shall notify, in writing and referenced to Universal Time Coordinated, the Designated Personnel Team Leader at each Designated Seismic Station of the beginning of the period of event readiness and the planned time of the test, to the nearest one second, in accordance with paragraph 13 of Section IV of this Protocol.

12. At each Designated Seismic Station, Designated Personnel shall:

(a) upon arrival, provide the Representative of the Testing Party with a description of the recording format and the computer program to enable the Testing Party to read digital data, if digital recordings of data are made;

(b) prior to departure, provide the Representative of the Testing Party with the following:

(i) a copy of all data recorded by all equipment used by Designated Personnel, on the same medium as that on which these data were recorded;

(ii) a graphic representation on a paper medium of the seismic data of the test for a period of time beginning one minute prior to the test and ending 30 minutes following the test; and

(iii) the results of the calibration of all seismic equipment, including the amplitude-frequency characteristics of the equipment used to measure and record the seismic data; and

(c) prior to their departure, prepare for inspection, storage in accordance with the conditions chosen by the Testing Party, or shipment of their equipment.

13. Designated Personnel shall have the right to acquire photographs of operations and activities related to seismic yield measurement at the Designated Seismic Stations. Photographs shall be taken by personnel of the Testing Party, using their own photographic cameras, or, at the option of the Testing Party, by Designated Personnel using their own photographic cameras.

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(a) If the Testing Party takes photographs, the following conditions shall be met:

(i) the Testing Party shall identify those of its personnel who will take photographs;

(ii) photographs shall be taken at the request and under observation of Designated Personnel. If requested by Designated Personnel, such photographs shall show the size of an object being photographed by placing a measuring scale, provided by Designated Personnel, alongside that object during the photographing; and

(iii) Designated Personnel shall determine whether photographs that were taken conform to those requested, and, if not, repeat photographs shall be taken.

(b) If Designated Personnel take photographs, the following conditions shall be met:

(i) the Verifying Party shall identify those of its Designated Personnel who will take photographs; and

(ii) photographs shall be taken under observation of personnel of the Testing Party, unless otherwise agreed by the Parties.

14. All activities of Designated Personnel at the Designated Seismic Stations shall be carried out in accordance with the coordinated schedule. Designated Personnel shall arrive at the Designated Seismic Stations in accordance with this schedule, but no less than 10 days prior to the planned date of the test. Designated Personnel shall depart the Designated Seismic Station within two days following the test.

15. If the planned date of a test is postponed by more than 10 days following receipt of the most recent notification, Designated Personnel shall have the right to leave the Designated Seismic Stations or, if requested by the Representative of the Testing Party, shall depart the Designated Seismic Stations for a mutually agreed location within the territory of the Testing Party or depart the territory of the Testing Party through the point of entry. If Designated Personnel leave the Designated Seismic Stations, they shall have the right to seal their equipment located at the stations. The seals shall not be broken except by Designated Personnel under observation of personnel of the Testing Party. Designated Personnel shall

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have the right to reoccupy the Designated Seismic Stations no less than 72 hours prior to the next planned time of the test.

16. The number of Designated Personnel carrying out seismic measurements at each Designated Seismic Station shall not exceed five. At least one individual fluent in the language of the Testing Party shall be among Designated Personnel at each Designated Seismic Station.

SECTION VII. ON-SITE INSPECTION

1. In carrying out on-site inspection, the Verifying Party shall have the right to confirm the validity of the geological, geophysical, and geometrical information provided in accordance with paragraphs 4 and 9 of Section IV of this Protocol, in accordance with the following procedures:

(a) the Testing Party shall provide Designated Personnel, upon their arrival at the test site, with the results of any studies of core samples and rock fragments extracted from each emplacement hole and any exploratory holes and tunnels, and the results of logging and geodetic measurements carried out in each emplacement hole and any exploratory holes and tunnels, relevant to the geology and geophysics of the emplacement medium, if the Testing Party carried out such studies and measurements;

(b) using their own equipment and under observation of personnel of the Testing Party, Designated Personnel shall have the right to carry out:

(i) if an emplacement hole is vertical, in the emplacement hole, from the end of the hole to the entrance to the hole, gamma-gamma, gamma, neutron, electrical resistivity, magnetic susceptibility, gravity, acoustic, television, and caliper logging, and measurements of the depth and cross section of the emplacement hole, as well as measurements to determine the location and volume of voids, using, in a non-destructive way, such methods as electromagnetic measurements, radar, and acoustic sounding; and

(ii) if an emplacement hole is horizontal, in the holes specified in subparagraph (d)(ii) of this paragraph, and in the emplacement hole in the

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regions extending from each end of the emplacement hole to a point located 300 meters from the corresponding emplacement point in the direction of the entrance to the emplacement hole, gamma-gamma, gamma, neutron, electrical resistivity, magnetic susceptibility, gravity, acoustic, and caliper logging, and measurements of the length and cross section of the emplacement hole, as well as measurements to determine the location and volume of voids, using, in a non-destructive way, such methods as electromagnetic measurements, radar, and acoustic sounding;

(c) all logging and geometrical measurement data obtained by Designated Personnel in accordance with subparagraph (b) of this paragraph, including calibration data, shall be duplicated, and a copy of these data shall be provided to personnel of the Testing Party prior to the departure from the test site of Designated Personnel who have carried out those measurements. Calibration data shall include information needed to confirm the sensitivity of logging equipment under the conditions in which it is used;

(d) Designated Personnel shall have the right to receive:

(i) if an emplacement hole is vertical, core samples or rock fragments, at the option of Designated Personnel, extracted from the emplacement hole at 10 depths specified by Designated Personnel, plus one additional depth for every complete 50-meter distance between the uppermost and lowest emplacement points. The total volume of core samples or rock fragments extracted at each of the specified depths shall be no less than 400 cubic centimeters and no more than 3000 cubic centimeters, unless the Parties otherwise agree; and

(ii) if an emplacement hole is horizontal, core samples or rock fragments, at the option of Designated Personnel, from the emplacement hole in the regions extending from each end of the emplacement hole to a point located 300 meters from the corresponding emplacement point in the direction of the entrance to the emplacement hole. Core samples shall be extracted during drilling from each of five holes drilled at stations in the emplacement hole, specified by

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Designated Personnel. These five stations shall be separated from each other by no less than 15 meters. At each station the hole shall be drilled in a direction specified by Designated Personnel, except that at each station within 65 meters of each emplacement point the Testing Party shall have the right to exclude two 90-degree sectors separated by a sector of 90 degrees. The diameter of each drilled hole shall be no less than 0.09 meters and no more than 0.15 meters, and the depth of each hole shall be no more than the diameter of the emplacement hole at that station. Core samples shall be extracted at locations specified by Designated Personnel along the drilled hole. Rock fragments shall be extracted from the walls of the emplacement hole at five stations specified by Designated Personnel. The total volume of core samples or rock fragments extracted at each station shall be no less than 400 cubic centimeters and no more than 3000 cubic centimeters, unless the Parties otherwise agree.

(e) core samples or rock fragments, at the option of Designated Personnel, shall be extracted, in accordance with subparagraph (d) of this paragraph, by personnel of the Testing Party, under observation of Designated Personnel, or by Designated Personnel, at the option of the Testing Party;

(f) if the Testing Party does not extract core samples or rock fragments in accordance with subparagraph (d) of this paragraph, Designated Personnel shall have the right to do so, using their own equipment and under observation of personnel of the Testing Party;

(g) if, prior to arrival of Designated Personnel at the test site, the Testing Party has cased more than a total of 20 meters within any 100-meter segment of a vertical emplacement hole in the region extending from the end of the emplacement hole to a point 300 meters from the planned emplacement point in the direction of the entrance to the emplacement hole, the Testing Party shall provide an uncased hole with respect to which the Verifying Party shall have the same rights as those specified for an emplacement hole in subparagraphs (b), (d), (e), and (f) of this paragraph. This uncased hole shall be located no more than 50 meters from the emplacement hole and shall have a depth no less than that of the emplacement hole. If personnel of the Testing Party, under observation of Designated Personnel, extract core samples through coring during

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the drilling of this uncased hole, the diameter of this hole shall be no less than 0.09 meters. If Designated Personnel, under observation of personnel of the Testing Party, extract core samples from this uncased hole following drilling, the diameter of this uncased hole shall be no less than 0.3 meters; and

(h) Designated Personnel shall have the right to retain core samples and rock fragments specified in subparagraphs (d), (e), (f), and (g) of this paragraph. Any such core samples or rock fragments shall be prepared in accordance with the procedures agreed upon by the Parties for shipment to the territory of the Verifying Party.

2. Designated Personnel shall have the right:

(a) if an emplacement hole is vertical, to observe the emplacement of each explosive canister into the emplacement hole from the time the bottom of the canister is last visible above the entrance of the emplacement hole, and to determine by direct measurement the depth of emplacement of the bottom of the canister;

(b) if an emplacement hole is horizontal, to determine by direct measurement the location of each explosive canister in the emplacement hole, and to confirm the presence of at least 10 meters of stemming, as specified in subparagraph (c)(ii) of this paragraph, in any previously stemmed tunnel that had provided access to an explosive canister, using, in a non-destructive way, such methods as electromagnetic measurements, radar, and acoustic sounding;

(c) to observe stemming of each emplacement hole:

(i) if an emplacement hole is vertical, until a solid concrete plug no less than three meters thick is installed above the explosive canister closest to the entrance to the emplacement hole; and

(ii) if an emplacement hole is horizontal, until access to any explosive canister has been prevented by installation of stemming material for a distance no less than 10 meters, including the installation of a solid concrete plug no less than three meters thick;

(d) to have access along agreed routes to the location of the test to carry out activities related to on-site inspection;

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(e) to have access to their equipment associated with the carrying out of on-site inspection from the time of its transfer to Designated Personnel at the test site, until it is transferred to personnel of the Testing Party in accordance with paragraph 9(g) of Section VIII of this Protocol, unless otherwise provided in this Protocol;

(f) if an emplacement hole is vertical, to have access, for the purpose of visual inspection of the ground surface, to the area delineated by a circle having a radius of 300 meters, centered on the entrance to the emplacement hole; and

(g) if an emplacement hole is horizontal, to have access, for the purpose of visual inspection of the ground surface, to the area delineated by a circle having a radius of 300 meters, centered directly above the emplacement point of each explosive canister.

3. Designated Personnel shall have the right to obtain photographs associated with on-site inspection, which shall be taken in accordance with paragraph 12 of Section V of this Protocol, of the following:

(a) if an emplacement hole is vertical, the emplacement of each explosive canister and the stemming of the emplacement hole specified in paragraph 2(c)(i) of this Section;

(b) if an emplacement hole is horizontal, the interior of the emplacement hole within 20 meters of the emplacement point of each explosive canister, and the stemming of the emplacement hole specified in paragraph 2(c)(ii) of this Section;

(c) core samples and rock fragments, extracted in accordance with paragraphs 1(d), 1(e), 1(f), and 1(g) of this Section, the equipment and activities associated with extracting such samples, as well as the interior of the emplacement hole, if the emplacement hole is horizontal, at the stations where core samples and rock fragments were extracted; and

(d) with the agreement of the Testing Party, other activities of Designated Personnel directly related to on-site inspection.

4. In no case shall the cumulative delay resulting from the photographic process specified in paragraph 3 of this Section exceed two hours for each of the operations specified in paragraph 3 of this Section, unless the Parties

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otherwise agree, except that stemming shall not be interrupted as a result of the photographic process.

5. All on-site inspection activities shall be carried out in accordance with the coordinated schedule. Designated Personnel shall have the right, within a period not to exceed 15 days, to carry out logging and coring activities specified in paragraph 1 of this Section, unless the Parties otherwise agree and so specify in the coordinated schedule. These activities shall be completed no less than one day prior to the beginning of emplacement of explosives. Upon completion of the activities specified in paragraph 1 of this Section, Designated Personnel shall depart the territory of the Testing Party, except that Designated Personnel who will also participate in the activities specified in paragraph 2 of this Section shall remain at the test site, if the Parties decide that this is required by the coordinated schedule. Otherwise, Designated Personnel shall depart the territory of the Testing Party or, if agreed by the Parties, they may depart to another point within the territory of the Testing Party. All Designated Personnel who will carry out the activities specified in paragraph 2 of this Section shall arrive at the test site in accordance with the coordinated schedule, but no less than three days prior to the date specified by the Testing Party for the beginning of these activities.

6. The number of Designated Personnel carrying out the activities specified in paragraph 1 of this Section shall not exceed 23 at any time. The number of Designated Personnel carrying out activities specified in paragraphs 2(a), 2(b), and 2(c) of this Section shall not exceed five at any time. At least one individual fluent in the language of the Testing Party shall be among Designated Personnel.

SECTION VIII. EQUIPMENT

1. Designated Personnel, in carrying out activities related to verification in accordance with this Protocol, shall have the right to bring into the territory of the Testing Party, install, and use:

(a) if the Verifying Party has provided notification of its intent to use the hydrodynamic yield measurement method, part or all of the equipment specified in paragraph 3 of this Section;

(b) if the Verifying Party has provided notification of its intent to use the seismic yield

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measurement method, part or all of the equipment specified in paragraph 4 of this Section;

(c) if the Verifying Party has provided notification of its intent to carry out on-site inspection, part or all of the equipment specified in paragraph 5 of this Section;

(d) maintenance and support equipment and spare parts necessary for the installation and functioning of equipment of the Verifying Party;

(e) electrical power supplies, converters, and associated cables;

(f) photographic equipment, if the Testing Party does not provide such equipment;

(g) locks, seals, and equipment necessary for installing seals of the Verifying Party and checking their integrity;

(h) medical and health physics equipment and supplies, personal protective gear, recreational items, and such other items as may be agreed upon by the Parties;

(i) office equipment and supplies, including, but not limited to, copying and facsimile machines, and personal computers;

(j) closed-circuit television equipment for the purpose of carrying out remote observation by Designated Personnel, in accordance with paragraph 9(g) of Section V of this Protocol, if the Testing Party does not provide such equipment; and

(k) satellite communications equipment, if the Testing Party does not provide satellite communications for Designated Personnel.

2. During the first meeting of the Coordinating Group for a specific test, the Parties shall agree, within 15 days, upon such additional materials, temporary structures, and equipment as may be requested in writing by the Verifying Party and which shall be supplied by the Testing Party for use by Designated Personnel. Such additional materials, temporary structures, and equipment, with their descriptions and operating instructions, shall be provided to Designated Personnel in accordance with the coordinated schedule.

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3. The list of equipment for the purposes of the use of the hydrodynamic yield measurement method in accordance with Section V of this Protocol shall include:

- (a) sensing elements and cables and transducers;
- (b) electrical cables for transmission of hydrodynamic data from the entrance of each horizontal satellite hole to the entrance of the horizontal emplacement hole with which it is associated;
- (c) the hydrodynamic recording facilities, with equipment, including computers, for acquiring, recording, and processing data and timing signals, as well as for transmitting and receiving hydrodynamic data and command and monitoring signals between each hydrodynamic recording facility and the command and monitoring facility, and the shock mitigation platforms for installing each hydrodynamic recording facility, and with equipment for distributing electrical analogs of the signals arriving from the instrumentation facility of the Testing Party;
- (d) trigger conditioner devices for generating a timing reference signal from the electrical cables of the Verifying Party, and terminal devices for converting an optical signal into an electrical signal;
- (e) the command and monitoring facility, with equipment, including computers, for generating and recording command and monitoring signals, for transmitting and receiving command and monitoring signals between each hydrodynamic recording facility and the command and monitoring facility, as well as for retrieving, storing, and processing hydrodynamic data;
- (f) electrical cables for transmission of hydrodynamic data from the entrance of each vertical satellite hole or from the entrance of each horizontal emplacement hole to the hydrodynamic recording facility of the Verifying Party;
- (g) electrical cables for the grounding of equipment and for above-ground transmission of electrical power, and electrical and fiber optic cables for above-ground transmission of command and monitoring signals and hydrodynamic data;
- (h) measuring and calibration instrumentation, support equipment, and equipment for installing and positioning sensing elements and cables and transducers;

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(i) equipment specified in paragraph 5 of this Section for confirming the characteristics of emplacement holes and satellite holes; and

(j) directional survey and magnetic survey equipment and equipment for determining the distance between emplacement holes and satellite holes, and equipment for detecting voids and determining their relative locations and volumes.

4. The list of equipment for the purposes of the use of the seismic yield measurement method at each Designated Seismic Station in accordance with Section VI of this Protocol shall include:

(a) seismic sensors capable of recording ground movements in three orthogonal directions within the frequency range from 0.1 to 10 hertz;

(b) equipment for amplifying, filtering, and digitizing the output signals of the seismic sensors;

(c) equipment for recording seismic data, and cables for interconnecting the equipment described in this paragraph;

(d) equipment for controlling sensors and recorders and for calibrating equipment;

(e) means of recording Universal Time Coordinated and referencing the recorded seismic data to it;

(f) equipment, including computers, to process data, to monitor the quality of the recorded data, as well as to display, store, and copy data; and

(g) equipment, including that using digital algorithms, for assessing the validity of recorded seismic data.

5. The list of equipment for the purposes of carrying out on-site inspection in accordance with Section VII of this Protocol shall include:

(a) equipment for obtaining the following logging data: gamma-gamma, gamma, neutron, electrical resistivity, magnetic susceptibility, gravity, television, acoustic, and caliper, as well as equipment for measuring the depth and cross section of emplacement holes and for measuring the volume of voids;

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(b) equipment, including computers, for calibrating logging equipment, for monitoring the quality of the recorded data, as well as for recording, displaying, and copying data from logging equipment;

(c) equipment for extracting core samples and rock fragments; and

(d) geologist's field tools and kits, and equipment for the recording of field data.

6. The Testing Party shall have the right, for the purposes of an initial familiarization, to inspect the equipment and every component thereof that the Verifying Party intends to use in carrying out activities related to verification, and thereafter shall have the right to familiarize itself with the equipment and every component thereof that had not previously been provided for this purpose in accordance with this paragraph. For these purposes:

(a) the equipment subject to familiarization by the Testing Party shall include:

(i) a set of equipment for hydrodynamic yield measurements, specified in paragraph 3 of this Section;

(ii) a set of equipment for seismic yield measurements, specified in paragraph 4 of this Section;

(iii) a set of equipment for on-site inspection, specified in paragraph 5 of this Section; and

(iv) the equipment specified in paragraphs 1(d), 1(e), 1(f), 1(g), 1(h), 1(i), 1(j), and 1(k) of this Section;

(b) the Verifying Party shall initiate the familiarization process by notifying the Testing Party no less than 30 days prior to the date on which it intends to deliver equipment to the point of entry. This notification shall include a preliminary inventory of the equipment and the planned date of its delivery;

(c) no less than seven days prior to the date of delivery of equipment, the Verifying Party shall provide a complete inventory of such equipment, which shall also specify which equipment, in accordance with paragraph 7(h) of this Section, will be removed from

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the facilities of the Verifying Party immediately prior to the beginning of the final dry run and immediately prior to the test. At the same time the Verifying Party shall provide instructions on the installation and operation of equipment with functional and technical descriptions and specifications, including electrical diagrams, as well as block diagrams of the system and its components;

(d) no more than 45 days following receipt of the equipment, the Testing Party, taking into account the equipment specified for removal in subparagraph (c) of this paragraph, shall specify, in writing, to the Verifying Party:

(i) the equipment approved by it for use by Designated Personnel in accordance with the information provided in accordance with subparagraph (c) of this paragraph; and

(ii) the characteristics of any equipment component it finds unacceptable because it is inconsistent with its non-intrusiveness, containment, safety, or security requirements;

(e) no more than 50 days following its initial delivery to the point of entry, equipment shall be returned, in the same condition as that in which it was received, to the Verifying Party at the point of entry; and

(f) following receipt of the written evaluation provided by the Testing Party in accordance with subparagraph (d)(ii) of this paragraph, the Verifying Party may deliver to the Testing Party, for familiarization in accordance with procedures specified in subparagraphs (b) and (c) of this paragraph, modified or replacement equipment to eliminate the unacceptable characteristics specified by the Testing Party, after which the procedures specified in subparagraphs (d) and (e) of this paragraph shall be followed with respect to the modified or replacement equipment.

7. The following procedures shall apply to equipment for use of the hydrodynamic yield measurement method:

(a) with the exception of that equipment that the Verifying Party intends to use from the equipment stored in accordance with subparagraph (j) of this paragraph, no less than 60 days prior to the planned date of the beginning of emplacement of sensing

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elements and cables or the planned date of the beginning of emplacement of explosives, whichever occurs earlier, unless the Parties otherwise agree, the Verifying Party shall deliver in sealed containers to the point of entry, at its option, either one or two sets of all or part of the equipment specified in paragraphs 1(d), 1(e), 1(f), 1(g), 1(h), 1(i), 1(k), 3(i), and 3(j) of this Section;

(b) with the exception of that equipment that the Verifying Party intends to use from the equipment stored in accordance with subparagraph (j) of this paragraph, no less than 45 days prior to the planned date of the beginning of emplacement of sensing elements and cables, unless the Parties otherwise agree, the Verifying Party shall deliver in sealed containers to the point of entry two identical sets of the equipment specified in paragraphs 3(a), 3(b), 3(c), 3(d), and 3(e) of this Section, and, at its option, either one or two sets of the equipment specified in paragraphs 1(j), 3(f), 3(g), and 3(h) of this Section, and, if it has not been delivered in accordance with subparagraph (a) of this paragraph, the equipment specified in paragraphs 1(d), 1(e), 1(f), 1(g), 1(h), 1(i), and 1(k) of this Section;

(c) these sets of equipment shall have the same components with the same functional and technical descriptions and specifications as the equipment approved by the Testing Party in accordance with paragraph 6(d)(i) of this Section;

(d) no less than seven days prior to the date of delivery of equipment to the point of entry, the Verifying Party shall provide a complete inventory of this equipment, specifying which equipment, in accordance with subparagraph (h) of this paragraph, will be removed from the facilities of the Verifying Party immediately prior to the beginning of the final dry run and immediately prior to the test;

(e) if the Verifying Party provides two identical sets of equipment:

(i) the Testing Party shall choose, at the point of entry, one of the two identical sets of each type of equipment for use by Designated Personnel, with the exception of the equipment specified in paragraphs 3(a) and 3(b) of this Section, and shall affix its own seals to the sealed containers in which that set of equipment arrived. The set of equipment not chosen by the

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Testing Party for use by Designated Personnel shall be subject to inspection by the Testing Party. Seals of the Verifying Party shall be removed from equipment chosen by the Testing Party for inspection, in the presence of personnel of both Parties, and thereafter this equipment shall be retained for inspection by the Testing Party without the presence of Designated Personnel for a period of no more than 30 days, after which time it shall be returned, in the same condition as that in which it was received, to the Verifying Party at the point of entry;

(ii) with respect to the equipment specified in paragraphs 3(a) and 3(b) of this Section, the Testing Party, under observation of Designated Personnel, shall remove the seals of the Verifying Party, combine the two sets of equipment, and randomly redistribute the items of each type of such equipment in order to produce two new identical sets. The Testing Party shall choose one of these new identical sets for use by Designated Personnel, and both Parties shall affix their own seals to the containers of that set. The set of equipment not chosen by the Testing Party for use by Designated Personnel shall be subject to inspection by the Testing Party in accordance with procedures specified in subparagraph (e)(iii) of this paragraph;

(iii) if the Verifying Party has delivered the equipment specified in paragraphs 3(a) and 3(b) of this Section with individual gas-blocking devices installed in the cables, Designated Personnel, under observation of personnel of the Testing Party, shall cut each cable at points three meters on either side of each gas-blocking device and shall place these gas-blocking devices and their attached cable segments in separate containers. If the Verifying Party delivered this equipment without individual gas-blocking devices installed, Designated Personnel, under observation of personnel of the Testing Party, shall cut a three-meter segment from each end of each cable and shall place these segments in separate containers. Personnel of each Party, under observation of personnel of the other Party, shall seal these separate containers of cable segments or gas-blocking devices with cable segments. The remainder of this equipment shall be retained for inspection by the Testing Party in accordance with subparagraph (e)(i) of this paragraph, except that

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during inspection of this equipment the Testing Party may remove up to 150 meters of cable from the set chosen for inspection, in no more segments than twice the number of cables in that set; the set of equipment not chosen by the Testing Party for use by Designated Personnel shall be subject to inspection by the Testing Party;

(iv) the Testing Party shall ensure protection of the equipment chosen by it for use by Designated Personnel and the sealed containers specified in subparagraph (e)(iii) of this paragraph while they are in its territory, and shall transport this equipment to the test site in such a manner as to ensure that it is delivered to Designated Personnel in the same condition as that in which it was received by the Testing Party. Prior to shipment to the test site, and from the time of its arrival at the test site until the time of its transfer to Designated Personnel, this equipment shall be kept sealed, in storage under conditions agreed upon by the Parties;

(v) personnel of the Testing Party shall consult with Designated Personnel regarding plans and schedule of shipment of the equipment no less than 48 hours prior to its shipment. Designated Personnel shall have the right to verify the integrity of their seals, to observe their equipment, and to accompany it from the point of entry to the test site. The equipment specified in subparagraph (a) of this paragraph shall be delivered to Designated Personnel for use at the test site no less than 25 days prior to the planned date of the beginning of emplacement of explosives or the planned date of the beginning of emplacement of sensing elements and cables, whichever occurs earlier, unless the Parties otherwise agree. The equipment specified in subparagraph (b) of this paragraph shall be delivered to Designated Personnel at the test site for use no less than 10 days prior to the planned date of the beginning of emplacement of sensing elements and cables, unless the Parties otherwise agree. Personnel of each Party shall remove their seals from the equipment under observation of personnel of the other Party. Prior to removing their seals, personnel of each Party shall have the right to verify the integrity of those seals, under observation of personnel of the other Party;

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(vi) seals affixed to the equipment specified in paragraphs 3(a), 3(b), and 3(d) of this Section shall not be removed prior to either the conduct of pressure tests and non-destructive inspections, in accordance with subparagraphs e(vii) and (e)(viii) of this paragraph, or preparation for installation of such equipment, at which time personnel of each Party shall remove their seals, under observation of personnel of the other Party. Prior to removing their seals, personnel of each Party shall have the right to verify the integrity of those seals, under observation of personnel of the other Party. Thereafter, personnel of the Testing Party shall have the right to observe all activities of Designated Personnel related to this equipment;

(vii) the Testing Party shall have the right to conduct pressure tests on the portions of cables with individual gas-blocking devices specified in subparagraph (e)(iii) of this paragraph, in accordance with its technical operations and practices and under observation of Designated Personnel, to ensure that the individual gas-blocking devices meet the containment requirements of the Testing Party. These pressure tests shall be conducted at a time specified by the Testing Party, at which time personnel of each Party shall verify the integrity of their seals on the containers specified in subparagraph (e)(iii) of this paragraph and shall remove their seals, under observation of personnel of the other Party. The Testing Party shall also have the right to conduct non-destructive inspections, under observation of Designated Personnel, on the set of cables chosen for use, to ensure that the cables chosen for use are identical in construction to those chosen for inspection. Such non-destructive inspections shall be carried out at a time specified by the Testing Party. All tests and non-destructive inspections related to the containment requirements of the Testing Party shall be completed, and the results communicated to the Designated Personnel Team Leader at the test site, no less than 10 days prior to the planned date for the beginning of emplacement of sensing elements and cables. If all of the individual gas-blocking devices removed from cables in the set chosen for inspection, in accordance with subparagraph (e)(iii) of this paragraph, successfully meet the containment requirements, and if cables chosen for

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use are found to be identical in construction to those chosen for inspection, then the set chosen for use shall be sealed by the seals of both Parties, which shall not be removed prior to preparation for installation of such equipment. Following the pressure tests, the Testing Party shall have the right to retain the individual gas-blocking devices with their attached cable segments from the set chosen for inspection;

(viii) if the Verifying Party delivered the equipment specified in paragraphs 3(a) and 3(b) of this Section without individual gas-blocking devices installed in the cables, the Testing Party shall have the right to conduct pressure tests, in accordance with its technical operations and practices, to ensure that the gas-blocking properties of these cables meet the containment requirements of the Testing Party. These tests shall be performed under observation of Designated Personnel on the segments of cables specified in subparagraph (e)(iii) of this paragraph as well as on a three-meter segment of each cable of the set chosen for use, removed by Designated Personnel, under observation of personnel of the Testing Party, from the end of the cable that will extend to the ground surface. These pressure tests shall be conducted at a time specified by the Testing Party, at which time personnel of each Party shall verify the integrity of their seals on the containers specified in subparagraph (e)(iii) of this paragraph, as well as on the containers with the set of equipment chosen for use, specified in paragraphs 3(a) and 3(b), and shall remove their seals under observation of personnel of the other Party. All tests related to the containment requirements of the Testing Party shall be completed, and the results communicated to the Designated Personnel Team Leader at the test site, no less than 10 days prior to the planned date for the beginning of emplacement of sensing elements and cables. If all of the cable segments removed from the set chosen for use and the set chosen for inspection meet the containment requirements of the Testing Party, then the set chosen for use shall be sealed by the seals of both Parties, which shall not be removed prior to preparation for installation of such equipment and its use in hydrodynamic yield measurements; and

(ix) if, within one day following the completion of testing and non-destructive

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inspections specified in subparagraphs (e)(vii) and (e)(viii) of this paragraph, the Verifying Party so requests, the Testing Party shall provide cables that meet its containment requirements. The Testing Party shall deliver these cables to Designated Personnel at the test site no more than two days following the request of the Verifying Party but no less than seven days prior to the planned date for the beginning of emplacement of sensing elements and cables, unless the Parties otherwise agree;

(f) if the Verifying Party provides only one set of equipment:

(i) upon arrival of the equipment at the point of entry, the seals of the Verifying Party shall be removed from this equipment in the presence of personnel of both Parties, after which the Testing Party shall have the right to inspect this equipment for no more than 30 days, without the presence of Designated Personnel;

(ii) upon completion of the inspection, the Testing Party shall transport all approved equipment to the test site and deliver it, in the same condition as that in which it was received, to Designated Personnel. The equipment specified in subparagraph (a) of this paragraph shall be delivered to Designated Personnel no less than 25 days prior to the planned date of the beginning of emplacement of explosives or the planned date of the beginning of emplacement of sensing elements and cables, whichever occurs earlier, unless the Parties otherwise agree. The equipment specified in subparagraph (b) of this paragraph shall be delivered to Designated Personnel at the test site no less than 10 days prior to the planned date of the beginning of emplacement of sensing elements and cables, unless the Parties otherwise agree; and

(iii) within five days following delivery of equipment to Designated Personnel, the Designated Personnel Team Leader shall certify, in writing, to the Representative of the Testing Party that the equipment delivered to the test site is in working condition or, in the event of damage to the equipment, shall report such damage in writing;

(g) upon completion of inspection of the equipment, in accordance with subparagraphs (e)(i) and (f)(i) of this paragraph, the Testing Party shall

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inform the Verifying Party, in writing, of any equipment that does not conform to that approved previously in accordance with paragraph 6(d)(i) of this Section and shall specify the non-conforming characteristics of any such equipment or component thereof. Prior to shipment to the test site, in the case of equipment provided in one set, or at the time of delivery to Designated Personnel at the test site of the set of equipment chosen for use, in the case of equipment provided in two sets, the equipment that does not conform to that approved previously shall be removed by Designated Personnel under observation of personnel of the Testing Party and placed under seals of both Parties in storage at a location chosen by the Testing Party. Any such equipment shall be returned by the Testing Party to Designated Personnel at the point of entry following completion of the activity related to verification for which it was originally provided. Except as otherwise provided in this Protocol, equipment approved by the Testing Party shall remain under the exclusive control of Designated Personnel from the time of its delivery to Designated Personnel at the test site until it is transferred to the Testing Party in accordance with subparagraph (i) of this paragraph;

(h) immediately prior to the beginning of the final dry run, Designated Personnel, under observation of personnel of the Testing Party, shall remove from each hydrodynamic recording facility and the command and monitoring facility all items specified in accordance with paragraph 6(c) of this Section for removal at that time. These items shall be placed under the seals of both Parties and stored at a location chosen by the Testing Party. Upon departure of personnel of both Parties from each hydrodynamic recording facility immediately prior to the test, all remaining maintenance and support equipment and spare parts shall be removed by Designated Personnel, unless the Parties otherwise agree;

(i) personnel of the Testing Party shall have the right to inspect equipment after it has been used for carrying out activities related to hydrodynamic yield measurements, for a period of 30 days, without the presence of Designated Personnel. For these purposes:

(i) the equipment used for carrying out activities specified in paragraphs 4(g), 5(c), and 5(f) or 5(g) or 5(h), and 6(b), 6(f), 7(c), and 7(f) or 7(g) or 7(h) of Section V of this Protocol shall be transferred to the Testing Party upon

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completion of all these activities, unless the Parties agree that equipment for any specific activity may be transferred upon completion of that activity;

(ii) all other equipment, except that specified in paragraphs 1(e), 1(g), 1(h), 1(i), and 1(k) of this Section, shall be transferred to the Testing Party upon completion of all activities specified in paragraphs 9(m) and 14(b) of Section V of this Protocol;

(iii) equipment specified in paragraphs 1(e), 1(g), 1(h), 1(i), and 1(k) of this Section shall be transferred to the Testing Party upon completion of all activities of Designated Personnel specified in Section V of this Protocol; and

(iv) during inspection of equipment specified in paragraphs 3(f) and 3(g) of this Section, after it has been used for carrying out activities related to hydrodynamic yield measurements, the Testing Party shall have the right to remove and retain no more than 150 meters of those cables, in no more segments than twice the number of cables in each set, with the exception of the fiber optic cables and the electrical cables for above-ground transmission of electrical power;

(j) the Verifying Party shall have the right to store for subsequent use part or all of its equipment in the territory of the Testing Party. Storage shall be under conditions agreed upon by the Parties, at a location chosen by the Testing Party and under its protection;

(k) with respect to inventory and shipment or storage of this equipment, the following procedures, at the option of the Verifying Party, shall be applied:

(i) upon transfer of equipment to the Testing Party for inspection, in accordance with subparagraph (i) of this paragraph, Designated Personnel shall provide complete inventories of equipment to be stored and equipment to be shipped to their territory. These inventories shall be signed by the Designated Personnel Team Leader and the Representative of the Testing Party, each of whom shall retain a copy of the inventories. Within five days following completion of inspection of equipment to be shipped, the Testing

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Party shall return this equipment to Designated Personnel at the point of entry, in the same condition as that in which it was received. Elimination of information stored in memories shall not be deemed damage to the equipment; or

(ii) within five days following completion of inspection of equipment in accordance with subparagraph (i) of this paragraph, the Testing Party shall return this equipment to Designated Personnel at a location chosen by the Testing Party, in the same condition as that in which it was received. Elimination of information stored in memories shall not be deemed damage to the equipment. Designated Personnel shall examine, inventory, and pack their equipment in containers. Personnel of the Testing Party shall have the right to observe these activities. Within five days following receipt of their equipment, Designated Personnel shall transfer to the Testing Party the packed containers, along with inventories of the equipment to be stored and the equipment to be shipped. These inventories shall be signed by the Designated Personnel Team Leader and the Representative of the Testing Party, each of whom shall retain a copy of the inventories. Within 10 days following receipt of the equipment to be shipped, the Testing Party shall deliver it to the point of entry; and

(1) if stored equipment is to be used for activities related to verification of a subsequent test, it shall be subject to further inspection only after such use. The equipment specified in subparagraph (a) of this paragraph shall be delivered, in the same condition as that in which it was received, to Designated Personnel for use at the test site no less than 25 days prior to the planned date of the beginning of emplacement of explosives or the planned date of the beginning of emplacement of sensing elements and cables, whichever occurs earlier, unless the Parties otherwise agree. The equipment specified in subparagraph (b) of this paragraph shall be delivered, in the same condition as that in which it was received, to Designated Personnel at the test site no later than 10 days prior to the planned date of the beginning of emplacement of sensing elements and cables, unless the Parties otherwise agree.

8. The following procedures shall apply to equipment for use of the seismic yield measurement method:

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(a) with the exception of that equipment that the Verifying Party intends to use from the equipment stored in accordance with subparagraph (h) of this paragraph, no less than 45 days prior to the planned date of the test, unless the Parties otherwise agree, the Verifying Party shall deliver in sealed containers to the point of entry, at its option, either one or two sets of all or part of the equipment specified in paragraphs 1(d), 1(e), 1(f), 1(g), 1(h), 1(i), and 4 of this Section;

(b) these sets of equipment shall have the same components with the same functional and technical descriptions and specifications as the equipment approved by the Testing Party in accordance with paragraph 6(d)(1) of this Section;

(c) no less than seven days prior to the date of delivery of equipment to the point of entry, the Verifying Party shall provide a complete inventory of this equipment;

(d) if the Verifying Party provides two identical sets of equipment:

(i) the Testing Party shall choose, at the point of entry, one of the two identical sets of each type of equipment for use by Designated Personnel, and shall affix its own seals to the sealed containers in which that set of equipment arrived;

(ii) the Testing Party shall ensure protection of this equipment while it is in its territory, and shall transport this equipment to the Designated Seismic Stations in such a manner as to ensure that it is delivered to Designated Personnel in the same condition as that in which it was received by the Testing Party. Prior to shipment to the Designated Seismic Stations, and from the time of its arrival at the Designated Seismic Stations until the time of its transfer to Designated Personnel, the set of equipment chosen by the Testing Party for use by Designated Personnel shall be kept sealed, in storage under conditions agreed upon by the Parties;

(iii) personnel of the Testing Party shall consult with Designated Personnel regarding plans and schedule of shipment of the equipment no less than 48 hours prior to its shipment. Designated Personnel shall have the right to verify the

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integrity of their seals, to observe their equipment, and to accompany it from the point of entry to the Designated Seismic Stations. This equipment shall be delivered to Designated Personnel at Designated Seismic Stations for installation and use no less than 10 days prior to the planned date of the test. Personnel of each Party shall remove their seals from the equipment under observation of personnel of the other Party. Prior to removing their seals, personnel of each Party shall have the right to verify the integrity of those seals, under observation of personnel of the other Party; and

(iv) seals of the Verifying Party shall be removed from equipment chosen by the Testing Party for inspection, in the presence of personnel of both Parties, and thereafter this equipment shall be retained for inspection by the Testing Party without the presence of Designated Personnel for a period of no more than 30 days, after which time it shall be returned, in the same condition as that in which it was received, to the Verifying Party at the point of entry;

(e) if the Verifying Party provides only one set of equipment:

(i) upon arrival of the equipment at the point of entry, the seals of the Verifying Party shall be removed from this equipment in the presence of personnel of both Parties, after which the Testing Party shall have the right to inspect this equipment for no more than 30 days, without the presence of Designated Personnel;

(ii) upon completion of the inspection, the Testing Party shall transport all approved equipment to the Designated Seismic Stations and deliver it, in the same condition as that in which it was received, to Designated Personnel no less than 10 days prior to the planned date of the test, unless the Parties otherwise agree; and

(iii) within three days following delivery of the equipment to Designated Personnel, the Designated Personnel Team Leader shall certify in writing to the Representative of the Testing Party that the equipment delivered to the Designated Seismic Station is in working condition or, in the event of damage to the equipment, shall report such damage in writing;

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(f) upon completion of inspection of the equipment, in accordance with subparagraphs (d)(iv) and (e)(i) of this paragraph, the Testing Party shall inform the Verifying Party, in writing, of any equipment that does not conform to that approved previously in accordance with paragraph 6(d)(i) of this Section and shall specify the non-conforming characteristics of any such equipment or component thereof. Prior to shipment to the Designated Seismic Station, in the case of equipment provided in one set, or at the time of delivery to Designated Personnel at the Designated Seismic Station of the set of equipment chosen for use, in the case of equipment provided in two sets, the equipment that does not conform to that approved previously shall be removed by Designated Personnel under observation of personnel of the Testing Party and placed under seals of both Parties in storage at a location chosen by the Testing Party. Any such equipment shall be returned by the Testing Party to Designated Personnel at the point of entry following completion of the activity related to verification for which it was originally provided. Except as otherwise provided in this Protocol, equipment approved by the Testing Party shall remain under the exclusive control of Designated Personnel from the time of its delivery to Designated Personnel at a Designated Seismic Station until it is transferred to the Testing Party in accordance with subparagraphs (g) and (j) of this paragraph;

(g) personnel of the Testing Party shall have the right to inspect equipment after it has been used for activities related to seismic yield measurements for a period of 30 days, without the presence of Designated Personnel. If the Testing Party decides to inspect that equipment, it shall be transferred to the Testing Party upon completion of activities specified in Section VI of this Protocol;

(h) the Verifying Party shall have the right to store for subsequent use part or all of its equipment in the territory of the Testing Party. Storage shall be under conditions agreed upon by the Parties, at a location chosen by the Testing Party and under its protection;

(i) if the Testing Party inspects the equipment, with respect to inventory and shipment or storage of this equipment, the following procedures, at the option of the Verifying Party, shall be applied:

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(i) upon transfer of equipment to the Testing Party for inspection in accordance with subparagraph (g) of this paragraph, Designated Personnel shall provide complete inventories of equipment to be stored and equipment to be shipped to their territory. These inventories shall be signed by the Designated Personnel Team Leader and the Representative of the Testing Party, each of whom shall retain a copy of the inventories. Within five days following completion of inspection of equipment to be shipped, the Testing Party shall return this equipment to Designated Personnel at the point of entry, in the same condition as that in which it was received. Elimination of information stored in memories shall not be deemed damage to the equipment; or

(ii) within five days following completion of inspection of equipment in accordance with subparagraph (g) of this paragraph, the Testing Party shall return this equipment to Designated Personnel at a location chosen by the Testing Party in the same condition as that in which it was received. Elimination of information stored in memories shall not be deemed damage to the equipment. Designated Personnel shall examine, inventory, and pack their equipment in containers. Personnel of the Testing Party shall have the right to observe these activities. Within five days following receipt of their equipment, Designated Personnel shall transfer to the Testing Party the packed containers, along with inventories of the equipment to be stored and the equipment to be shipped. These inventories shall be signed by the Designated Personnel Team Leader and the Representative of the Testing Party, each of whom shall retain a copy of the inventories. Within 10 days following receipt of equipment to be shipped, the Testing Party shall deliver it to the point of entry;

(j) if the Testing Party chooses not to inspect the equipment upon completion of activities related to seismic yield measurements, Designated Personnel shall prepare the equipment for storage or shipment to their territory prior to departure from the Designated Seismic Station and, upon transfer of equipment to the Testing Party, shall provide complete inventories of equipment to be stored and equipment to be shipped. These inventories shall be signed by the Designated Personnel Team Leader and the Representative of the Testing Party, each of whom shall retain a copy of the

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inventories. Equipment to be shipped shall be returned to the Verifying Party at the point of entry within 10 days following departure of Designated Personnel from the Designated Seismic Station. Equipment to be stored shall be prepared for storage, in accordance with agreed procedures for the conditions of storage chosen by the Testing Party; and

(k) if stored equipment is to be used for activities related to verification of a subsequent test, it shall be subject to further inspection only after such use. This equipment shall be delivered, in the same condition as that in which it was received, to Designated Personnel for use at the Designated Seismic Stations no later than 10 days prior to the planned date of the test, unless the Parties otherwise agree.

9. The following procedures shall apply to equipment for carrying out on-site inspection:

(a) with the exception of that equipment that the Verifying Party intends to use from the equipment stored in accordance with subparagraph (h) of this paragraph, no less than 55 days prior to the planned date of the beginning of emplacement of explosives, unless the Parties otherwise agree, the Verifying Party shall deliver in sealed containers to the point of entry, at its option, either one or two sets of all or part of the equipment specified in paragraphs 1(d), 1(e), 1(f), 1(g), 1(h), 1(i), 1(k), and 5 of this Section;

(b) these sets of equipment shall have the same components with the same functional and technical descriptions and specifications as the equipment approved by the Testing Party in accordance with paragraph 6(d)(i) of this Section;

(c) no less than seven days prior to the date of delivery of equipment to the point of entry, the Verifying Party shall provide a complete inventory of this equipment;

(d) if the Verifying Party provides two identical sets of equipment:

(i) the Testing Party shall choose, at the point of entry, one of the two identical sets of each type of equipment for use by Designated Personnel, and shall affix its own seals to the sealed containers in which that set of equipment arrived;

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(ii) the Testing Party shall ensure protection of this equipment while it is in its territory, and shall transport this equipment to the test site in such a manner as to ensure that it is delivered to Designated Personnel in the same condition as that in which it was received by the Testing Party. Prior to shipment to the test site, and from the time of its arrival at the test site until the time of its transfer to Designated Personnel, the set of equipment chosen by the Testing Party for use by Designated Personnel shall be kept sealed, in storage under conditions agreed upon by the Parties;

(iii) personnel of the Testing Party shall consult with Designated Personnel regarding plans and schedule of shipment of the equipment no less than 48 hours prior to its shipment. Designated Personnel shall have the right to verify the integrity of their seals, to observe their equipment, and to accompany it from the point of entry to the test site. This equipment shall be delivered to Designated Personnel at the test site no less than 20 days before the planned date of the beginning of emplacement of explosives, unless the Parties otherwise agree. Personnel of each Party shall remove their seals from the equipment under observation of personnel of the other Party. Prior to removing their seals, personnel of each Party shall have the right to verify the integrity of those seals, under observation of personnel of the other Party; and

(iv) seals of the Verifying Party shall be removed from equipment chosen by the Testing Party for inspection, in the presence of personnel of both Parties, and thereafter this equipment shall be retained for inspection by the Testing Party without the presence of Designated Personnel for a period of no more than 30 days, after which time it shall be returned, in the same condition as that in which it was received, to the Verifying Party at the point of entry;

(e) if the Verifying Party provides only one set of equipment:

(i) upon arrival of the equipment at the point of entry, the seals of the Verifying Party shall be removed from this equipment in the presence of personnel of both Parties, after which the Testing Party shall have the right to inspect

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this equipment for no more than 30 days, without the presence of Designated Personnel;

(ii) upon completion of the inspection, the Testing Party shall transport all approved equipment to the test site and deliver it, in the same condition as that in which it was received, to Designated Personnel no less than 20 days prior to the planned date of the beginning of emplacement of explosives, unless the Parties otherwise agree; and

(iii) within five days following delivery of equipment to Designated Personnel, the Designated Personnel Team Leader shall certify, in writing, to the Representative of the Testing Party that the equipment delivered to the test site is in working condition or, in the event of damage to the equipment, shall report such damage in writing;

(f) upon completion of inspection of the equipment in accordance with subparagraphs (d)(iv) and (e)(i) of this paragraph, the Testing Party shall inform the Verifying Party, in writing, of any equipment that does not conform to that approved previously in accordance with paragraph 6(d)(i) of this Section and shall specify the non-conforming characteristics of any such equipment or component thereof. Prior to shipment to the test site, in the case of equipment provided in one set, or at the time of delivery to Designated Personnel at the test site of the set of equipment chosen for use, in the case of equipment provided in two sets, the equipment that does not conform to that approved previously shall be removed by Designated Personnel under observation of personnel of the Testing Party and placed under seals of both Parties in storage at a location chosen by the Testing Party. Any such equipment shall be returned by the Testing Party to Designated Personnel at the point of entry, following completion of the activity related to verification for which it was originally provided. Except as otherwise provided in this Protocol, equipment approved by the Testing Party shall remain under the exclusive control of Designated Personnel from the time of its delivery to Designated Personnel at the test site until it is transferred to the Testing Party in accordance with subparagraph (g) of this paragraph;

(g) personnel of the Testing Party shall have the right to inspect equipment after it has been used for carrying out activities related to on-site inspection,

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for a period of 30 days, without the presence of Designated Personnel. For these purposes:

(i) the equipment used for carrying out activities specified in paragraphs 1(b), 1(c), 1(e), 1(f), 1(g), and 1(h) of Section VII of this Protocol shall be transferred to the Testing Party upon completion of all these activities, unless the Parties agree that equipment for any specific activity may be transferred upon completion of that activity; and

(ii) all other equipment shall be transferred to the Testing Party upon completion of all activities of Designated Personnel specified in Section VII of this Protocol;

(h) the Verifying Party shall have the right to store for subsequent use part or all of its equipment in the territory of the Testing Party. Storage shall be under conditions agreed by the Parties, at a location chosen by the Testing Party and under its protection;

(i) with respect to inventory and shipment or storage of this equipment, the following procedures, at the option of the Verifying Party, shall be applied:

(i) upon transfer of equipment to the Testing Party for inspection in accordance with subparagraph (g) of this paragraph, Designated Personnel shall provide complete inventories of equipment to be stored and equipment to be shipped to their territory. These inventories shall be signed by the Designated Personnel Team Leader and the Representative of the Testing Party, each of whom shall retain a copy of the inventories. Within five days following completion of inspection of the equipment to be shipped, the Testing Party shall return this equipment to Designated Personnel at the point of entry, in the same condition as that in which it was received. Elimination of information stored in memories shall not be deemed damage to the equipment; or

(ii) within five days following completion of inspection of equipment in accordance with subparagraph (g) of this paragraph, the Testing Party shall return this equipment to Designated Personnel at a location chosen by the Testing Party, in the same condition as that in which it was received. Elimination of information stored

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in memories shall not be deemed damage to the equipment. Designated Personnel shall examine, inventory, and pack their equipment in containers. Personnel of the Testing Party shall have the right to observe these activities. Within five days following receipt of their equipment, Designated Personnel shall transfer to the Testing Party the packed containers, along with inventories of the equipment to be stored and the equipment to be shipped. These inventories shall be signed by the Designated Personnel Team Leader and the Representative of the Testing Party, each of whom shall retain a copy of the inventories. Within 10 days following receipt of the equipment to be shipped, the Testing Party shall deliver it to the point of entry; and

(j) if stored equipment is to be used for activities related to verification of a subsequent test, it shall be subject to further inspection only after such use. This equipment shall be delivered, in the same condition as that in which it was received, to Designated Personnel at the test site no less than 20 days prior to the planned date of the beginning of emplacement of explosives for that test, unless the Parties otherwise agree.

SECTION IX. DESIGNATED PERSONNEL AND TRANSPORT PERSONNEL

1. No later than 10 days following entry into force of the Treaty each Party shall provide the other Party with a list of its proposed Designated Personnel who will carry out activities in accordance with this Protocol and a list of its proposed Transport Personnel who will provide transportation for these Designated Personnel, their baggage, and equipment of the Verifying Party. These lists shall contain name, date of birth, and sex of each individual of its proposed Designated Personnel and Transport Personnel. The list of Designated Personnel shall at no time include more than 300 individuals, and the list of Transport Personnel shall at no time include more than 200 individuals.

2. Each Party shall review the list of Designated Personnel and the list of Transport Personnel proposed by the other Party. If the Party reviewing a list determines that an individual included thereon is acceptable to it, it shall so inform the Party providing the list within 20 days

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following receipt of the list, and such an individual shall be deemed accepted. If the Party reviewing a list determines that an individual included thereon is not acceptable to it, it shall so inform the Party providing the list of its objection within 20 days following receipt of the list, and such an individual shall be deemed unaccepted and shall be deleted from the list.

3. Each Party may propose the addition or substitution of individuals on its list of Designated Personnel or its list of Transport Personnel at any time, who shall be designated in the same manner as provided in paragraph 2 of this Section with regard to the initial lists. Annually, no more than 100 individuals from the list of Designated Personnel shall be subject to substitution. This limitation shall not apply to the replacement of individuals due to permanent physical incapacity or death, or to deletion of an individual from the list of Designated Personnel in accordance with paragraph 5 of this Section. Replacement of an individual due to permanent physical incapacity, death or deletion from the list shall be accomplished in the same manner as provided in paragraph 2 of this Section.

4. Following receipt of the initial list of Designated Personnel or the initial list of Transport Personnel or of subsequent changes thereto, the Party receiving such information shall prepare for the issuance of such visas and other documents as may be required to ensure that each individual on the list of Designated Personnel or the list of Transport Personnel who has been accepted may enter and remain in its territory for the purpose of carrying out activities in accordance with this Protocol. Such visas and documents shall be provided by the Testing Party only to the individuals whose names are included in the notification provided by the Verifying Party, in accordance with paragraphs 2 and 3 of Section X of this Protocol, upon receipt of such notification. Such visas and documents shall be valid for multiple entry throughout the period required for Designated Personnel to carry out their activities related to verification of a specific test.

5. If a Party determines that an individual included on the list of Designated Personnel or the list of Transport Personnel of the other Party has violated the provisions of this Protocol or has ever committed a criminal offense in its territory, or has ever been sentenced for committing a criminal offense, or has ever been expelled from its territory, the Party making such a determination shall notify the other Party of its objection to the continued inclusion of this individual on the list. If at that time this individual is present in the territory of the Party raising the objection, then the other Party shall

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immediately recall this individual from the territory of the Party raising this objection and immediately thereafter delete that individual from the list of Designated Personnel or from the list of Transport Personnel.

6. Designated Personnel with their personal baggage and equipment of the Verifying Party shall be permitted to enter the territory of the Testing Party at the designated point of entry, to remain in that territory, and to exit that territory through the designated point of entry.

7. Designated Personnel and Transport Personnel shall be accorded the following privileges and immunities for the entire period they are in the territory of the Testing Party and thereafter with respect to acts previously performed in the exercise of their official functions as Designated Personnel or Transport Personnel:

(a) Designated Personnel and Transport Personnel shall be accorded the inviolability enjoyed by diplomatic agents pursuant to Article 29 of the Vienna Convention on Diplomatic Relations of April 18, 1961;

(b) living and working quarters occupied by Designated Personnel and Transport Personnel carrying out activities in accordance with this Protocol shall be accorded the inviolability and protection accorded the quarters of missions and diplomatic agents pursuant to Articles 22 and 30 of the Vienna Convention on Diplomatic Relations;

(c) archives, documents, papers, and correspondence of Designated Personnel and Transport Personnel shall enjoy the inviolability accorded the archives, documents, papers, and correspondence of missions and diplomatic agents pursuant to Articles 24 and 30 of the Vienna Convention on Diplomatic Relations. In addition, the aircraft or other transport vehicles of the Verifying Party shall be inviolable;

(d) Designated Personnel and Transport Personnel shall be accorded the immunities accorded diplomatic agents pursuant to paragraphs 1, 2, and 3 of Article 31 of the Vienna Convention on Diplomatic Relations. Immunity from jurisdiction of Designated Personnel or Transport Personnel may be waived by the Verifying Party in those cases in which it is of the opinion that immunity would impede the course of justice, and it can be waived without prejudice to the implementation of the provisions of this Protocol. Waiver must always be express;

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(e) Designated Personnel and Transport Personnel carrying out their activities in accordance with this Protocol shall be accorded the exemption from dues and taxes accorded diplomatic agents pursuant to Article 34 of the Vienna Convention on Diplomatic Relations;

(f) living and working quarters occupied by Designated Personnel and Transport Personnel carrying out their activities in accordance with this Protocol shall be accorded the exemption from dues and taxes accorded mission premises pursuant to Article 23 of the Vienna Convention on Diplomatic Relations; and

(g) Designated Personnel and Transport Personnel shall be permitted to bring into the territory of the Testing Party, without payment of any customs duties or related charges, articles for their personal use, with the exception of articles the import or export of which is prohibited by law or controlled by quarantine regulations.

8. Designated Personnel and Transport Personnel shall not engage in any professional or commercial activity for personal profit in the territory of the Testing Party.

9. Without prejudice to their privileges and immunities, Designated Personnel and Transport Personnel shall be obliged to respect the laws and regulations of the Testing Party and shall be obliged not to interfere in the internal affairs of that Party.

10. If the Testing Party considers that there has been an abuse of privileges and immunities specified in paragraph 7 of this Section, consultations shall be held between the Parties to determine whether such an abuse has occurred and, if so determined, to prevent a repetition of such an abuse.

SECTION X. ENTRY, TRANSPORT, FOOD, LODGING, AND
PROVISION OF SERVICES FOR DESIGNATED PERSONNEL
AND TRANSPORT PERSONNEL

1. The Testing Party shall ensure Designated Personnel and Transport Personnel access to its territory for the purposes of carrying out activities related to verification in accordance with this Protocol, and shall provide these personnel with such other assistance as may be necessary to enable them to carry out these activities. Designated Personnel shall have the right to be present at the test

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site and at Designated Seismic Stations in the territory of the Testing Party to carry out activities related to verification in accordance with this Protocol at such times and for such periods as required to carry out these activities. The specific times and periods for carrying out such activities shall be specified in the coordinated schedule.

2. No less than 20 days prior to the planned date of arrival of its Designated Personnel at the point of entry for participation in activities related to verification of a specific test, the Verifying Party shall provide the Testing Party with:

(a) a list of the names of the Designated Personnel with their passports and documentation, who will carry out activities related to verification of a specific test;

(b) the names of the Designated Personnel Team Leader or Leaders and the names of Designated Personnel who will escort equipment of the Verifying Party to the test site or each Designated Seismic Station;

(c) confirmation of the point of entry to be used;

(d) the planned date and the estimated time of arrival of these Designated Personnel at the point of entry; and

(e) the mode of transport to be used.

No more than 15 days following receipt of the list and passports and documentation specified in subparagraph (a) of this paragraph, the Testing Party shall return those passports to the Verifying Party with the visas and all necessary documents specified in paragraph 4 of Section IX of this Protocol.

3. No less than 20 days prior to the planned date of arrival of Transport Personnel at the point of entry, the Verifying Party shall provide the Testing Party with the number of Transport Personnel. No less than three days prior to the planned date of arrival of Transport Personnel, the Verifying Party shall provide the Testing Party with a list of the names of those Transport Personnel with their passports and documentation. No less than one day prior to the planned date of arrival of Transport Personnel, the Testing Party shall return those passports to the Verifying Party with the visas and all necessary documents specified in paragraph 4 of Section IX of this Protocol.

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4. The number of Designated Personnel present at a test site or Designated Seismic Station to carry out activities related to verification of a specific test shall be governed by the relevant restrictions specified in Sections V, VI, and VII of this Protocol. Designated Personnel shall leave the test site or Designated Seismic Station upon completion of activities related to verification of a specific test as specified in the coordinated schedule. Designated Personnel who have been present at the test site for a period of six consecutive weeks or more may be replaced by individuals included on the list submitted in accordance with paragraph 1 of Section IX of this Protocol. Designated Personnel who have not been present at the test site for a period of six consecutive weeks may be replaced only for reasons of injury, illness, or family emergency, and shall be replaced by individuals included on the list submitted in accordance with paragraph 1 of Section IX of this Protocol.

5. If a transport aircraft other than a regularly scheduled commercial aircraft is used by the Verifying Party for transportation between the territory of the Verifying Party and the point of entry, its flight path shall be along airways agreed upon by the Parties, and its flight plan shall be filed in accordance with the procedures of the International Civil Aviation Organization applicable to civil aircraft, including in the remarks section of the flight plan a confirmation that the appropriate clearance has been obtained. The Testing Party shall provide parking, security protection, servicing, and fuel for aircraft of the Verifying Party at the point of entry. The Verifying Party shall bear the cost of such fuel and servicing.

6. The Testing Party shall ensure that all necessary clearances or approvals are granted so as to enable Designated Personnel, their baggage, and equipment of the Verifying Party to arrive at the point of entry by the estimated arrival date and time.

7. The Testing Party shall assist Designated Personnel and Transport Personnel and their baggage in passage through customs without undue delay. The Testing Party shall provide transportation between the point of entry and the test site or the Designated Seismic Stations for Designated Personnel, their baggage, and equipment of the Verifying Party, so as to enable such personnel to exercise their rights and functions in the time periods provided in this Protocol and specified in the coordinated schedule.

8. The Testing Party shall have the right to assign its personnel to escort Designated Personnel and Transport Personnel while they are in its territory.

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9. Except as otherwise provided in this Protocol, movement and travel of Designated Personnel and Transport Personnel in the territory of the Testing Party, from the time of their arrival at the point of entry until their departure from the territory of the Testing Party at the point of entry, shall be subject to the authorization of the Testing Party.

10. During the period Designated Personnel and Transport Personnel are in the territory of the Testing Party, the Testing Party shall provide food, hotel-like living accommodations, working facilities, transportation, and medical services for such personnel, including access to its medical facilities for out-patient treatment and in-patient treatment, and also secure places for storing equipment. If the Verifying Party desires to provide its own food for its Designated Personnel and its Transport Personnel during their stay in the territory of the Testing Party, the Testing Party shall provide such assistance as may be necessary for such food to arrive at the appropriate locations. Designated Personnel shall have the use of a complete kitchen at all times during their stay at the test site and at each Designated Seismic Station.

11. The Verifying Party shall have the right to include among its Designated Personnel a medical specialist, who shall be allowed to bring medications, medical instruments, and portable medical equipment agreed upon by the Parties. If Designated Personnel are treated in a medical facility of the Testing Party, the medical specialist shall have the right to consult on the recommended treatment and monitor the course of medical treatment at all times. The medical specialist of the Verifying Party shall have the right to require the Testing Party to provide emergency evacuation of any individual of the Designated Personnel who is ill or has suffered an accident to a mutually agreed medical facility in the territory of the Testing Party or to the point of entry for emergency medical evacuation by the Verifying Party. Designated Personnel shall have the right to refuse any treatment prescribed by medical personnel of the Testing Party, and in this case the Testing Party shall not be responsible for any consequences of such refusal. Such refusal must always be express.

12. The Testing Party shall provide the Designated Personnel Team Leader or his designated representative at all times access to:

(a) telephone communications between the embassy of the Verifying Party in the territory of the Testing Party and the working facilities and living

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accommodations of Designated Personnel at each test site and each Designated Seismic Station; and

(b) an international telephone network from their working facilities and living accommodations at each test site and each Designated Seismic Station.

13. The Designated Personnel Team Leader or his designated representative shall have the right to use at all times satellite communications to ensure communications via the International Maritime Satellite Organization (INMARSAT) commercial satellite system, or a system of equivalent performance, between each test site in the territory of the Testing Party and the telephone communications system of the Verifying Party. If the Testing Party does not provide such communications, Designated Personnel shall have the right to use their own equipment specified in paragraph 1(k) of Section VIII of this Protocol. In this case, installation and alignment of all such equipment shall be done jointly. All equipment of this system, except the remote control unit, shall be locked and placed under seals of both Parties, and personnel of neither Party shall have access to this equipment except under observation of personnel of the other Party. Only Designated Personnel shall use the remote control unit. If the Verifying Party provides satellite communications equipment, personnel of the Testing Party shall have the right, under observation of Designated Personnel, to make the following modifications provided they do not degrade the quality of the communications:

(a) install bandpass filters, to limit the frequency range, in the antenna signal transmission and reception lines;

(b) modify the remote control unit to prevent manual tuning; and

(c) modify the satellite communications equipment to allow the Testing Party to monitor all transmissions.

14. The Testing Party shall provide the following for use by Designated Personnel:

(a) portable radios for communications at the test location;

(b) telephones for communications between work areas and between work areas and living quarters of Designated Personnel at the test site or Designated Seismic Stations; and

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(c) access to Testing Party-controlled vehicle-mounted radios for communications with the test location, work areas, or living quarters while Designated Personnel are in transit at the test site.

15. At the test site and each Designated Seismic Station, Designated Personnel shall observe all safety rules and regulations applicable to the personnel of the Testing Party, as well as all those additional restrictions with regard to access and movement as may be established by the Testing Party. Designated Personnel shall have access only to the areas in which they will directly exercise their rights and functions in accordance with Sections V, VI, VII, and VIII of this Protocol. The areas at the test site or the Designated Seismic Station in which Designated Personnel shall have freedom of movement during the conduct of a specific test without the mandatory escort of personnel of the Testing Party shall be marked on the diagrams of the test site or the Designated Seismic Stations provided to the Verifying Party at the first meeting of the Coordinating Group specified in paragraph 10 of Section XI of this Protocol. In all other cases, the permission of the Representative of the Testing Party, and escort by, personnel of the Testing Party shall be required.

16. Designated Personnel shall not be given or seek access by physical, visual, or technical means to the interior of any explosive canister, to documentary or other information descriptive of the design of an explosive, or to equipment for control and firing of an explosive. The Testing Party shall not locate documentary or other information descriptive of the design of an explosive in such ways as to impede Designated Personnel in carrying out their activities in accordance with this Protocol.

17. Possession or use by Designated Personnel of firearms, ammunition, or substances containing narcotics, with the exception of those prescribed by a physician, in the territory of the Testing Party is prohibited. Except as otherwise provided in this Protocol, possession or use by Designated Personnel of the following items is also prohibited at the test site or a Designated Seismic Station:

- (a) photographic and video recording equipment;
- (b) radio transmitters or receivers other than those supplied by the Testing Party;
- (c) sound recorders;
- (d) teleoptical devices; and
- (e) personal computers.

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18. Except as otherwise provided in this Protocol or as may be approved in writing by the Representative of the Testing Party, Designated Personnel are prohibited from removing any of the following items from the test site or a Designated Seismic Station:

- (a) soil samples;
- (b) plant samples;
- (c) water and air samples;
- (d) animals;
- (e) metal objects; and
- (f) rock samples or debris.

19. Designated Personnel shall have the right to remove from the territory of the Testing Party all items, including data, obtained in accordance with this Protocol.

20. The Testing Party shall have the right to inspect, in the presence of Designated Personnel, baggage and personal possessions of Designated Personnel upon their entry to or departure from the test site or Designated Seismic Stations. The Testing Party shall also have the right to inspect, in the presence of Designated Personnel, any packages received by Designated Personnel during their stay at the test site or Designated Seismic Stations or prepared for shipment by Designated Personnel from the test site or Designated Seismic Stations.

21. Except as provided in paragraphs 22, 23, and 24 of this Section or unless the Parties otherwise agree, the Verifying Party shall bear all costs of verification activities of Designated Personnel and Transport Personnel set forth in the coordinated schedule, including costs for use or consumption of materials, equipment, transportation, food, living and working facilities, medical assistance, communications, and services requested by and provided to the Verifying Party. The Verifying Party shall also bear the costs associated with transport aircraft in accordance with paragraph 5 of this Section.

22. The Testing Party shall bear all costs related to the preparation of its test sites, Designated Seismic Stations, and equipment storage facilities within its territory for the use of Designated Personnel as provided for in this Protocol.

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23. With respect to a test of non-standard configuration:

(a) the Testing Party shall bear the costs of the activities specified in paragraph 6(a) of Section V of this Protocol that are carried out with respect to the second and third satellite holes, if requested by the Verifying Party in accordance with paragraph 11 of Section XI of this Protocol; and

(b) the Testing Party shall bear the costs related to the conduct of a test identified by it as a reference test to satisfy the request of the Verifying Party in accordance with paragraph 11 of Section XI of this Protocol.

24. The Testing Party shall bear all costs related to transportation of equipment of the Verifying Party between:

(a) the point of entry and the location at which such equipment is subject to familiarization or inspection by the Testing Party in accordance with Section VIII of this Protocol;

(b) the location for familiarization or inspection by the Testing Party and the location at which such equipment is returned to the Verifying Party;

(c) the location at which such equipment is turned over to the Testing Party for storage and the storage location; and

(d) the storage location and the location at which such equipment is returned to the Verifying Party.

25. If the Verifying Party decides not to carry out activities related to verification that it specified in its initial notification, after technical and logistical support for these activities has been agreed upon in the Coordinating Group in accordance with paragraph 12 of Section XI of this Protocol, the Verifying Party shall reimburse the Testing Party for the costs of such agreed technical and logistical support incurred by the Testing Party prior to receipt of notification that the Verifying Party will not carry out the initially declared activities related to verification.

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SECTION XI. PROCEDURES FOR CONSULTATION AND COORDINATION

1. For the purposes of implementation of the Treaty and this Protocol, the Parties shall, immediately following entry into force of the Treaty, establish a Bilateral Consultative Commission, within the framework of which they shall meet, at the request of either Party, to:

(a) consider any questions relating to implementation of the Treaty and this Protocol;

(b) consider any suggestions for amendments to the Treaty or this Protocol;

(c) consider any technical or administrative changes to this Protocol of the nature provided in paragraph 2, 3, or 4 of this Section;

(d) consider any questions relating to compliance with the Treaty and this Protocol;

(e) consider any new verification technologies having a bearing on the Treaty or this Protocol;

(f) seek agreement on those matters specified in this Protocol as requiring agreement of the Parties; and

(g) seek agreement on questions related to costs for verification activities and procedures for reciprocal payments of such costs between the Parties.

2. If the Parties determine that the periods of time specified with respect to notifications in Section IV of this Protocol create practical difficulties and do not serve the interest of effective implementation of this Protocol, they may change such periods of time by agreement in the Bilateral Consultative Commission. Such agreed changes shall not be considered amendments to the Treaty or this Protocol.

3. If the Parties determine that, in the interest of effective implementation of this Protocol, the arrangements set forth in Section X of this Protocol regarding transportation, lodging, food, and services require modification, the provisions of Section X of this Protocol may be changed by agreement of the Parties in the Bilateral Consultative Commission. Such agreed changes shall not be considered amendments to the Treaty or this Protocol.

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4. If the Parties determine that modifications to verification procedures, including modifications resulting from improvements in existing technologies, would enhance effective implementation of the basic aims of the Treaty or this Protocol, they may, in the Bilateral Consultative Commission, agree upon such modifications. Such agreed modifications shall not be considered amendments to the Treaty or this Protocol.

5. The Parties, through consultation, shall establish, and may amend as appropriate, regulations to govern the operations of the Bilateral Consultative Commission.

6. For each test with respect to which activities related to verification are carried out in accordance with this Protocol, the Parties shall establish a Coordinating Group of the Bilateral Consultative Commission that shall be responsible for coordinating the activities of the Verifying Party with the activities of the Testing Party. The Bilateral Consultative Commission may, as necessary, establish and amend procedures governing the activities of the Coordinating Group.

7. The Coordinating Group shall operate throughout the entire period of preparing and carrying out activities related to verification of a specific test, until departure of Designated Personnel from the territory of the Testing Party.

8. All members of the Coordinating Group from the Verifying Party shall be drawn from the list of Designated Personnel. The Representative of the Verifying Party to the Coordinating Group shall be the Principal Designated Personnel Team Leader, whose name shall be provided simultaneously with the notification of intent to carry out activities related to verification of a specific test. Within 15 days following receipt of this notification, the Testing Party shall provide the Verifying Party with the name of its Representative to the Coordinating Group.

9. The first meeting of the Coordinating Group shall be convened in the capital of the Testing Party within 25 days following notification by the Verifying Party that it intends to carry out activities related to verification of a specific test. Thereafter, the Coordinating Group shall meet at the request of either Party.

10. On the first day of the first meeting of the Coordinating Group, the Testing Party shall present a list, including times and durations, of all activities it intends to carry out that could affect the rights of the Verifying Party provided in this Protocol with respect to activities

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declared by it and related to verification of a specific test. If the Verifying Party has provided notification of its intent:

(a) to use the hydrodynamic yield measurement method or carry out an on-site inspection, the Testing Party shall provide the Verifying Party with the following information:

(i) the number of emplacement holes for the specific test;

(ii) with respect to each emplacement hole, whether, for the purposes of this Protocol, the emplacement hole shall be deemed vertical or horizontal; and

(iii) the number of explosions included in the test and the location of each planned end of each emplacement hole and of the corresponding planned emplacement point, to the nearest 10 meters;

(b) to use the hydrodynamic yield measurement method with respect to a test of standard configuration that includes more than one explosion, the Testing Party shall provide, in addition to the information specified in subparagraph (a) of this paragraph, the following information:

(i) whether any explosion has a planned yield exceeding 50 kilotons, and, if so, which explosion or explosions; and

(ii) whether any explosion has a planned yield exceeding 35 kilotons, and, if so, which explosion or explosions; and

(c) to use the hydrodynamic yield measurement method with respect to a test of non-standard configuration, the Testing Party shall provide the information specified in subparagraphs (a) and (b) of this paragraph, as well as the following information:

(i) a detailed description, including dimensions, of each emplacement hole and any access or bypass tunnels connected to each emplacement hole if any portion of an access or bypass tunnel is within the hydrodynamic measurement zone;

(ii) the dimensions of each explosive canister and its orientation in the emplacement hole;

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(iii) the density and dimensions of each choke section; and

(iv) the location and configuration of any access or bypass tunnels and any known voids with a volume larger than one cubic meter, within 50 meters of the wall of each emplacement hole within the hydrodynamic measurement zone, and the bulk density of the stemming material if these voids are to be stemmed.

11. Within 15 days following the convening of the first meeting of the Coordinating Group, the Verifying Party shall provide the Testing Party, in the Coordinating Group, with a list of the activities it intends to carry out, as well as those activities provided for in this Protocol that it intends not to carry out. The Verifying Party shall also provide the Testing Party, in the Coordinating Group, with a preliminary statement of its requirements for technical and logistical support for the activities related to verification that it intends to carry out and whether it will require the Testing Party to provide the cables specified in paragraphs 3(a) and 3(b) of Section VIII of this Protocol for its use. If the Verifying Party has notified the Testing Party that it intends to use the hydrodynamic yield measurement method with respect to a test of non-standard configuration, the Verifying Party also shall inform the Testing Party:

(a) whether it requires a reference test; and

(b) whether it will actually carry out hydrodynamic yield measurements of the test of non-standard configuration, and, if so, which measurements, and:

(i) the number of satellite holes required and the specific distance and azimuth relative to the emplacement hole of the second and third satellite holes, if such are requested by the Verifying Party and, if the Testing Party is unable to prepare the first satellite hole in accordance with the conditions for such hole in the standard configuration, the distance and azimuth of that satellite hole relative to the emplacement hole; and

(ii) in which satellite holes the Verifying Party intends to use transducers and associated power supplies.

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12. Within 10 days following receipt by the Testing Party of the information specified in paragraph 11 of this Section, the Parties, in the Coordinating Group, shall develop and agree upon a coordinated schedule, which shall include specific times and durations for carrying out activities related to verification, ensuring the rights of each Party provided in this Protocol, and taking into account the number of Designated Personnel that will carry out activities related to verification of a specific test in accordance with Sections V, VI, and VII of this Protocol. The coordinated schedule shall reflect those numbers.

13. Agreement of the Representative of each Party to the Coordinating Group shall constitute agreement of the Parties for the purposes of this Protocol with the exception of paragraphs 3, 4, 5, 6, and 9 of Section III of this Protocol and paragraph 2 of Section XII of this Protocol.

14. Upon completion of activities related to verification of a specific test, the Designated Personnel Team Leader at the test site or at each Designated Seismic Station shall prepare a written report, in the language of each Party. The report shall be factual. It shall list activities carried out by Designated Personnel, with dates of their completion, and shall include lists of information, data, photographs, and samples obtained by Designated Personnel or provided by the Testing Party in accordance with this Protocol. The report shall list technical and logistical activities carried out by the Testing Party in support of activities related to verification. The Designated Personnel Team Leader shall include in the report comments on any ambiguities not resolved during the carrying out of activities related to verification. The Representative of the Testing Party may include in the report comments responding to these ambiguities. The Designated Personnel Team Leader shall complete the report prior to the scheduled departure of Designated Personnel from the test site or Designated Seismic Station. The Designated Personnel Team Leader and the Representative of the Testing Party shall each sign the report and retain a copy.

15. If, in the course of implementing activities related to verification of a specific test, in accordance with this Protocol, questions arise requiring prompt resolution, such questions shall be considered by the Coordinating Group. If the Coordinating Group is unable to resolve such questions, they shall immediately be referred to the Bilateral Consultative Commission for resolution.

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SECTION XII. RELEASE OF INFORMATION

1. Nothing in the Treaty and this Protocol shall affect the proprietary rights of either Party in information provided by it in accordance with the Treaty and this Protocol, or in information that may be disclosed to the other Party or that may become known to the other Party in preparing for or conducting a test. Claims to such proprietary rights, however, shall not impede implementation of the provisions of the Treaty and this Protocol.

2. Public release of the information provided in accordance with this Protocol or publication of material using such information may take place only with the agreement of the Testing Party. Public release of the results of observation or measurements made by Designated Personnel may take place only with the agreement of both Parties.

SECTION XIII. ENTRY INTO FORCE

This Protocol is an integral part of the Treaty. It shall enter into force on the date of entry into force of the Treaty and shall remain in force as long as the Treaty remains in force.

DONE at Washington, in duplicate, this first day of June, 1990, in the English and Russian languages, both texts being equally authentic.

FOR THE UNITED STATES
OF AMERICA:

FOR THE UNION OF SOVIET
SOCIALIST REPUBLICS:

President of the United
States of America

President of the Union of
Soviet Socialist Republics

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CONFERENCE ON DISARMAMENT

CD/1067
8 March 1991

Original: ENGLISH

LETTER DATED 28 FEBRUARY 1991 FROM THE REPRESENTATIVE OF THE UNITED STATES OF AMERICA ADDRESSED TO THE PRESIDENT OF THE CONFERENCE ON DISARMAMENT TRANSMITTING THE TEXT OF THE 1976 TREATY BETWEEN THE UNITED STATES OF AMERICA AND THE UNION OF SOVIET SOCIALIST REPUBLICS ON UNDERGROUND NUCLEAR EXPLOSIONS FOR PEACEFUL PURPOSES, TOGETHER WITH ITS PROTOCOL */

I have the honour to forward to you the 1976 Treaty between the United States of America and the Union of Soviet Socialist Republics on Underground Nuclear Explosions for Peaceful Purposes, together with its Protocol, which entered into force following the exchange of instruments of ratification on 11 December 1990.

In accordance with the past practice, Minister Batsanov, USSR Representative to the Conference on Disarmament, will transmit these documents in Russian to the Conference on Disarmament.

I ask that you take the appropriate steps to issue this treaty text as an official document of the Conference on Disarmament and have it distributed to all member delegations and non-member States participating in the work of the Conference.

(Signed) Stephen J. Ledogar
Representative of the
United States of America
to the Conference on
Disarmament

*/ The official Russian text of the above-mentioned Treaty together with its Protocol is to be found in CD/1069.

Treaty Between the United States of America and the Union of Soviet Socialist Republics on Underground Nuclear Explosions for Peaceful Purposes

Signed at Washington and Moscow May 28, 1976

The United States of America and the Union of Soviet Socialist Republics, hereinafter referred to as the Parties.

Proceeding from a desire to implement Article III of the Treaty between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Underground Nuclear Weapon Tests, which calls for the earliest possible conclusion of an agreement on underground nuclear explosions for peaceful purposes.

Reaffirming their adherence to the objectives and principles of the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water, the Treaty on Non-Proliferation of Nuclear Weapons, and the Treaty on the Limitation of Underground Nuclear Weapon Tests, and their determination to observe strictly the provisions of these international agreements.

Desiring to assure that underground nuclear explosions for peaceful purposes shall not be used for purposes related to nuclear weapons.

Desiring that utilization of nuclear energy be directed only toward peaceful purposes.

Desiring to develop appropriately cooperation in the field of underground nuclear explosions for peaceful purposes.

Have agreed as follows:

Article I

1. The Parties enter into this Treaty to satisfy the obligations in Article III of the Treaty on the Limitation of Underground Nuclear Weapon Tests, and assume additional obligations in accordance with the provisions of this Treaty.

2. This Treaty shall govern all underground nuclear explosions for peaceful purposes conducted by the Parties after March 31, 1976.

Article II

For the purposes of this Treaty:

(a) "explosion" means any individual or group underground nuclear explosion for peaceful purposes;

(b) "explosive" means any device, mechanism or system for producing an individual explosion;

(c) "group explosion" means two or more individual explosions for which the time interval between successive individual explosions does not exceed five seconds and for which the emplacement points of all explosives can be interconnected by straight line segments, each of which joins two emplacement points and each of which does not exceed 40 kilometers.

Article III

1. Each Party, subject to the obligations assumed under this Treaty and other international agreements, reserves the right to:

(a) carry out explosions at any place under its jurisdiction or control outside the geographical boundaries of test sites specified under the provisions of the Treaty on the Limitation of Underground Nuclear Weapon Tests; and

(b) carry out, participate or assist in carrying out explosions in the territory of another State at the request of such other State.

2. Each Party undertakes to prohibit, to prevent and not to carry out at any place under its jurisdiction or control, and further undertakes not to carry out, participate or assist in carrying out anywhere:

(a) any individual explosion having a yield exceeding 150 kilotons;

(b) any group explosion:

(1) having an aggregate yield exceeding 150 kilotons except in ways that will permit identification of each individual explosion and determination of the yield of each individual explosion in the group in accordance with the provisions of Article IV of and the Protocol to this Treaty;

(2) having an aggregate yield exceeding one and one-half megatons;

(c) any explosion which does not carry out a peaceful application;

(d) any explosion except in compliance with the provisions of the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water, the Treaty on the Non-Proliferation of Nuclear Weapons, and other international agreements entered into by that Party.

3. The question of carrying out any individual explosion having a yield exceeding the yield specified in paragraph 2(a) of this article will be considered by the Parties at an appropriate time to be agreed.

Article IV

1. For the purpose of providing assurance of compliance with the provisions of this Treaty, each Party shall:

(a) use national technical means of verification at its disposal in a manner consistent with generally recognized principles of international law; and

(b) provide to the other Party information and access to sites of explosions and furnish assistance in accordance with the provisions set forth in the Protocol to this Treaty.

2. Each Party undertakes not to interfere with the national technical means of verification of the other Party operating in accordance with paragraph 1(a) of this article, or with the implementation of the provisions of paragraph 1(b) of this article.

Article V

1. To promote the objectives and implementation of the provisions of this Treaty, the Parties shall establish promptly a Joint Consultative Commission within the framework of which they will:

(a) consult with each other, make inquiries and furnish information in response to such inquiries, to assure confidence in compliance with the obligations assumed;

(b) consider questions concerning compliance with the obligations assumed and related situations which may be considered ambiguous;

(c) consider questions involving unintended interference with the means for assuring compliance with the provisions of this Treaty;

(d) consider changes in technology or other new circumstances which have a bearing on the provisions of this Treaty; and

(e) consider possible amendments to provisions governing underground nuclear explosions for peaceful purposes.

2. The Parties through consultation shall establish, and may amend as appropriate, Regulations for the Joint Consultative Commission governing procedures, composition and other relevant matters.

Article VI

1. The Parties will develop cooperation on the basis of mutual benefit, equality, and reciprocity in various areas related to carrying out underground nuclear explosions for peaceful purposes.

2. The Joint Consultative Commission will facilitate this cooperation by considering specific areas and forms of cooperation which shall be determined by agreement between the Parties in accordance with their constitutional procedures.

3. The Parties will appropriately inform the International Atomic Energy Agency of results of their cooperation in the field of underground nuclear explosions for peaceful purposes.

Article VII

1. Each Party shall continue to promote the development of the international agreement or agreements and procedures provided for in Article V of the Treaty on the Non-Proliferation of Nuclear Weapons, and shall provide appropriate assistance to the International Atomic Energy Agency in this regard.

2. Each Party undertakes not to carry out, participate or assist in the carrying out of any explosion in the territory of another State unless that State agrees to the implementation in its territory of the international observation and procedures contemplated by Article V of the Treaty on the Non-Proliferation of Nuclear Weapons and the provisions of Article IV of and the Protocol to this Treaty, including the provision by that State of the assistance necessary for such implementation and of the privileges and immunities specified in the Protocol.

Article VIII

1. This Treaty shall remain in force for a period of five years, and it shall be extended for successive five-year periods unless either Party notifies the other of its termination no later than six months prior to its expiration. Before the expiration of this period the Parties may, as necessary, hold consultations to consider the situation relevant to the substance of this Treaty. However, under no circumstances shall either Party be entitled to terminate this Treaty while the Treaty on the Limitation of Underground Nuclear Weapon Tests remains in force.

2. Termination of the Treaty on the Limitation of Underground Nuclear Weapon Tests shall entitle either Party to withdraw from this Treaty at any time.

3. Each Party may propose amendments to this Treaty. Amendments shall enter into force on the day of the exchange of instruments of ratification of such amendments.

Article IX

1. This Treaty including the Protocol which forms an integral part hereof, shall be subject to ratification in accordance with the constitutional procedures of each Party. This Treaty shall enter into force on the day of the exchange of instruments of ratification which exchange shall take place simultaneously with the exchange of instruments of ratification of the Treaty on the Limitation of Underground Nuclear Weapon Tests.

2. This Treaty shall be registered pursuant to Article 102 of the Charter of the United Nations.

DONE at Washington and Moscow, on May 28, 1976, in duplicate, in the English and Russian languages, both texts being equally authentic.

For the United States of America:

GERALD R. FORD,

The President of the United States of America.

For the Union of Soviet Socialist Republics:

L. BREZHNEV,

General Secretary of the Central Committee of the CPSU.

PROTOCOL TO THE TREATY BETWEEN
THE UNITED STATES OF AMERICA AND
THE UNION OF SOVIET SOCIALIST REPUBLICS
ON UNDERGROUND NUCLEAR EXPLOSIONS
FOR PEACEFUL PURPOSES

The United States of America and the Union of Soviet Socialist Republics, hereinafter referred to as the Parties,

Confirming the provisions of the Treaty Between the United States of America and the Union of Soviet Socialist Republics on Underground Nuclear Explosions for Peaceful Purposes of May 28, 1976, hereinafter referred to as the Treaty,

Taking into account the fact that nuclear explosions for peaceful purposes are conducted outside national nuclear test sites under various geological conditions,

Convinced of the necessity to ensure effective verification of compliance with the Treaty,

Have agreed as follows:

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SECTION I. DEFINITIONS

In addition to the definitions of terms set forth in Article II of the Treaty, for the purposes of this Protocol:

1. The term "emplacement hole" means the entire interior of any drill hole, shaft, adit or tunnel in which an explosive, associated cables, and other equipment are installed for the purposes of carrying out an explosion.
2. The term "Verifying Party" means the Party entitled to carry out, in accordance with this Protocol, activities related to verification of compliance with the Treaty by the Party carrying out an explosion.
3. The term "Designated Personnel" means personnel appointed by the Verifying Party from among its nationals and included on its list of Designated Personnel, in accordance with Section IX of this Protocol, to carry out activities related to verification, in accordance with this Protocol, in the territory of the Party carrying out the explosion.
4. The term "Transport Personnel" means personnel appointed by the Verifying Party from among its nationals and included on its list of Transport Personnel, in accordance with Section IX of this Protocol, to provide transportation for Designated Personnel, their baggage, and equipment of the Verifying Party between the territory of the Verifying Party and the point of entry in the territory of the Party carrying out the explosion.
5. The term "point of entry" means Washington, D.C. (Dulles International Airport) with respect to the United States of America; and Moscow (Sheremetyevo-2 Airport) with respect to the Union of Soviet Socialist Republics. Other locations may serve as points of entry for specific explosions, as agreed by the Parties.
6. The term "on-site inspection" means activities carried out by the Verifying Party in the territory of the Party carrying out the explosion, in accordance with Section VII of this Protocol, for the purposes of independently obtaining data on conditions under which the explosion will be conducted and confirming the validity of data provided by the Party carrying out the explosion.
7. The term "hydrodynamic yield measurement method" means the method whereby the yield of an explosion is derived from on-site, direct measurement of the position

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of the shock front as a function of time during the hydrodynamic phase of the ground motion produced by the explosion.

8. The term "local seismic network" means the array of seismic stations and the control point temporarily deployed, in accordance with this Protocol, for the purpose of identifying the number of individual explosions in a specific group explosion.

9. The term "Joint Consultative Commission" means the Commission established in accordance with Article V of the Treaty.

10. The term "Coordinating Group" means a working group of the Joint Consultative Commission, established in accordance with Section XI of this Protocol.

11. The term "Nuclear Risk Reduction Centers" means the Centers located in Washington, D.C., and Moscow, established in accordance with the Agreement Between the United States of America and the Union of Soviet Socialist Republics on the Establishment of Nuclear Risk Reduction Centers of September 15, 1987.

SECTION II. EXPLOSION DEPTH AND COMPOSITION

1. No explosion shall be conducted at a distance in meters from the ground surface less than 30 times the 3.4 root of the planned yield of that explosion in kilotons.

2. No group explosion shall have an aggregate yield exceeding 150 kilotons unless the Parties agree on specific procedures to implement appropriate provisions of this Protocol so as to permit identification of each individual explosion and determination of the yield of each individual explosion in the group.

3. No explosion having a planned yield exceeding 35 kilotons shall be conducted in a cavity having a volume exceeding 20,000 cubic meters, unless the Parties agree on verification measures for such an explosion.

SECTION III. VERIFICATION MEASURES

1. For the purposes of the Treaty, all underground nuclear explosions conducted outside national nuclear test

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sites shall be considered underground nuclear explosions for peaceful purposes subject to all the provisions of the Treaty. For purposes of verification of compliance with the Treaty, in addition to using available national technical means, the Verifying Party shall have the right:

(a) to use the hydrodynamic yield measurement method, in accordance with Section V of this Protocol, to measure the yield of each explosion that the Party carrying out the explosion notifies, in accordance with paragraph 3 of Section IV of this Protocol, to have a planned yield exceeding 50 kilotons;

(b) to use the hydrodynamic yield measurement method, in accordance with Section V of this Protocol, to monitor the yield of each individual explosion in a group explosion that the Party carrying out the explosion notifies, in accordance with paragraph 3 of Section IV of this Protocol, to have a planned aggregate yield exceeding 50 kilotons;

(c) to use, in conjunction with the use of the hydrodynamic yield measurement method, a local seismic network, in accordance with Section VI of this Protocol, for each group explosion that the Party carrying out the explosion notifies, in accordance with paragraph 3 of Section IV of this Protocol, to have a planned aggregate yield exceeding 150 kilotons; and

(d) to carry out on-site inspection, in accordance with Section VII of this Protocol, with respect to any explosion that the Party carrying out the explosion notifies, in accordance with paragraph 3 of Section IV of this Protocol, to have a planned yield exceeding 35 kilotons and, with respect to any explosion having a planned yield exceeding 50 kilotons, only if the Verifying Party has decided not to use the hydrodynamic yield measurement method.

2. The Party carrying out the explosion shall bear full responsibility for, and have exclusive control over, the conduct of the explosion.

3. Designated Personnel shall be responsible for the working of their equipment, its timely installation and operation, for participating in such operations, including dry runs, as the Party carrying out the explosion may request, and for recording data at the time of the explosion. The Party carrying out the explosion shall be under no obligation to change the time of the explosion because of any malfunction of the equipment of the Verifying Party or inability of Designated Personnel to carry out their functions, unless actions of the Party carrying out the explosion have caused such a situation to arise.

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SECTION IV. NOTIFICATIONS AND INFORMATION
RELATING TO EXPLOSIONS

1. Unless the Parties otherwise agree, all notifications provided for in this Protocol shall be transmitted through the Nuclear Risk Reduction Centers. The Nuclear Risk Reduction Centers may also be used, as appropriate, to transmit other information provided in accordance with this Protocol.

2. Not later than July 1 following entry into force of the Treaty, and each July 1 thereafter, each Party shall inform the other Party whether or not it intends to conduct, during the following calendar year, any individual or group explosion for peaceful purposes having a planned aggregate yield exceeding 35 kilotons, and, if so, how many. On the date of entry into force of the Treaty, information specified by this paragraph shall be provided by each Party for the remainder of the calendar year in which the Treaty enters into force and for the period from January 1 through December 31 of the succeeding year. In the event of changes in the information provided in accordance with this paragraph, such changes shall be immediately provided to the other Party.

3. No less than 180 days prior to the planned date of the beginning of emplacement of the explosive or explosives for every explosion having a planned yield exceeding 35 kilotons, the Party carrying out the explosion shall notify the Verifying Party of its intention to carry out the explosion and shall provide the Verifying Party with the following information, to the extent and degree of accuracy available at the time when it is provided:

- (a) the planned date of the explosion;
- (b) the planned date of the beginning of emplacement of the explosive or explosives;
- (c) the purpose of the explosion;
- (d) the location of the explosion, expressed in geographic coordinates to the nearest minute;
- (e) the planned yield of the explosion;
- (f) the number of explosives, and the planned yield of each individual explosive;
- (g) the planned depth of emplacement of each explosive to the nearest 10 meters;

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(h) the type or types of rock in which the explosion will take place, including the depth of the water table; and

(i) a description of specific technological features of the project of which the explosion is a part that may affect determination of its yield and confirmation of its purpose.

4. Following receipt of information specified in paragraph 3 of this Section, the Verifying Party shall inform the Party carrying out the explosion, no less than 150 days prior to the planned date of the beginning of emplacement of explosives, in a single notification, whether or not it intends to carry out one of the following activities related to verification:

(a) with respect to an explosion having a planned yield exceeding 35 kilotons, to carry out on-site inspection in accordance with Section VII of this Protocol; or

(b) with respect to an explosion having a planned yield exceeding 50 kilotons, to use the hydrodynamic yield measurement method, in accordance with Section V of this Protocol, and, with respect to a group explosion having a planned aggregate yield exceeding 150 kilotons, to use, in conjunction with the hydrodynamic yield measurement method, a local seismic network, in accordance with Section VI of this Protocol.

5. If the Verifying Party:

(a) declares its intention not to conduct activities described in paragraphs 4(a) and 4(b) of this Section, it shall thereby forfeit its right to conduct such activities unless the Party carrying out the explosion provides notification, in accordance with paragraph 9 of this Section, of a change in the location by more than one minute of latitude or longitude or of a change in the planned date of the explosion that changes the date indicated in the initial notification by 60 days or more. Within 30 days of notification by the Party carrying out the explosion of any such change in location or planned date of the explosion, the Verifying Party shall have the right to revise the notification it provided in accordance with paragraph 4 of this Section. In the event the Verifying Party elects to revise its notification and to use the hydrodynamic yield measurement method or to carry out on-site inspection, the beginning of emplacement of explosives shall not

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occur less than 90 days from the date of the Verifying Party's revised notification, unless the Parties otherwise agree. The Party carrying out the explosion shall thereafter provide the Verifying Party with the information specified in paragraph 6 or 7 of this Section; or

(b) decides not to conduct the activities related to verification specified by it in its initial notification, after technical and logistical support requirements for these activities have been agreed upon in the Coordinating Group, in accordance with paragraph 6 of Section XI of this Protocol, the Verifying Party shall reimburse the Party carrying out the explosion for costs for such technical and logistical support incurred by the Party carrying out the explosion prior to receipt of notification that the Verifying Party will not carry out the initially-declared activities related to verification.

6. In the event of receipt by the Party carrying out the explosion of notification from the Verifying Party of its intent to use the hydrodynamic yield measurement method, the Party carrying out the explosion shall provide the Verifying Party not less than 60 days prior to the planned date of the beginning of emplacement of explosives with the following information:

(a) the number of explosives; the planned yield of each explosive; the planned depth of emplacement of each explosive with an accuracy of 10 meters; the planned point of emplacement of each explosive to be used in a group explosion relative to all other explosives in the group with an accuracy of 10 percent of the distance between that explosive and the nearest other explosive, but in no case shall the error be greater than 100 meters; and the planned time intervals between individual explosions in each group explosion with an accuracy of 0.1 second;

(b) a description of the geological and geophysical characteristics of the site of each explosion that could influence determination of the yield, which shall include: the depth of the water table; a stratigraphic column above each emplacement point; the position of each emplacement point relative to nearby geological and other features that influenced the design of the project of which the explosion is a part; and the estimated physical parameters of the rock within each hydrodynamic measurement zone, including bulk density, grain density, compressional and shear-wave velocities, porosity, and total water content;

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(c) the locations and purposes of facilities and installations that are associated with the conduct of the explosion;

(d) the planned date of the beginning of emplacement of each explosive;

(e) a topographic chart, marked with geographic coordinates accurate to one minute of latitude and longitude, of the areas circumscribed by circles of 15 kilometer radius centered on points on the surface of the earth above the points of emplacement of each explosive, at a scale of 1:24,000 or 1:25,000 with a contour interval of 10 meters or less. The planned location of each explosive shall be marked on this chart with an accuracy of 50 meters;

(f) the length of each canister in which an explosive will be contained, hereinafter referred to as an explosive canister;

(g) the dimensions of any pipe or other device that will be used to emplace each explosive canister;

(h) the planned cross-sectional dimensions of each emplacement hole within the hydrodynamic measurement zones;

(i) a description of materials, including their densities, to be used to stem the emplacement hole within each hydrodynamic measurement zone; and

(j) the location and configuration of any known voids larger in volume than one cubic meter within each hydrodynamic measurement zone.

7. In the event of receipt by the Party carrying out the explosion of notification from the Verifying Party of its intent to carry out on-site inspection, the Party carrying out the explosion shall provide the Verifying Party, not less than 60 days prior to the planned date of the beginning of emplacement of explosives, with the following information:

(a) the number of explosives; the planned yield of each explosive; the planned depth of emplacement of each explosive with an accuracy of 10 meters; the planned point of emplacement of each explosive to be used in a group explosion relative to all other explosives in the group with an accuracy of 10 percent of the distance between that explosive and the nearest other explosive, but in no case shall the error be

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greater than 100 meters; and the planned time intervals between individual explosions in each group explosion with an accuracy of 0.1 second;

(b) a description of the geological and geophysical characteristics of the site of each explosion that could influence determination of the yield, which shall include: the depth of the water table; a lithologic column above each emplacement point; the position of each emplacement point relative to nearby geological and other features that influenced the design of the project of which the explosion is a part; and the estimated physical parameters of the rock within each hydrodynamic measurement zone, including bulk density, grain density, porosity, and total water content;

(c) the locations and purposes of facilities and installations that are associated with the conduct of the explosion;

(d) the planned date of the beginning of emplacement of each explosive;

(e) a topographic chart, marked with geographic coordinates accurate to one minute of latitude and longitude, of the areas circumscribed by circles of 15 kilometer radius centered on points on the surface of the earth above the points of emplacement of each explosive, at a scale of 1:24,000 or 1:25,000 with a contour interval of 10 meters or less. The planned location of each explosive shall be marked on this chart with an accuracy of 50 meters;

(f) the planned cross-sectional dimensions of each emplacement hole within the hydrodynamic measurement zones; and

(g) the location and configuration of any known voids larger in volume than one cubic meter within each hydrodynamic measurement zone.

8. For each explosion, the Party carrying out the explosion shall inform the Verifying Party, no less than two days prior to the explosion, of the planned time of detonation of each explosive, with an accuracy of 0.1 second. In the event the Party carrying out the explosion decides to change the detonation time, the Verifying Party shall be notified of this change immediately after this decision has been taken. No more than 10 days following the explosion the Verifying Party shall be informed of the actual detonation time.

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9. The Party carrying out the explosion shall immediately notify the Verifying Party of any change in any information provided in accordance with paragraph 3, 6, or 7 of this Section. If the Verifying Party has provided notification under paragraph 4 of this Section of its decision to use the hydrodynamic yield measurement method or to carry out on-site inspection, the emplacement of explosives shall not begin less than 90 days following notification of any change in any information provided in accordance with paragraph 3, 6, or 7 of this Section that requires more extensive verification procedures than are required on the basis of initial information, unless an earlier date for the beginning of emplacement of explosives has been agreed upon by the Parties. Such changes include:

- (a) change in the location of the explosion by more than one minute of latitude or longitude;
- (b) change in the number of explosives in a group explosion;
- (c) change in the yield of the explosion;
- (d) change in the purpose of the explosion; and
- (e) delay in the planned date of the explosion by more than 90 days.

10. In using an explosion to decrease the consequences of an emergency situation related to an unforeseen set of circumstances and requiring immediate action, by virtue of which it would be practically impossible to adhere to the requirements of paragraph 3 of this Section concerning the time period, the following conditions shall be fulfilled:

- (a) the Party making the decision to carry out an explosion for such a purpose shall notify the Verifying Party of this decision immediately after it has been made and shall describe the circumstances and provide the planned yield for such an explosion;
- (b) the planned aggregate yield for such an explosion shall not exceed 100 kilotons and the explosion shall not include more than three individual explosions, unless the Parties otherwise agree;
- (c) the Party carrying out such an explosion shall provide the Verifying Party with the information specified in paragraphs 3 and 6 of this Section, to the extent such information is available, after making the decision on carrying out the explosion, but no less than 60 days prior to the beginning of emplacement of explosives; and

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(d) if, within 15 days following receipt of notification of such an explosion, the Verifying Party has made the decision to carry out verification of that explosion using the hydrodynamic yield measurement method, it shall deliver hydrodynamic yield measurement equipment to the point of entry in the territory of the Party carrying out the explosion no less than 35 days prior to the planned date of the beginning of emplacement of explosives, in accordance with paragraphs 8(b), 8(c), 8(d), 8(e), and 8(f) of Section VIII of this Protocol. This equipment shall be handed over, in the same condition as that in which it was received, to Designated Personnel at the site of the explosion for emplacement, installation, and use no less than 20 days prior to the planned date of the beginning of emplacement of explosives.

11. The Party carrying out an explosion shall have the right to make changes in the schedule of operations related to the conduct of the explosion. In the event the Verifying Party exercises its rights to use the hydrodynamic yield measurement method or to carry out on-site inspection, in accordance with Section III of this Protocol, the Party carrying out the explosion shall immediately inform the Verifying Party of any such change in the schedule of operations. In the event the Verifying Party has provided notification, under paragraph 4 of this Section, of its decision to use the hydrodynamic yield measurement method or to carry out on-site inspection, the explosion shall not be carried out more than five days prior to the planned date of the explosion indicated in the initial notification, unless the Parties otherwise agree.

12. The Verifying Party may at any time, but no more than one year after the explosion, request from the Party carrying out the explosion clarification of any point of information provided in accordance with this Section. Such clarification shall be provided in the shortest possible time, but no more than 30 days following receipt of a request.

SECTION V. HYDRODYNAMIC YIELD MEASUREMENT METHOD

1. The hydrodynamic measurement zone for each explosive means a cylindrical region coaxial with the emplacement hole of that explosive. This region extends in the direction of the entrance to the emplacement hole from the midpoint of the canister containing that explosive to the point at which the axis of the emplacement hole intersects a spherical surface whose radius, measured from

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the midpoint of the canister containing the explosive, is equal in meters to 10 times the cube root of the planned yield in kilotons of that explosive, or 25 meters, whichever is greater. The length of this region in the opposite direction from the same midpoint of the canister is equal in meters to three times the cube root of the planned yield in kilotons of that explosive, or 7.5 meters, whichever is greater. The radius of this region is equal in meters to three times the cube root of the planned yield in kilotons of that explosive, or 7.5 meters, whichever is greater.

2. For hydrodynamic yield measurement the following procedures shall apply:

(a) Designated Personnel shall emplace, for each explosive, the equipment specified in paragraph 5(a) of Section VIII of this Protocol in the same emplacement hole as the explosive. The equipment specified in paragraphs 5(a) and 5(b) of Section VIII of this Protocol shall be installed, in accordance with installation instructions provided in accordance with paragraph 8(a)(i) of Section VIII of this Protocol, by Designated Personnel under observation of personnel of the Party carrying out the explosion and with their assistance, if Designated Personnel have requested such assistance. The location of each recording facility and the command and monitoring facility of the Verifying Party shall be determined by agreement of the Parties with respect to each particular explosion. This equipment shall be operated by Designated Personnel;

(b) for each explosive, the equipment specified in paragraph 5(a) of Section VIII of this Protocol shall be installed so that the end point of the equipment farthest from the emplacement hole entrance is three meters from the surface of the explosive canister closest to the emplacement hole entrance as measured along the axis of the emplacement hole. The location of this equipment relative to the axis of the emplacement hole shall be agreed upon by the Parties. No more than six sensor channels shall be installed for each explosive. Each Party shall make documented records of measured distances to the sensors. These records shall be exchanged by the Parties;

(c) explosive canisters with a length greater than 10 meters or a diameter greater than three meters shall be used only if prior agreement has been reached between the Parties establishing, in each specific case, provisions for their use; and

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(d) the Party carrying out the explosion shall fill all voids other than the explosive canister within the hydrodynamic measurement zone of each explosive in each emplacement hole with stemming material. This stemming material, beginning no more than three meters from each explosive canister cover towards the entrance of the hole, and proceeding in that direction, shall have a bulk density no less than 70 percent of the average density of the surrounding rock. An alternate stemming material may be used for filling the remainder of the hydrodynamic measurement zone of that explosive. For any explosive emplaced in an emplacement hole whose diameter is less than 30 centimeters and emplaced at a distance of more than 1.5 kilometers from the entrance of the hole, an alternate stemming material may be used for filling the entire hydrodynamic measurement zone of that explosive. If more than one explosive is emplaced in a single emplacement hole, the Parties shall agree upon an alternate stemming material for filling the entire hydrodynamic measurement zone of each explosive other than the explosive nearest the entrance of the emplacement hole if the emplacement hole diameter is greater than 30 centimeters but less than 60 centimeters. Any alternate stemming material shall have a bulk density no less than 1.2 grams per cubic centimeter. Pipes located within the hydrodynamic measurement zone need not be filled with stemming material if they have a cross-sectional area less than 10 square centimeters, or if they have a cross-sectional area less than 100 square centimeters and a length less than one meter. Costs incurred by the Party carrying out the explosion to ensure, within the hydrodynamic measurement zone, a density of stemming material no less than 70 percent of the average density of the surrounding rock shall be borne by the Verifying Party.

3. For a group explosion the Party carrying out the explosion shall ensure that the emplacement point of each explosive canister, the detonation sequence, and the time intervals between individual explosions are such that no explosion in the group shall interfere with the hydrodynamic yield measurement of any other individual explosion. With the exception of group explosions provided for in paragraph 2 of Section II of this Protocol, if the technological characteristics of the project of which the group explosion is a part make it impossible to satisfy this requirement, the Parties, prior to the beginning of emplacement of explosives, shall agree upon alternative hydrodynamic or other verification procedures.

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4. In preparation for the use of the hydrodynamic yield measurement method, the Verifying Party shall have the right to confirm the validity of the geological and geophysical information provided in accordance with Section IV of this Protocol, in accordance with the following procedures:

(a) Designated Personnel may analyze relevant studies and measurement data, including logging data, of the Party carrying out the explosion, the core samples or rock fragments extracted from each emplacement hole within the hydrodynamic measurement zone, as well as any logging data and core samples from existing exploratory holes, which shall be provided to Designated Personnel upon their arrival at the explosion site, if the Party carrying out the explosion carried out relevant studies, measurements, and coring; and

(b) Designated Personnel shall have the right to observe logging and the extraction of core samples or rock fragments from locations agreed upon by the Parties within the hydrodynamic measurement zone in the emplacement hole or from an exploratory hole at depth intervals agreed upon by the Parties. Any such exploratory hole shall be no farther from the emplacement hole than a distance in meters of 10 times the cube root of the planned yield in kilotons of the emplaced explosive; or

(c) if the Party carrying out the explosion does not take core samples or rock fragments in accordance with subparagraph (b) of this paragraph or does not drill an exploratory hole meeting the requirements specified in subparagraph (b) of this paragraph, the Verifying Party shall have the right to extract sidewall rock samples from the emplacement hole with its own equipment, to drill such an exploratory hole, and to core this hole. Such operations shall be conducted in the presence of personnel of the Party carrying out the explosion. Such an exploratory hole shall be stemmed by the Party carrying out the explosion, at the expense of the Verifying Party; and

(d) Designated Personnel shall have the right to examine and remove from the territory of the Party carrying out the explosion logging data, core samples, sidewall rock samples, and rock fragments referred to in subparagraphs (a), (b), and (c) of this paragraph, as selected by Designated Personnel.

5. While using the hydrodynamic yield measurement method, Designated Personnel shall have the right:

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(a) to confirm by direct measurement the validity of the information provided in accordance with paragraphs 6(f), 6(g), and 6(h) of Section IV of this Protocol;

(b) to confirm the validity of the information provided in accordance with paragraph 6(i) of Section IV of this Protocol, and to receive, upon request, a sample of each batch of stemming material as this material is placed in the emplacement hole within the hydrodynamic measurement zone; and

(c) to confirm the validity of the information provided in accordance with paragraphs 6(b) and 6(j) of Section IV of this Protocol, by observing, upon request, relevant field measurements being made by the Party carrying out the explosion if such measurements are made by the Party carrying out the explosion, and by making field measurements with its own logging equipment, to include determination of the location and configuration of any voids within each hydrodynamic measurement zone or, at the option of the Verifying Party under leasing conditions, with the logging equipment of the Party carrying out the explosion, if the Party carrying out the explosion has such equipment. Such field measurements shall be made in the presence of personnel of both Parties. All of the data produced by either Party, including calibration data, shall be duplicated, and one copy of the data shall be provided to each Party. Calibration data for the equipment shall include information to confirm the sensitivity of the equipment under the conditions in which it is utilized for this explosion.

6. Designated Personnel shall have the right:

(a) to have access to the site of the explosion and to facilities and structures related to the conduct of the explosion, along agreed routes;

(b) to observe the emplacement of each explosive canister, to confirm, by direct measurement, the depth of emplacement of each explosive canister and, for explosives in a group, the relative location of their points of emplacement, and to observe the stemming of each emplacement hole;

(c) to have access to their equipment associated with the use of the hydrodynamic yield measurement method from commencement of its use by Designated Personnel at the explosion site until the departure of all personnel from the explosion area prior to the explosion;

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(d) to unimpeded visual observation of the entrance area to each emplacement hole at any time from the moment of emplacement of each explosive until the departure of all personnel from the explosion area prior to the explosion;

(e) to observe remotely by means of closed-circuit television equipment their hydrodynamic yield measurement equipment specified in paragraphs 5(b) and 5(c) of Section VIII of this Protocol;

(f) to observe the explosion; and

(g) to monitor electrically the integrity and performance of their equipment in each recording facility from the command and monitoring facility, to transmit the hydrodynamic yield measurement data from each recording facility to the command and monitoring facility, and to transmit the commands required for operation of each recording facility from the command and monitoring facility to each recording facility.

7. The Party carrying out the explosion shall produce, at the request of the Verifying Party, a timing reference command signal to each recording facility at two minutes, plus or minus 100 milliseconds, before the moment of the explosion, or before the first explosion in a group, and a zero-time reference signal to each corresponding recording facility for each explosion, with an accuracy of plus or minus one microsecond. The parameters for these signals, produced by the Party carrying out the explosion, and procedures for their transmission and reception shall be agreed upon by the Parties. At the Verifying Party's option, it shall have the right to generate a timing reference signal for each explosion, using the electromagnetic pulse from its hydrodynamic measurement cables. These timing reference signals shall be transmitted, used, and recorded by the Verifying Party without intervention by the Party carrying out the explosion.

8. Designated Personnel shall have the right to acquire photographs taken by the Party carrying out the explosion, with photographic cameras provided by the Verifying Party, under the following conditions:

(a) the Party carrying out the explosion shall identify those of its personnel who will take photographs;

(b) photographs shall be taken as requested by, and in the presence of, Designated Personnel. If requested by Designated Personnel, such photographs shall show the size of an object by placing a measuring

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scale, provided by the Verifying Party, alongside that object during the photographing;

(c) Designated Personnel shall determine whether photographs conform to those requested and, if not, repeat photographs shall be taken; and

(d) before completion of any photographed operation related to emplacement, and prior to the time at which an object being photographed becomes permanently hidden from view, Designated Personnel shall determine whether requested photographs are adequate. If they are not adequate, before the operation shall proceed, additional photographs shall be taken until the Designated Personnel determine that the photographs of that operation are adequate. This photographic process shall be carried out as expeditiously as possible, and in no case shall the cumulative delay resulting from this process exceed two hours for each emplacement operation, unless the Parties otherwise agree.

9. Designated Personnel shall have the right to obtain photographs of the following:

(a) the exterior of installations and structures associated with the conduct of the explosion;

(b) the emplacement of each explosive canister and stemming of each emplacement hole as specified in paragraph 6(b) of this Section;

(c) geological samples used for confirming the validity of geological and geophysical information as provided for in paragraph 4 of this Section, and equipment used in obtaining such samples;

(d) emplacement and installation of hydrodynamic yield measurement method equipment and cables associated with it;

(e) containers, facilities and structures for storing and operating the equipment used by Designated Personnel; and

(f) with the agreement of the Party carrying out the explosion, other activities of Designated Personnel directly related to the use of the hydrodynamic yield measurement method.

10. Equipment identified by the Party carrying out the explosion, in accordance with paragraph 8(h) of Section VIII of this Protocol, as unacceptable for use at the time of the

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explosion shall be sealed by both Parties and placed in the custody of the Party carrying out the explosion at a time agreed upon by the Party carrying out the explosion and by Designated Personnel.

11. Two individuals from the Party carrying out the explosion shall have the right to join Designated Personnel in the command and monitoring facility at the time of the explosion, to observe command and monitoring of the recording equipment and acquisition and duplication of data transmitted from each recording facility, and to receive a copy of the data. Designated Personnel, in the presence of personnel of the Party carrying out the explosion, shall recover all recordings of data taken at the time of the explosion and prepare two identical copies of such data. Personnel of the Party carrying out the explosion shall select one of the two identical copies by lot, and Designated Personnel shall retain the other copy. Designated Personnel shall retain no other such data, and shall have no further access to their recording facilities, their command and monitoring facility, and their equipment until these are returned to the Verifying Party, in accordance with paragraph 11 of Section VIII of this Protocol, unless the Parties otherwise agree, in which case access of the Designated Personnel to their recording facilities, their command and monitoring facility, and their equipment shall be under the observation of personnel of the Party carrying out the explosion. Designated Personnel shall provide the Party carrying out the explosion with information on sensor location in relation to the explosive canister. With respect to digital recording of signals, the Verifying Party shall provide a description of the recording format and a sample of the computer program for reading digital data. The program shall be provided by Designated Personnel upon their arrival at the point of entry.

12. Designated Personnel shall not be present in areas from which all personnel of the Party carrying out the explosion have been withdrawn in connection with carrying out an explosion, but shall have the right to reenter those areas at the same time as personnel of the Party carrying out the explosion.

SECTION VI. LOCAL SEISMIC NETWORK

1. For any group explosion that the Party carrying out the explosion has notified to have a planned aggregate yield exceeding 150 kilotons, and with respect to which the Verifying Party has notified its intention to measure the yield of the explosion using the hydrodynamic yield

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measurement method, Designated Personnel, in addition to using the hydrodynamic yield measurement method, shall have the right to install and use, under the observation and with the assistance of personnel of the Party carrying out the explosion if Designated Personnel request such assistance, a local seismic network.

2. Such a network shall be installed and used at locations agreed upon by the Parties within an area circumscribed by circles of 15 kilometer radius centered on points on the surface of the earth above the points of emplacement of the explosives. The number of stations of the network shall be determined by the Verifying Party, but shall not exceed the number of explosives in the group plus eight.

3. The control point of the local seismic network shall be installed at a location that the Parties agree is outside the areas specified in paragraph 12 of Section V of this Protocol and within the area specified in paragraph 2 of this Section, unless the Parties otherwise agree. Designated Personnel shall have the right to have access to their equipment in the control point at any time from commencement of installation of the local seismic network until five days following the explosion, subject to the provisions of paragraph 12 of Section V, if applicable, and paragraph 10(e) of Section VIII of this Protocol.

4. Installation of a local seismic network may commence 20 days prior to the planned date of the explosion, and its operation shall continue no more than three days following the explosion, unless the Parties otherwise agree.

5. Designated Personnel shall have the right to use radio communication for the transmission and reception of data and control signals between seismic stations and the control point of the local seismic network. Frequencies and maximum power output of radio transmitters, frequency range and sensitivity of radio receivers, orientation of transmitting and receiving antennas, and period of operation of the local seismic network radio transmitters and radio receivers prior to the explosion shall be agreed upon by the Parties. Operation of the radio equipment following the explosion shall continue for no more than three days, unless the Parties otherwise agree.

6. Designated Personnel shall have access along agreed routes to the stations and the control point of the local seismic network for the purpose of carrying out activities related to the installation and use of the local seismic network.

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7. In installing and using a local seismic network, Designated Personnel shall have the right to use and retain the topographic chart provided in accordance with paragraph 6(e) of Section IV of this Protocol.

8. Designated Personnel shall have the right to obtain photographs associated with the local seismic network, which shall be taken by the Party carrying out the explosion at the request of Designated Personnel in accordance with applicable provisions of paragraph 8 of Section V of this Protocol.

9. Within five days following the explosion, Designated Personnel shall provide the Party carrying out the explosion with the original and one copy of the data from the local seismic network stations recorded on the primary medium, graphic representation of recording materials on a paper medium, and the results of calibration of seismic channels. Upon receipt of these materials the Party carrying out the explosion, in the presence of Designated Personnel, shall select and retain either the copy or the original of each recording, graphic representation, and results of calibration of the seismic channels. The set of data not selected by the Party carrying out the explosion shall be retained by Designated Personnel. For digital recording of seismic signals, the Verifying Party shall provide the description of the recording format and a sample of the computer program for reading digital data. Designated Personnel shall provide the program sample upon arrival at the point of entry. Seismic recordings provided to the Party carrying out the explosion shall cover a time period beginning no less than 30 seconds prior to the time of arrival of the first explosion-generated P-wave at any station of the local seismic network and ending no more than three days after the explosion, unless the Parties otherwise agree. All seismic recordings shall include a common time reference agreed upon by the Parties.

SECTION VII. ON-SITE INSPECTION

1. In carrying out on-site inspection, the Verifying Party shall have the right to confirm the validity of the geological and geophysical information provided in accordance with paragraphs 3 and 7 of Section IV of this Protocol in accordance with the following procedures:

(a) Designated Personnel may analyze relevant studies and measurement data, including logging data, of the Party carrying out the explosion, the core

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samples or rock fragments extracted from each emplacement hole from the bottom of the hole to a distance above the point of emplacement in meters equal to 40 times the cube root of the planned yield in kilotons of the emplaced explosive, as well as any logging data and core samples from existing exploratory holes, which shall be provided to Designated Personnel upon their arrival at the explosion site, if the Party carrying out the explosion carried out relevant studies, measurements, and coring;

(b) Designated Personnel shall have the right to observe logging and the extraction of core samples or rock fragments from locations agreed upon by the Parties within the portion of the emplacement hole specified in subparagraph (a) of this paragraph or from an exploratory hole, provided that it is located no farther from the emplacement hole than a distance in meters equal to 10 times the cube root of the planned yield in kilotons of the emplaced explosive at depth intervals agreed upon by the Parties if such operations are carried out by the Party carrying out the explosion;

(c) Designated Personnel shall have the right to use their own equipment for logging the emplacement hole and extracting sidewall rock samples within the portion of the emplacement hole identified in subparagraph (a) of this paragraph. Such operations shall be conducted in the presence of personnel of the Party carrying out the explosion; and

(d) all logging data produced by either Party, including calibration data, shall be duplicated, and one copy of the data shall be provided to each Party. Calibration data shall include information needed to confirm the sensitivity of the equipment under the conditions in which it is used. Designated Personnel shall have the right to examine and remove from the territory of the Party carrying out the explosion core samples, sidewall rock samples, and rock fragments specified in subparagraphs (a), (b), and (c) of this paragraph, as selected by Designated Personnel.

2. In carrying out on-site inspection, Designated Personnel shall have the right:

(a) to confirm by direct measurement the validity of the information provided in accordance with paragraph 7(f) of Section IV of this Protocol;

(b) to confirm the validity of the information provided in accordance with paragraph 7(g) of Section

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IV of this Protocol, by observing relevant measurements being made, and by having access to the data obtained if such measurements are conducted by the Party carrying out the explosion, and by making measurements with their own equipment to determine the location and configuration of any voids within each hydrodynamic measurement zone;

(c) to have access to the site of the explosion and to facilities and structures related to the conduct of the explosion, along agreed routes;

(d) to observe the emplacement of each explosive canister, to confirm the depth of its emplacement and the relative location of explosives in a group, and to observe the stemming of each emplacement hole;

(e) to have access to their equipment associated with carrying out on-site inspection from commencement of its use by Designated Personnel at the explosion site until the departure of all personnel from the explosion area prior to the explosion;

(f) to unimpeded visual observation of the entrance area to each emplacement hole at any time from the moment of emplacement of each explosive until the departure of all personnel from the explosion area prior to the explosion; and

(g) to observe the explosion.

3. Designated Personnel shall have the right to obtain photographs associated with carrying out on-site inspection, which shall be taken by the Party carrying out the explosion at the request of Designated Personnel, in accordance with paragraphs 8 and 9 of Section V of this Protocol.

SECTION VIII. EQUIPMENT

1. Designated Personnel, in carrying out activities related to verification in accordance with this Protocol, shall have the right to bring into the territory of the Party carrying out the explosion, install, and use the following equipment:

(a) if the Verifying Party has provided notification of its intent to use the hydrodynamic yield measurement method, part or all of the equipment specified in paragraph 5 of this Section;

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(b) if the Verifying Party has provided notification of its intent to use a local seismic network, part or all of the equipment specified in paragraph 6 of this Section;

(c) if the Verifying Party has provided notification of its intent to carry out on-site inspection, part or all of the equipment specified in paragraph 7 of this Section;

(d) geologist's field tools and kits, geodetic equipment, topographic survey equipment, equipment for recording of field data, and equipment for rapid photo processing;

(e) portable short-range communication equipment, whose power and frequency shall conform to restrictions established by the Party carrying out the explosion;

(f) mobile work stations and temporary facilities;

(g) medical and health physics equipment and supplies, personal protective gear, personal computers, recreational and other items as may be agreed by the Parties; and

(h) satellite communications equipment, if the Party carrying out the explosion does not provide satellite communications for Designated Personnel.

2. At the choice of the Party carrying out the explosion, closed-circuit television equipment shall be provided by the Verifying Party or the Party carrying out the explosion, for the purpose of remote observation by the Verifying Party, in accordance with paragraph 6(e) of Section V of this Protocol.

3. Designated Personnel, in carrying out activities related to verification in accordance with this Protocol, shall have the right to bring into the territory of the Party carrying out the explosion, for use by the personnel of the Party carrying out the explosion in accordance with paragraph 8 of Section V of this Protocol, photographic cameras, film, and related photographic equipment.

4. No less than 120 days prior to the planned date of the beginning of emplacement of explosives, the Parties shall agree upon the list of such additional equipment as may be requested by the Verifying Party, and which shall be supplied by the Party carrying out the explosion for use by Designated Personnel. Such additional equipment

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with its description and operating instructions shall be provided to Designated Personnel upon arrival at the site of the explosion.

5. The complete list of equipment for hydrodynamic yield measurement shall include:

(a) sensing elements and associated cables for use in the emplacement hole;

(b) the recording facility or facilities, including equipment for sending and recording commands, equipment for generation of a timing reference signal from hydrodynamic measurement cables, and equipment for data acquisition, recording and processing, and, with respect to a group explosion in which any individual explosion in the group is separated from any other explosion by more than two kilometers, radio equipment for monitoring the operational status of the equipment and for transmitting and receiving control signals. Frequencies and maximum power output of radio transmitters, frequency range and sensitivity of radio receivers, and orientation of transmitting and receiving antennas shall be agreed upon by the Parties. Operation of the radio equipment shall begin at the time of the beginning of emplacement of sensing elements and associated cables and shall end at the time of the explosion. Designated Personnel shall notify the Party carrying out the explosion in advance of any activation or deactivation of the radio equipment;

(c) cables for above-ground transmission of electrical power, control signals and data;

(d) electrical power supplies;

(e) measuring and calibration instruments, support equipment, maintenance equipment, and spare parts necessary for ensuring the functioning of sensing elements, cables and equipment of the recording facilities and the command and monitoring facility;

(f) logging and sidewall rock sampling equipment necessary for confirming geological and geophysical characteristics of the emplacement hole as well as for obtaining data on the spatial location of points of emplacement of each explosive canister;

(g) coring equipment and drilling equipment for the drilling of an exploratory hole for coring

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purposes. Upon agreement between the Parties, the Verifying Party, under leasing conditions, may use for these purposes the coring and drilling equipment of the Party carrying out the explosion; and

(h) the command and monitoring facility, with equipment, including computers, for generating and recording command and monitoring signals, for transmitting and receiving command and monitoring signals between each recording facility and the command and monitoring facility, as well as for retrieving, storing, and processing hydrodynamic data.

6. The complete list of equipment for a local seismic network shall include:

(a) seismic stations, each of which contains seismic instruments, an electrical power supply and associated cables, and radio equipment for receiving and transmitting control signals and data;

(b) equipment for the control point, including electrical power supplies, equipment for sending and recording control signals and data, and data processing equipment; and

(c) measuring and calibration instruments, support equipment, maintenance equipment, and spare parts necessary for ensuring the functioning of the complete network.

7. The complete list of equipment for on-site inspection shall include logging and sidewall rock sampling equipment necessary for confirming geological and geophysical characteristics of the emplacement hole as well as for obtaining data on the spatial location of points of emplacement of each explosive canister.

8. The following procedures shall be followed with respect to the equipment for hydrodynamic yield measurement, the equipment for on-site inspection, and the equipment for a local seismic network:

(a) no less than 140 days prior to the planned date of the beginning of emplacement of explosives, the Verifying Party, if it has declared its intention to use the hydrodynamic yield measurement method, shall provide the Party carrying out the explosion with the equipment and information specified in subparagraph (a)(i) of this paragraph and, if the Verifying Party has declared its intention to use a local seismic network, the equipment and information

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specified in subparagraph (a)(ii) of this paragraph; or, if it has declared its intention to conduct on-site inspection, equipment and information specified in subparagraph (a)(iii) of this paragraph, in order to enable the Party carrying out the explosion to familiarize itself with such equipment, if such equipment and information have not previously been provided. If, upon completion of familiarization with the equipment provided in accordance with this subparagraph, the Party carrying out the explosion concludes that use of any element of the equipment provided would be inconsistent with its containment or security requirements, the Party carrying out the explosion shall promptly, but no less than 120 days prior to the planned date of the beginning of emplacement of explosives, so inform the Verifying Party, and shall specify the modifications that must be made in this equipment to satisfy the requirements of the Party carrying out the explosion. The equipment provided in accordance with this subparagraph shall be returned in the same condition as that in which it was received to the Verifying Party at the point of entry no less than 90 days prior to the planned date of the beginning of emplacement of explosives. The following equipment and information shall be provided:

(i) one set of equipment specified in paragraphs 5(a), 5(b), 5(c), 5(d), 5(e), 5(f) and 5(h) of this Section, as well as electrical and mechanical design information, specifications, and installation and operating instructions for this equipment;

(ii) one set of equipment specified in paragraph 6 of this Section, including one seismic station, as well as electrical and mechanical design information, specifications, and installation and operating instructions for this equipment; and

(iii) one set of equipment specified in paragraph 7 of this Section, as well as electrical and mechanical design information, specifications, and operating instructions for this equipment;

(b) no less than 50 days prior to the planned date of the beginning of emplacement of explosives, the Verifying Party shall deliver in sealed containers, to the point of entry in the territory of the Party carrying out the explosion, two identical sets of each type of equipment that it intends to use

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for activities related to verification for that explosion, with a complete inventory of equipment, specifying any components that do not perform functions directly related to measurements during the explosion. These sets of equipment shall have the same components and technical characteristics as the equipment specified in subparagraph (a) of this paragraph, or, if specified by the Party carrying out the explosion in accordance with subparagraph (a) of this paragraph, shall contain modifications made in accordance with the requirements of the Party carrying out the explosion with regard to containment and security. Each of the two identical sets shall include the following:

(i) if the Verifying Party has provided notification of its intent to use the hydrodynamic yield measurement method, equipment specified in paragraphs 5(a), 5(b), and 5(h) of this Section; and

(ii) if the Verifying Party has provided notification of its intent to use a local seismic network, equipment specified in paragraphs 6(a) and 6(b) of this Section;

(c) the Party carrying out the explosion shall choose one of the two identical sets of each type of equipment for use by Designated Personnel;

(d) at the point of entry the Party carrying out the explosion shall affix its own seals to the sealed containers in which the equipment chosen for use arrived, shall ensure protection of this equipment throughout the entire period it is in the territory of the Party carrying out the explosion, and shall transport that equipment to the site of the explosion. Prior to shipment to the site of the explosion, the set of equipment chosen for use shall be kept sealed at the point of entry, and the time of its shipment to the site of the explosion shall be determined by the Party carrying out the explosion. The Party carrying out the explosion shall consult with Designated Personnel regarding plans and schedule of shipment of the equipment no less than 48 hours in advance of the shipment. Designated Personnel shall have the right to unimpeded verification of the integrity of their seals, to observe their equipment, and to accompany their equipment. This equipment shall be handed over to Designated Personnel at the site of the explosion for emplacement, installation, and use no less than 20 days prior to the planned date of the beginning of

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emplacement of explosives, and it shall thereafter remain under the control of Designated Personnel; seals affixed to the equipment specified in paragraph 5(a) of this Section shall not be removed prior to preparation for installation of such equipment, at which time the seals shall be removed by Designated Personnel in the presence of personnel of the Party carrying out the explosion, and personnel of the Party carrying out the explosion thereafter shall have the right to observe all activities relating to the installation of such equipment;

(e) seals of the Verifying Party shall be removed from equipment not chosen for use, in the presence of personnel of both Parties, and thereafter this equipment shall be retained for inspection by the Party carrying out the explosion without the presence of Designated Personnel for a period ending no more than 30 days following the explosion, at which time such equipment shall be returned in the same condition as that in which it was received to the Verifying Party at the point of entry;

(f) no less than 50 days prior to the planned date of the beginning of emplacement of explosives, the Verifying Party shall provide, at its option, either one or two sets of the equipment that the Verifying Party intends to use for activities related to verification for this explosion, other than equipment specified in paragraph 8(b) of this Section. A complete inventory of such equipment, specifying any components that do not perform functions directly related to measurements during the explosion, shall be provided to the Party carrying out the explosion at least one week prior to the planned arrival of the equipment at the point of entry. If only one set of equipment is provided by the Verifying Party, the Party carrying out the explosion shall have the right to inspect this equipment upon its arrival at the point of entry for up to 30 days, without the presence of Designated Personnel. Upon conclusion of the inspection, the Party carrying out the explosion shall identify any equipment that it deems unacceptable for delivery to the site of the explosion, in which case such equipment shall be removed by the Verifying Party and returned to its territory. All equipment deemed acceptable for delivery to the site of the explosion shall be shipped to the site of the explosion so as to enable Designated Personnel to carry out their activities related to verification as set forth in the coordinated schedule specified in paragraph 6 of Section XI of this Protocol, but in no case less than

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20 days prior to the beginning of emplacement of explosives. The Party carrying out the explosion shall transport this equipment in such a manner as to ensure that it is delivered to Designated Personnel in the same condition as that in which it was received. If two sets of equipment are provided by the Verifying Party, the procedures specified in paragraphs 8(b), 8(c), 8(d), and 8(e) of this Section for selection and inspection of equipment shall be followed. If the Verifying Party under leasing conditions uses coring and drilling equipment of the Party carrying out the explosion, such equipment shall be provided to Designated Personnel at the site of the explosion so as to enable Designated Personnel to carry out their activities related to verification as set forth in the coordinated schedule referred to in paragraph 6 of Section XI of this Protocol, but in no case less than 20 days prior to the beginning of emplacement of explosives, unless the Parties otherwise agree;

(g) with respect to the equipment specified in paragraphs 5(a) and 5(c) of this Section, the Party carrying out the explosion shall have the right to retain for its own purposes up to 150 meters of each type of cable in the set being inspected. The cable segments to be retained may be taken from any place along the length of the cable, but the number of individual segments shall not exceed the number of reels of cable in a set of equipment; and

(h) after inspecting the equipment in accordance with paragraphs 8(e) and 8(f) of this Section, the Party carrying out the explosion shall inform Designated Personnel what equipment of that delivered to the site of the explosion it deems unacceptable for use during the explosion.

9. Prior to the beginning of emplacement of explosives, Designated Personnel shall certify in writing to the personnel of the Party carrying out the explosion that the equipment delivered to the site of the explosion is in working condition.

10. Personnel of the Party carrying out the explosion shall have the right to observe use of equipment by Designated Personnel at the site of the explosion, with access to the recording facilities, the command and monitoring facility, the control point, and seismic stations of the local seismic network of the Verifying Party being subject to the following:

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(a) at any time prior to the explosion that Designated Personnel are not present in the recording facilities, in the command and monitoring facility, in the control point, or at the seismic stations, these facilities, control point, and stations shall be sealed by the seals of both Parties. Seals may be removed by Designated Personnel only in the presence of personnel of the Party carrying out the explosion;

(b) prior to the explosion, personnel of the Party carrying out the explosion may enter the recording facilities, the command and monitoring facility, or the control point of the Verifying Party for the purpose of conducting operations that require the participation of both Parties only with the agreement of the Designated Personnel Team Leader and when accompanied by the Designated Personnel Team Leader or his designated representative;

(c) at all other times prior to the explosion, personnel of the Party carrying out the explosion may enter the recording facilities, the command and monitoring facility, or the control point of the Verifying Party only at the express invitation of the Designated Personnel Team Leader and when accompanied by the Designated Personnel Team Leader or his designated representative;

(d) following the explosion, Designated Personnel shall have the right to enter the recording facilities for data recovery only when accompanied by personnel of the Party carrying out the explosion. No later than the final dry run, Designated Personnel shall inform the Party carrying out the explosion of procedures for recovering such data and shall advise the Party carrying out the explosion at the time of data recovery of any changes the Designated Personnel make in those procedures and the reasons for such changes. Personnel of the Party carrying out the explosion shall observe the process of data recovery from instrumentation in the recording facilities and the command and monitoring facility, and shall leave the recording facilities and the command and monitoring facility at the same time as Designated Personnel; and

(e) at any time following the explosion, personnel of the Party carrying out the explosion shall have the right to observe the activities of Designated Personnel in the control point. Personnel of the Party carrying out the explosion shall be present in the control point to observe recovery of the initial data, which shall take place within one

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hour following the explosion. At any time following the explosion that Designated Personnel are not present in the control point, the control point shall be sealed with the seals of both Parties. The seals may be removed by Designated Personnel only in the presence of personnel of the Party carrying out the explosion. Within five days following the explosion, Designated Personnel shall leave the control point at the same time as personnel of the Party carrying out the explosion.

11. Following data recovery, the equipment used for activities related to verification in accordance with this Protocol may be retained by the Party carrying out the explosion and be subject to its exclusive control for a period ending no more than 30 days following data recovery, at which time this equipment shall be returned, in the same condition as that in which it was received, to the Verifying Party at the point of entry. Elimination of information stored in memories shall not be deemed damage to the equipment.

SECTION IX. DESIGNATED PERSONNEL AND TRANSPORT PERSONNEL

1. No later than 10 days following entry into force of the Treaty, each Party shall provide the other Party with a list of its proposed Designated Personnel who will carry out the activities related to verification in accordance with this Protocol and a list of its proposed Transport Personnel who will provide transportation for these Designated Personnel, their baggage, and equipment of the Verifying Party. These lists shall contain name, date of birth, and sex of each individual of its proposed Designated Personnel and Transport Personnel. The list of Designated Personnel shall at no time include more than 200 individuals, and the list of Transport Personnel shall at no time include more than 200 individuals.

2. Each Party shall review the list of Designated Personnel and the list of Transport Personnel proposed by the other Party. If the Party reviewing a list determines that an individual included thereon is acceptable to it, it shall so inform the Party providing the list within 20 days following receipt of the list, and such an individual shall be deemed accepted. If the Party reviewing a list determines that an individual included thereon is not acceptable to it, it shall so inform the Party providing the list of its objection within 20 days following receipt of the list, and such an individual shall be deemed not accepted and shall be deleted from the list.

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3. Each Party may propose the addition or substitution of individuals on its list of Designated Personnel or its list of Transport Personnel at any time, who shall be designated in the same manner as is provided for in paragraph 2 of this Section with regard to the initial lists. Annually, no more than 40 individuals from the list of Designated Personnel shall be subject to substitution. This limitation shall not apply to the replacement of individuals due to permanent physical incapacity or death, or to deletion of an individual from the list of Designated Personnel in accordance with paragraph 5 of this Section. Replacement of an individual due to permanent physical incapacity, death or deletion from the list shall be accomplished in the same manner as is provided for in paragraph 2 of this Section.

4. Following receipt of the initial list of Designated Personnel or the initial list of Transport Personnel or of subsequent changes thereto, the Party receiving such information shall prepare for the issuance of such visas and other documents as may be required to ensure that each individual on the list of Designated Personnel or the list of Transport Personnel to whom it has agreed may enter and remain in its territory for the purpose of carrying out activities related to verification in accordance with this Protocol. Such visas and documents shall be provided by the Party carrying out the explosion only to the individuals whose names are included on the lists provided by the Verifying Party, in accordance with paragraph 3 of Section X of this Protocol, upon receipt of such lists. Such visas and documents shall be valid for multiple entry throughout the period of preparation and conduct of the particular explosion.

5. If a Party determines that an individual included on the list of Designated Personnel or the list of Transport Personnel of the other Party has violated the provisions of this Protocol or has ever committed a criminal offense in its territory, or has ever been sentenced for committing a criminal offense, or has ever been expelled from its territory, the Party making such a determination shall so notify the other Party of its objection to the continued inclusion of this individual on the list. If at that time this individual is present in the territory of the Party raising the objection, the other Party shall immediately recall this individual from the territory of the Party raising this objection and immediately thereafter delete that individual from the list of Designated Personnel or from the list of Transport Personnel.

6. Designated Personnel with their personal baggage and equipment of the Verifying Party shall be permitted to

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enter the territory of the Party carrying out the explosion at the designated point of entry, to remain in that territory and to exit through the designated point of entry.

7. Designated Personnel and Transport Personnel shall be accorded the following privileges and immunities for the entire period they are in the territory of the Party carrying out the explosion and thereafter with respect to acts previously performed in the exercise of their official functions as Designated Personnel or Transport Personnel:

(a) Designated Personnel and Transport Personnel shall be accorded the inviolability enjoyed by diplomatic agents pursuant to Article 29 of the Vienna Convention on Diplomatic Relations of April 18, 1961;

(b) living and working quarters occupied by Designated Personnel and Transport Personnel carrying out activities in accordance with this Protocol shall be accorded the inviolability and protection accorded the quarters of missions and diplomatic agents pursuant to Articles 22 and 30 of the Vienna Convention on Diplomatic Relations;

(c) archives, documents, papers and correspondence of Designated Personnel and Transport Personnel shall enjoy the inviolability accorded the archives, documents, papers and correspondence of missions and diplomatic agents pursuant to Articles 24 and 30 of the Vienna Convention on Diplomatic Relations. In addition, the aircraft or other transport vehicles of the Verifying Party shall be inviolable;

(d) Designated Personnel and Transport Personnel shall be accorded the immunities accorded diplomatic agents pursuant to paragraphs 1, 2, and 3 of Article 31 of the Vienna Convention on Diplomatic Relations. Immunity from jurisdiction of Designated Personnel or Transport Personnel may be waived by the Verifying Party in those cases in which it is of the opinion that immunity would impede the course of justice and it can be waived without prejudice to the implementation of the provisions of this Protocol. Waiver must always be express;

(e) Designated Personnel and Transport Personnel carrying out their activities in accordance with this Protocol shall be accorded the exemption from dues and taxes accorded diplomatic agents

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pursuant to Article 34 of the Vienna Convention on Diplomatic Relations;

(f) living and working quarters occupied by Designated Personnel and Transport Personnel carrying out their activities in accordance with this Protocol shall be accorded the exemption from dues and taxes accorded mission premises pursuant to Article 23 of the Vienna Convention on Diplomatic Relations; and

(g) Designated Personnel and Transport Personnel shall be permitted to bring into the territory of the Party carrying out the explosion, without payment of any customs duties or related charges, articles for their personal use, with the exception of articles the import or export of which is prohibited by law or controlled by quarantine regulations.

8. Designated Personnel and Transport Personnel shall not engage in any professional or commercial activity for personal profit in the territory of the Party carrying out the explosion.

9. Without prejudice to their privileges and immunities, Designated Personnel and Transport Personnel shall be obliged to respect the laws and regulations of the Party carrying out the explosion and shall be obliged not to interfere in the internal affairs of that Party.

10. If the Party carrying out the explosion considers that there has been an abuse of privileges and immunities specified in paragraph 7 of this Section, consultations shall be held between the Parties to determine whether such an abuse has occurred and, if so determined, to prevent a repetition of such an abuse.

**SECTION X. ENTRY, TRANSPORT, FOOD, LODGING AND
PROVISION OF SERVICES FOR DESIGNATED PERSONNEL
AND TRANSPORT PERSONNEL**

1. The Party carrying out the explosion shall ensure Designated Personnel and Transport Personnel access to its territory for the purposes of carrying out activities related to verification, in accordance with this Protocol, and shall provide these personnel with such other assistance as may be necessary to enable them to carry out these activities. Following notification by the Verifying Party of its intention to conduct hydrodynamic yield

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measurement or to carry out on-site inspection, Designated Personnel shall have the right to be present at the site of the explosion to carry out activities in accordance with this Protocol at such times and for such periods as required to carry out these activities. The specific times and periods for carrying out such activities shall be specified in the coordinated schedule specified in paragraph 6 of Section XI of this Protocol.

2. The number of Designated Personnel shall not exceed:

(a) when exercising their rights and functions associated with drilling, logging, hole surveying, and coring, if this work is carried out by Designated Personnel operating their own equipment or equipment leased from the Party carrying out the explosion, 25;

(b) when exercising their rights and functions associated with observing drilling, logging, hole surveying, and coring performed by the Party carrying out the explosion, or when Designated Personnel perform logging, hole surveying, or sidewall rock sampling, 10;

(c) when exercising their rights and functions associated with the confirmation of the validity of geological and geophysical information, the number of emplacement holes plus three;

(d) when exercising their rights and functions associated with the use of hydrodynamic yield measurement equipment, the number of explosives plus three, plus the number of recording facilities specified in paragraph 5 of Section VIII of this Protocol multiplied by seven; and, with respect to group explosions in which radio controlled recording facilities are employed, three per recording facility, plus seven for the command and monitoring facility;

(e) when exercising their rights and functions associated with the use of a local seismic network, 15;

(f) for administrative, coordination, clerical, and health and safety matters, when Designated Personnel described in subparagraphs (a), (b), (c), (d), and (e) of this paragraph are present, eight; and

(g) if the Verifying Party provides food and housing for Designated Personnel identified in subparagraphs (a), (b), (c), (d), (e), and (f) of this paragraph, six.

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3. No less than 20 days prior to the planned arrival of its Designated Personnel or equipment at the point of entry to carry out activities related to verification of a particular explosion, the Verifying Party shall provide the Party carrying out the explosion with:

(a) a list of the names of the Designated Personnel, their passports and documentation, and a list of the names of the Transport Personnel, their passports and documentation, who will carry out activities related to verification of a particular explosion;

(b) the names of the Designated Personnel Team Leader and deputy team leader, and the names of those individuals from the Designated Personnel who will escort equipment of the Verifying Party to the site of the explosion;

(c) confirmation of the point of entry to be used;

(d) the scheduled date and the estimated time of arrival of Designated Personnel at the point of entry; and

(e) designation of the mode of transport to be used.

No more than 15 days following receipt of the lists, passports, and documentation specified in subparagraph (a) of this paragraph, the Party carrying out the explosion shall return those passports to the Verifying Party with the visas and documents specified in paragraph 4 of Section IX of this Protocol.

4. If a transport aircraft other than a regularly scheduled commercial aircraft is used for transportation, its flight path shall be along airways that are agreed upon by the Parties, and its flight plan shall be filed in accordance with the procedures of the International Civil Aviation Organization applicable to civil aircraft, including in the remarks section of the flight plan a confirmation that the appropriate clearance has been obtained. The Party carrying out the explosion shall provide parking, security protection, servicing, and fuel for the aircraft of the Verifying Party at the point of entry. The Verifying Party shall bear the cost of such fuel and servicing.

5. The Party carrying out the explosion shall ensure that any necessary clearances or approvals are granted so as to enable Designated Personnel, their baggage, and

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equipment of the Verifying Party to arrive at the point of entry by the estimated arrival date and time.

6. The Party carrying out the explosion shall assist Designated Personnel and Transport Personnel and their baggage in passage through customs without undue delay. The Party carrying out the explosion shall provide transportation between the point of entry and the site of the explosion for Designated Personnel, for their baggage and equipment of the Verifying Party, so as to enable such personnel to exercise their rights and functions in the time periods provided for in this Protocol.

7. The Party carrying out the explosion shall have the right to assign its personnel to escort Designated Personnel and Transport Personnel while they are in the territory of the Party carrying out the explosion.

8. Except as otherwise provided for in this Protocol, movement and travel of Designated Personnel and Transport Personnel shall be subject to the authorization of the Party carrying out the explosion.

9. During the period Designated Personnel and Transport Personnel are in the territory of the Party carrying out the explosion, the Party carrying out the explosion shall provide food, living and working facilities, secure places for storing equipment, transportation, and medical services for such personnel. If the Verifying Party desires to provide its own food or housing units for its Designated Personnel, or food for its Transport Personnel during their stay in the territory of the Party carrying out the explosion, the Party carrying out the explosion shall provide such assistance as may be necessary for such food and housing units to arrive at the appropriate locations. If the Verifying Party provides its own housing units, they shall be delivered to the point of entry no less than 30 days prior to the arrival of Designated Personnel. The Party carrying out the explosion shall have the right to inspect these housing units upon their arrival at the point of entry for a 30-day period, without the presence of personnel of the Verifying Party.

10. The Party carrying out the explosion shall ensure the Designated Personnel Team Leader or his designated representative access at all times to means of direct communications between the site of the explosion and the embassy of the Verifying Party, and shall provide Designated Personnel with telephone communications between their working facilities and living accommodations at the site of the explosion. The Designated Personnel Team Leader or his designated representative shall also have

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the right to use at all times satellite communications to ensure communications via the International Maritime Satellite Organization (INMARSAT) commercial satellite system, or a system of equivalent performance, between the site of the explosion and the telephone communications system of the Verifying Party. If the Party carrying out the explosion does not provide such communications, Designated Personnel shall have the right to use their own equipment specified in paragraph 1(h) of Section VIII of this Protocol. In this case, installation and alignment of all such equipment shall be done jointly. All equipment of this system, except the remote control unit, shall be locked and placed under seals of both Parties, and neither Party shall have access to this equipment except under the observation of personnel of the other Party. Designated Personnel shall have exclusive use of the remote control unit. If the Verifying Party provides satellite communications equipment, personnel of the Party carrying out the explosion shall have the right, under the observation of Designated Personnel, to make the following modifications provided they do not degrade the quality of communications:

(a) install bandpass filters, to limit the frequency range, in the antenna signal transmission and reception lines;

(b) modify the remote control unit to prevent manual tuning; and

(c) modify the satellite communications equipment to allow the Party carrying out the explosion to monitor all transmissions.

11. At the site of the explosion, Designated Personnel shall observe all safety rules and regulations applicable to the personnel of the Party carrying out the explosion, as well as those additional restrictions with regard to access and movement as may be established by the Party carrying out the explosion. Designated Personnel shall have access only to the areas where they will directly exercise their rights and functions in accordance with Sections V, VI, and VII of this Protocol.

12. Designated Personnel shall not be given or seek access by physical, visual or technical means to the interior of the explosive canister, to documentary or other information descriptive of the design of an explosive, or to equipment for control and firing of explosives. The Party carrying out the explosion shall not locate documentary or other information descriptive of the design of an explosive in such ways as to impede Designated Personnel in carrying out their activities in accordance with this Protocol.

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13. With the exception of those cases in which the Parties otherwise agree, all costs related to the activities of Designated Personnel and Transport Personnel carried out in accordance with this Protocol shall be borne by the Verifying Party, including costs for materials, equipment, leased equipment, and services that have been requested by and provided to the Verifying Party, as well as costs for transportation, food, living and working facilities, provision of medical assistance, and communications. These costs shall be billed at the standard or official rates existing in the territory of the Party carrying out the explosion.

14. The Verifying Party shall have the right to include among its Designated Personnel a medical specialist, who shall be allowed to bring medications, medical instruments, and portable medical equipment agreed upon by the Parties. If Designated Personnel are treated in a medical facility of the Party carrying out the explosion the medical specialist shall have the right to consult on the recommended treatment and monitor the course of medical treatment at all times. The medical specialist of the Verifying Party shall have the right to require the Party carrying out the explosion to provide emergency evacuation of any individual of Designated Personnel who is ill or suffered an accident to a mutually agreed medical facility in the territory of the Party carrying out the explosion or to the point of entry for emergency medical evacuation by the Verifying Party. Designated Personnel shall have the right to refuse any treatment prescribed by medical personnel of the Party carrying out the explosion, and in this case the Party carrying out the explosion shall not be responsible for any consequences of such refusal. Such refusal must always be express.

SECTION XI. PROCEDURES FOR CONSULTATION AND COORDINATION

1. To facilitate the implementation of this Protocol, the Parties shall use the Joint Consultative Commission, as provided for in the Treaty, that shall meet at the request of either Party. For each explosion for which activities are carried out in accordance with this Protocol, the Parties shall establish a Coordinating Group of this Commission.

2. The Coordinating Group shall be responsible for coordinating the activities of the Verifying Party with the activities of the Party carrying out the explosion.

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3. The Coordinating Group shall operate throughout the entire period of preparing and carrying out of the activities related to verification for a particular explosion, until the departure of Designated Personnel from the territory of the Party carrying out the explosion.

4. The Representative of the Verifying Party to the Coordinating Group shall be the Designated Personnel Team Leader, whose name shall be provided simultaneously with the notification of intent to carry out activities related to verification for a particular explosion. All members of the Coordinating Group from the Verifying Party shall be drawn from the list of Designated Personnel. Within 15 days following receipt of this notification, the Party carrying out the explosion shall provide the Verifying Party with the name of its Representative to the Coordinating Group.

5. The first meeting of the Coordinating Group shall be convened in the capital of the Party carrying out the explosion within 25 days following notification by the Verifying Party of its intent to conduct activities related to verification for a particular explosion. Thereafter, the Coordinating Group shall meet at the request of either Party.

6. At the first meeting of the Coordinating Group, the Party carrying out the explosion shall present a list, including times and durations, of all its planned activities that are to be carried out as from the first day of this meeting and affect the rights of the Verifying Party provided in this Protocol. The Verifying Party shall provide a preliminary statement of its requirements for technical and logistical support for the activities related to verification that it intends to carry out. Within 10 days the Parties shall develop and agree upon a coordinated schedule, including specific times and durations for carrying out activities related to verification, that shall ensure the rights of each Party provided in this Protocol.

7. Agreement of the Representative of each Party in the Coordinating Group shall constitute agreement of the Parties with respect to the following specific provisions of this Protocol:

- (a) Section I: paragraph 5;
- (b) Section IV: paragraphs 9, 10(b), and 11;
- (c) Section V: paragraphs 2, 3, 4(b), 6(a), 7, 8(d), 9(f), 10, and 11;

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- (d) Section VI: paragraphs 2, 3, 4, 5, 6, and 9;
- (e) Section VII: paragraphs 1(b) and 2(c);
- (f) Section VIII: paragraphs 1(g), 4, 5(b), 5(g), and 8(f);
- (g) Section X: paragraphs 4 and 13; and
- (h) Section XI: paragraph 6.

8. Upon completion of activities related to verification at the site of an explosion, the Designated Personnel Team Leader shall prepare, at his option, either at the site of the explosion or in the capital of the Party carrying out the explosion, a report of the activities provided for in this Protocol that were carried out by Designated Personnel. The report shall be factual, and shall list the types of activities in chronological order. Lists of information, of photographs, and of data required in accordance with this Protocol and provided by Designated Personnel to the Party carrying out the explosion and received by Designated Personnel from the Party carrying out the explosion in the course of conducting activities related to verification on the territory of the Party carrying out the explosion shall be appended to the report. The report shall be provided to the Party carrying out the explosion in its capital by the Designated Personnel Team Leader within 15 days following completion of activities related to verification at the site of the explosion.

9. If, in the course of implementing activities related to verification in accordance with this Protocol, questions arise requiring prompt resolution, such questions shall be considered by the Coordinating Group. If the Coordinating Group is unable to resolve such questions, they shall immediately be referred to the Joint Consultative Commission for resolution.

10. Within 30 days after the Party carrying out the explosion provides notification of its intent to carry out a group explosion having a planned aggregate yield exceeding 150 kilotons, a meeting of the Joint Consultative Commission shall be convened at the request of either Party with the goal of reaching agreement on specific procedures as specified in paragraph 2 of Section II of this Protocol. The explosion shall be conducted no less than 150 days following agreement of the Parties upon such procedures.

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11. The Joint Consultative Commission may, as necessary, establish and amend procedures governing the activities of the Coordinating Group.

SECTION XII. RELEASE OF INFORMATION

1. Nothing in the Treaty and this Protocol shall affect the proprietary rights of either Party in information provided by it in accordance with the Treaty and this Protocol, or in information that may be disclosed to the other Party or that may become known to the other Party in preparing for, or carrying out, explosions. Claims to such proprietary rights, however, shall not impede implementation of the provisions of the Treaty and this Protocol.

2. Public release of the information provided in accordance with this Protocol or publication of material using such information may take place only with the agreement of the Party carrying out an explosion. Public release of the results of observation or measurements made by Designated Personnel may take place only with the agreement of both Parties.

SECTION XIII. ENTRY INTO FORCE

This Protocol is an integral part of the Treaty. It shall enter into force on the date of entry into force of the Treaty and shall remain in force as long as the Treaty remains in force.

DONE at Washington, in duplicate, this first day of June, 1990, in the English and Russian languages, both texts being equally authentic.

FOR THE UNITED STATES
OF AMERICA:

FOR THE UNION OF SOVIET
SOCIALIST REPUBLICS:

President of the United
States of America

President of the Union of
Soviet Socialist Republics

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CONFERENCE ON DISARMAMENT

CD/1089
CD/NTB/WP/14
25 July 1991

Original: ENGLISH

LETTER DATED 9 JULY 1991 FROM THE HEAD OF THE SWEDISH DELEGATION
ADDRESSED TO THE SECRETARY-GENERAL OF THE CONFERENCE ON
DISARMAMENT TRANSMITTING THE TEXT OF A DRAFT COMPREHENSIVE
TEST-BAN TREATY AND ITS ANNEXED PROTOCOLS

I have the honour to send you enclosed a draft CTB Treaty and its annexed protocols which will be introduced by the Delegation of Sweden on 25 July 1991. It will also be presented in the Ad Hoc Committee on a Nuclear Test Ban on that same day.

I should be grateful if it could be issued as an official document of the Conference and translated into all the official languages. It would be appreciated if the document could be available in all the official languages, dated on 25 July 1991 and numbered both as a CD document and as a Working Paper in the Ad Hoc Committee.

(Signed) Carl-Magnus Hyltenius
Ambassador
Head of the Swedish Delegation
to the Conference on Disarmament

DRAFT COMPREHENSIVE NUCLEAR TEST-BAN TREATY

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DRAFT COMPREHENSIVE NUCLEAR TEST-BAN TREATY

The States Parties to this Treaty, hereinafter referred to as the "States Parties",

Convinced of the urgent need for an end to the nuclear arms race and the ultimate elimination of nuclear weapons,

Recalling the determination expressed by the Parties in the Preamble to the 1963 Treaty Banning Nuclear Weapons Tests in the Atmosphere, in Outer Space and Under Water to seek to achieve the discontinuance of all test explosions of nuclear weapons for all time, and to continue negotiations to this end,

Declaring their intention to achieve at the earliest possible date the cessation of the nuclear arms race and to undertake effective measures towards nuclear disarmament,

Urging the cooperation of all States in the attainment of this objective,

Convinced also that an end to nuclear testing by all States in all environments for all time is of fundamental importance to prevent the qualitative improvement and development of nuclear weapons and their further proliferation,

Have agreed as follows:

Article I

Basic Obligations

1. Each State Party undertakes to prohibit, to prevent, and not to carry out, in any environment, any test explosion of a nuclear explosive device.
2. Each State Party undertakes not to detonate anywhere any nuclear explosive device for peaceful purposes unless the States Parties have agreed on procedures for and controls of such nuclear explosions.
3. Each State Party undertakes, furthermore, to refrain from causing, encouraging, assisting, permitting or in any way participating in the carrying out anywhere of any nuclear explosion referred to in paragraphs 1 and 2 of this Article.

Article II

The Organization

1. The States Parties to the Treaty hereby establish a body hereinafter referred to as the "Organization" to achieve the objectives of the Treaty and to ensure the implementation of its provisions, including those for international verification of compliance with it, and to provide a forum for consultation and cooperation among the States Parties.

2. All States Parties shall be members of the Organization.
3. The seat of the Headquarters of the Organization shall be ...
4. The organs of the Organization shall be the Conference of the States Parties, the Executive Council and the Technical Secretariat.
5. The Conference of the State Parties is composed of all States Parties. It is the principal organ and oversees the implementation of, and the compliance with, the Treaty. It shall oversee the activities of the Executive Council and the Technical Secretariat.
6. The Executive Council, which is the executive organ of the Conference of the States Parties, shall in particular

- promote the effective implementation of, and compliance with, the Treaty;
- facilitate consultation among States Parties to resolve issues related to the Treaty, in particular to verification of compliance with its provisions;
- supervise the operation of the Technical Secretariat.

The Executive Council shall comprise twenty-five State Parties serving for a period of two years. The members of the Executive Council shall be elected by the Conference of the States Parties, with due regard given to an equitable political and geographical representation.

7. The Technical Secretariat shall assist States Parties, the Conference of the States Parties, and the Executive Council on issues of verification. It shall be headed by a Director-General. The Secretariat shall, inter alia,

- coordinate international cooperative arrangements to exchange seismological data, data on radionuclides in the atmosphere and other data relevant to the monitoring of compliance with the Treaty;
- conduct on-site monitoring and inspection at the invitation of a State Party, or at the request of the Executive Council;
- cooperate with the National Authorities of the States Parties to resolve uncertainties that a State Party may have about an event relevant to compliance with the Treaty.

8. The duties, functions and organization of the Conference of the States Parties, the Executive Council and the Technical Secretariat are further outlined in Protocol I.

Article III

National Implementation Measures

1. Each State Party undertakes to take any measures it considers necessary to prohibit and prevent any activity in violation of the provisions of the Treaty anywhere under its jurisdiction or control.
2. Each State Party shall inform the Organization established pursuant to Article II of this Treaty of the legislative and administrative measures taken to implement the Treaty.
3. In order to fulfil its obligations under the Treaty, each State Party shall designate or set up a National Authority and shall so inform the Organization upon entry into force of the Treaty for such a State Party. The National Authority shall serve as the national focal point for liaison with the Organization and with other States Parties.
4. Each State Party undertakes to cooperate in good faith with the Organization in the exercise of the functions of the Organization and, in particular, to provide assistance to the Technical Secretariat, including data reporting on a routine basis and in response to requests, and to provide assistance for on-site inspections, as provided for in this Treaty.

Article IV

Verification

1. Each State Party undertakes to cooperate in good faith to facilitate the verification of compliance with this Treaty to clarify any event which might cause concern to other States Parties to the Treaty through:

- an effective international exchange of seismological data;
- an effective international exchange of measurements on radionuclides in the atmosphere;
- additional relevant techniques as specified in Protocol II.

The arrangements for these international cooperative measures are laid down in Protocol II annexed to this Treaty.

Each State Party undertakes to establish the necessary facilities to participate in these cooperative measures and through its National Authority to establish the necessary communication channels with the Technical Secretariat.

These arrangements shall be operative on the entry into force of this Treaty.

2. Large non-nuclear explosions carried out by a State Party shall be conducted in accordance with provisions laid down in Protocol III.

3. The States Parties undertake to consult one another and to cooperate in good faith for the clarification of all events pertaining to matters relevant to compliance with this Treaty. Upon request from a State Party, the Technical Secretariat shall assist in this cooperation to facilitate the clarification of events observed. In accordance with this provision, each State Party undertakes:

- to provide the Technical Secretariat with any additional information it possesses that might assist in the interpretation of an event that may be of relevance to the Treaty which has occurred on its territory, or under its jurisdiction or control;
- to provide any relevant information, through the Technical Secretariat, in response to a request, by any other State Party.

4. Each State Party may conduct bilateral consultations with any other State Party on matters relevant to the Treaty, request information from any State Party, through the Technical Secretariat, on any events relevant to this Treaty occurring on the territory of that State or under its jurisdiction or control.

5. Each State Party may use national technical means of verification at its disposal in a manner consistent with generally recognized principles of international law to verify compliance with the Treaty. Each State Party undertakes not to interfere with national technical means of verification of any other State Party.

6. If a State Party is unable to clarify the nature of an event through the measures specified in paragraphs 1 through 5 of this Article, each State Party is entitled to request, through the Executive Council, an on-site inspection on the territory of any other State Party for the purpose of ascertaining whether or not a specified event was a nuclear explosion.

7. The requesting State Party shall state the reasons for its request, including the evidence available. The requested State Party is under the obligation to comply with a request for an inspection. Such an inspection shall be conducted by the Technical Secretariat, and the result shall be reported to the Executive Council and all States Parties. Procedures for such inspections, including the rights and functions of the inspecting personnel, are laid down in Protocol III.

8. An on-site inspection carried out by the Technical Secretariat may also follow an invitation to the Executive Council by the State Party on whose territory the event has occurred.

Article V

Non-compliance

1. If a State Party considers that another State Party has failed to fulfil its obligations to cooperate in good faith to facilitate the verification of this Treaty, it may raise the issue in the Executive Council. If the matter

cannot be resolved in the Executive Council, it may be taken up in the Conference of the States Parties. The Conference of the States Parties shall take the necessary measures to ensure compliance with the Treaty and to redress and remedy any situation which contravenes the provisions of the Treaty.

2. In cases where a State Party fails to fulfil a request to take measures to redress a situation which gives rise to problems with regard to its compliance with the Treaty, the Conference of the States Parties may request that the State Party's rights and privileges under the Treaty be suspended until it undertakes the necessary action to conform with its obligations under the Treaty.

3. Any State Party which finds that any other State Party is acting in breach of obligations deriving from the provisions of the Treaty, may lodge a complaint with the Secretary-General of the United Nations. Such a complaint shall include all possible evidence confirming its validity, as well as a request for its consideration.

4. Each State Party undertakes to cooperate in good faith in carrying out any investigation which the Security Council may initiate in accordance with the provisions of the Charter of the United Nations on the basis of the complaint received by the Council.

5. The Secretary-General shall inform the States Parties of the results of the investigation. He shall further inform the Security Council of any indication that a State Party may have acted in breach of obligations under the Treaty and may request the Council to decide on measures necessary to ensure compliance with the Treaty.

Article VI

Privileges and Immunities

1. The States Parties to this Treaty shall grant privileges and immunities to the representatives of States Parties and the members of delegations to the Conference of the States Parties, the members of the Executive Council, the Director-General and the personnel of the Technical Secretariat in accordance with the Vienna Convention on Diplomatic Relations of 18 April 1961 in order to enable them to carry out the functions entrusted to them under this Treaty.

2. Provisions regarding privileges and immunities in connection with on-site inspections are contained in Protocol III.

3. The State Party in whose territory the Headquarters of the Organization is located shall, as soon as possible, conclude with the Organization a Headquarters Agreement covering privileges, exemptions and immunities.

Article VII

Annexes

The Protocols I, II and III to this Treaty constitute integral parts of the Treaty.

Article VIII

Amendments

1. At any time after the entry into force of this Treaty, any State Party may propose amendments to the Treaty or to any annexed Protocol. Any proposal for an amendment shall be communicated to the Depositary, who shall circulate it to all States Parties and seek their views on whether a conference should be convened to consider the proposal. If a majority, that shall not be less than twenty, of the States Parties so agree, the Depositary shall promptly convene a conference to which all States Parties shall be invited. The Conference may adopt amendments proposed, if a majority of the States Parties present and voting, including the nuclear-weapon States, so agree. Amendments shall enter into force for each Party accepting them upon their adoption by the Conference and thereafter for each remaining Party on the date of acceptance of the amendments by such a Party.
2. Proposals for amendments of provisions of a technical nature to be specified in Protocols I, II and III will be subject to a simplified amendment procedure conducted and decided by the Executive Council.

Article IX

Review of the Treaty

Five years after the entry into force of this Treaty, or earlier if it is requested by a majority of Parties to the Treaty by submitting a proposal to this effect to the Depositary, a conference of States Parties to the Treaty shall be held at, to review the operation of the Treaty, with a view to assuring that the purposes of the preamble and the provisions of the Treaty are being realized. Such review shall take into account any new scientific and technological developments relevant to the Treaty.

Article X

Entry into force

1. This Treaty shall be open to all States for signature. Any State which does not sign this Treaty before its entry into force in accordance with this Article may accede to it at any time.
2. This Treaty shall be subject to ratification by Signatory States.
3. This Treaty shall enter into force upon the deposit of instruments of ratification by forty Governments, including the nuclear-weapon States.

For the purposes of this Treaty, a nuclear-weapon State is one which has manufactured and exploded a nuclear weapon or other nuclear explosive device prior to 1 January 1967.

4. For those States whose instruments of ratification or accession are deposited after the entry into force of this Treaty, it shall enter into force on the date of the deposit of their instruments of ratification or accession.

Article XI

Depositary

1. The Secretary-General of the United Nations shall be the Depositary of this Treaty and shall receive the instruments of ratification and instruments of accession.

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 of accession and the date of the entry into force of this Treaty and of any amendments thereto, any notice of withdrawal, and the receipt of other notices. He shall also inform the Security Council of the United Nations of any notice of withdrawal.

3. This Treaty shall be registered by the Depositary in accordance with Article 102 of the Charter of the United Nations.

Article XII

Duration and Withdrawal

This Treaty shall be of unlimited duration. In exercising its national sovereignty, each State Party shall have the right to withdraw from the Treaty, if it decides that extraordinary events, related to the provisions of this Treaty, have jeopardized the supreme interests of its country. It shall give notice of such withdrawal to the Depositary three months in advance. Such notice shall include a statement of the extraordinary events it regards as having jeopardized its supreme interests.

Article XIII

Official Languages

This Treaty, 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, who shall send duly certified copies thereof to the Governments of the signatory and acceding States.

Article XIV

Signature

In witness whereof, the undersigned, duly authorized thereto, have signed this Treaty.

PROTOCOL I

The Organization

A. General Provisions

1. The Organization shall oversee the overall function of the Treaty and its verification arrangements and shall consist of the organs specified in Article III.
2. All States Parties to the Treaty shall be members of the Organization.
3. The cost of the Organization shall be borne by the States Parties in accordance with the United Nations scale of assessment.

B. The Conference of the States Parties

1. Each State Party shall have one representative in the Conference of the States Parties, who may be accompanied by alternates and advisers.
2. The Conference of the States Parties shall meet annually unless it decides otherwise.
3. The Conference of the States Parties shall take decisions on questions of procedure, including decisions to convene special sessions of the Conference, by a simple majority of the members present and voting. Decisions on matters of substance should be taken as far as possible by consensus. If consensus is not attainable when an issue comes up for decision, the Chairman shall defer any vote for 24 hours and during this period of deferment shall make every effort to facilitate achievement of consensus, and shall report to the Conference prior to the end of the period. If there is no possibility of achieving consensus at the end of 24 hours, the Conference shall take the decision by a two-thirds majority of members present and voting unless otherwise specified in the Treaty. When the issue arises as to whether or not the question is one of substance, that question shall be treated as one of substance unless otherwise decided by the Conference by the majority required for decisions on questions of substance.

C. The Executive Council

1. The Executive Council is responsible to the Conference of the States Parties. It shall carry out the powers and functions entrusted to it under the Treaty and its Protocols, 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. The Executive Council shall keep the overall operation of the Treaty and its verification arrangements under review to promote the effective implementation of and compliance with the Treaty. It shall facilitate

consultation among States Parties to resolve issues related to the Treaty, in particular to its verification, and supervise the operation of the Technical Secretariat.

3. The Executive Council shall decide on proposals for amendments to Protocols II and III of this Treaty on matters concerning the equipment and technical procedures to be used to verify compliance with the Treaty following proposals from a State Party or from the Technical Secretariat. An Advisory Board of international experts shall be established to provide scientific expertise on verification measures and to assist the Executive Council in assessing the value of new methods to be considered for the verification of this Treaty.

4. The Executive Council shall supervise the operation of the Technical Secretariat and therewith in particular:

- appoint its Director-General;
- decide on its annual budget;
- receive and review its reports submitted every three months and annually.

5. The Executive Council shall facilitate consultations among States Parties to resolve issues related to the Treaty, in particular to its verification. The functions of the Executive Council with regard to on-site inspections are laid down in Article V and Protocol III.

6. The Executive Council shall meet annually. Between sessions it shall meet as often as required to fulfil its functions. It shall elect its own Chairman.

7. Decisions by the Executive Council on (to be specified) are taken by simple majority.

D. The Technical Secretariat

1. A Technical Secretariat shall be established to assist States Parties, the Conference of the States Parties and the Executive Council on issues of verification. The Technical Secretariat shall, inter alia,

- coordinate international cooperative arrangements to exchange seismological data, data on radionuclides in the atmosphere and other data relevant to the monitoring of the Treaty;
- conduct on-site monitoring and inspection at the invitation of a State Party or at the request of the Executive Council;
- cooperate with the National Authorities of the States Parties to resolve uncertainties regarding compliance with the Treaty.

2. The Technical Secretariat shall coordinate the operation of the global seismological network and in particular

- operate the International Data Centre to compile, analyse and report on seismic data;
- supervise the operation of participating seismological stations and their reporting;
- provide technical assistance in the installation and operation of seismological stations;
- compile and assess results and experience of the operation of the seismological network.

3. The Technical Secretariat shall coordinate the operation of the network for global surveillance of radionuclides in the atmosphere and in particular

- operate the International Data Centre to compile, analyse and report data on radionuclides in the atmosphere;
- supervise stations which are monitoring radionuclides in the atmosphere;
- provide technical assistance in the installation and operation of monitoring stations;
- compile and assess results and experiences of the operation of a network for global surveillance of radionuclides in the atmosphere.

4. Upon request, the Technical Secretariat shall assist States Parties in using satellite observations to clarify seismic and other events in relation to this Treaty and

- ensure access to relevant, publicly available satellite data;
- process and analyse satellite data to facilitate the interpretation and clarification of seismic events.

The Technical Secretariat shall also compile, analyse and report on hydroacoustic signals in the ocean and other relevant data provided by States Parties to facilitate the verification of this Treaty.

5. The Technical Secretariat shall receive, compile and report to all States Parties any additional information that a State Party may provide to assist in the interpretation of an event which has occurred on its territory.

The Technical Secretariat shall forward requests for information made by any State Party to any other State Party on any event relevant to this Treaty occurring on the territory of the latter State. The Technical Secretariat shall receive, compile and report on any information received in response to such requests.

6. The functions of the Technical Secretariat with regard to on-site inspections are laid down in Article IV and Protocol III.
7. Upon invitation through the Executive Council, the Technical Secretariat shall conduct on-site monitoring of large non-nuclear explosions, exceeding 100 tons TNT equivalent, and report the result of such observations to the States Parties. The Technical Secretariat shall also compile and distribute a monthly list of reported non-nuclear explosions, exceeding 10 tons TNT equivalent.
8. The Technical Secretariat is authorized to propose to the Executive Council amendments of a technical nature to Protocols II and III of this Treaty. The Technical Secretariat is also authorized, in consultation with the National Authorities of States Parties, to make modifications in the Operational Manuals of the verification systems referred to in Protocols II and III. Such modifications shall be reported to the Executive Council.
9. The Technical Secretariat shall comprise a Director-General, appointed by the Executive Council for a period of four years, who shall be its Head and Chief Administrative Officer and such scientific, technical and other personnel as may be required. The Director-General may be reappointed for one further term, but not thereafter. Only citizens of States Parties shall serve as Inspectors or as other members of the professional and clerical staff of the Technical Secretariat.
10. The Technical Secretariat shall, on an annual basis, submit its budget proposal to the Executive Council. The Technical Secretariat shall further report to the Executive Council on its activities every three months, and annually.

PROTOCOL II

Global Monitoring System

Part I

International Exchange of Seismological Data

1. Each State Party to the Treaty undertakes to cooperate in good faith in an international exchange of seismological data to assist the States Parties in the verification of the Treaty by providing additional technical information for their national assessment. These international cooperative measures include 50-100 high-quality designated seismological stations, including seismic arrays in participating countries and in other territories, efficient systems for the exchange of seismological data, and an International Data Centre. The operation of the system shall be coordinated by the Technical Secretariat and guided by the Operational Manual for International Exchange of Seismological Data.

2. Each State Party shall have the right to participate in the international exchange of seismological data by contributing data from one or more designated seismological stations and to receive all the seismological data made available through the international exchange. Each State Party should cooperate with the international exchange. Each State Party should cooperate with the international system through its National Authority. To ensure that seismological stations with the necessary geographical coverage will be incorporated in the exchange, the States listed in Table I have agreed to provide data from the stations specified in the same Table.

Each State Party participating in the international data exchange shall provide geographical coordinates, a description of the seismic noise and the geological site, and a description of the instrumentation of each designated station. Any changes in these data shall be reported immediately. Data on designated stations are collected, compiled and regularly reported to the States Parties by the Technical Secretariat.

In consultation with the States Parties, the Technical Secretariat shall identify the need for data from additional stations or from high-quality stations and how such needs should be met. The Technical Secretariat shall also provide technical assistance to establish, operate and maintain new seismic high-quality stations in regions of the world where there is a lack of such stations.

3. The seismological stations designated for participation in the international exchange shall have the basic equipment specified in the Operational Manual. These stations shall be operated, calibrated and maintained as specified in the Manual. Information on the operation and the calibration of the stations shall be sent regularly to the Technical Secretariat.

4. Seismological data from each designated station shall be reported routinely and on a regular basis through the appropriate National Authority. The seismological data to be reported, the reporting format and the time schedule are specified in the Operational Manual.

In addition to routinely submitted data, each State Party participating in the international data exchange shall provide any relevant seismological data from its designated stations which are requested through the International Data Centre by any other State Party. The procedures for making such requests and the format and time schedule for responding to them are laid down in the Operational Manual.

5. An International Data Centre shall be established by the Technical Secretariat. Easy and free access for representatives of all Parties to the Treaty shall be granted to all facilities of the International Data Centre.

6. The International Data Centre shall routinely receive all seismological data contributed to the international exchange by its participants, process these data, without interpreting them, distribute such data to all

participants within one week, store all data contributed by participants as well as the results of the processing at the Centre. The procedures to be used at the International Data Centre are laid down in the Operational Manual. The International Data Centre shall further coordinate requests for additional seismological data from one State Party to another Party and circulate data obtained as a result of such requests.

7. Each State Party is encouraged to assist in the assessment of the nature of the seismic events located by the International Data Centre by contributing any additional information available about events located in its own territory.

Table 1

State	Station
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Part II

Surveillance of Radionuclides in the Atmosphere

1. Each State Party undertakes to cooperate in good faith in an international network for surveillance of radionuclides in the atmosphere. These international cooperative measures include 50-100 designated sampling stations for radionuclides in the atmosphere in participating States and in other territories, national or regional analysis laboratories, systems for the evaluation and exchange of these measurements, and the International Data Centre established for this purpose. The operation of the System shall be coordinated by the Technical Secretariat and guided by the Operational Manual for the Surveillance of Radionuclides in the Atmosphere.

2. Each State Party shall have the right to participate in the international surveillance of radionuclides in the atmosphere by contributing measurements of samples from one or more designated stations and to receive all the information made available through the international exchange. To ensure the necessary geographical coverage of sampling stations for radionuclides in the atmosphere, the States listed in Table 2 have agreed to provide measurements of samples from the stations specified in this Table.

Each State Party participating in the international surveillance shall provide geographical coordinates and a description of the instrumentation of each designated station as well as of the techniques applied in the laboratories carrying out the analysis. Any changes in these data shall be reported immediately. Data on designated stations and laboratories are collected, compiled and regularly reported by the Technical Secretariat.

3. The sampling stations and the analysis laboratories for radionuclides in the atmosphere designated for participation in the international exchange shall have the basic equipment specified in the Operational Manual for the Surveillance of Radionuclides in the Atmosphere. These stations and laboratories shall be operated and maintained as specified in this Manual. Information about the operation and maintenance of the stations and laboratories shall be sent to the Technical Secretariat on a regular basis.

4. Measurements of radionuclides in the atmosphere from each designated station shall be reported routinely and on a regular basis through the appropriate National Authority. The measurements of samples to be reported, the reporting format and time schedule are specified in the Operational Manual. A State Party shall cooperate in good faith with the International Data Centre to clarify any technical question regarding data reported.

In addition to routinely submitted measurements, each State Party participating in the international measurements exchange shall provide any relevant measurements from its designated stations requested through the International Data Centre by any State Party. The procedures for making such requests and the format and time schedule for responding are laid down in the Operational Manual.

5. An International Data Centre for the exchange of measurements on radionuclides in the atmosphere shall be established by the Technical Secretariat. Easy and free access for representatives of all States Parties shall be granted to all facilities of the International Data Centre.

The International Data Centre shall receive all measurements on radionuclides in the atmosphere contributed to the international exchange by its participants and routinely analyse and process these measurements according to established procedures. For observed release of radionuclides in the atmosphere, the time and location of the source shall be evaluated. In this analysis, relevant wind trajectories obtained from meteorological data shall be used. The results of the analysis shall be distributed to all participants within one week, and the records thereof be kept at the Centre. The procedures to be used in the analysis at the International Data Centre are laid down in the Operational Manual.

The International Data Centre shall also coordinate requests for additional measurements from one State Party to another and circulate the information obtained as a result of such requests.

Table 2

State	Station
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.....
.....

Part III

Use of Satellite Data

1. In order to assist in the interpretation of seismic and other events relevant to this Treaty and to facilitate the use by States Parties of satellite images, the Technical Secretariat shall ensure access to relevant data obtained from available satellite systems.
2. The Technical Secretariat shall assist States Parties in utilizing satellite data by establishing and operating a Satellite Image Processing Centre. This Centre shall have the capability to store available satellite data and to process such data according to specified procedures at the request of any State Party. The operation of the Satellite Image Processing Centre shall be guided by the Operational Manual for Satellite Data Processing.
3. Each State party operating an unclassified satellite system which provides images with a coverage and resolution relevant to this Treaty undertakes to make such image data available on terms to be agreed with the Technical Secretariat.

Part IV

Other Methods

1. The Technical Secretariat shall facilitate cooperation among States Parties in using additional means of verification which any State Party may find useful. The Technical Secretariat shall receive, compile and circulate any data relevant to the verification of this Treaty which any State Party makes available.
2. The Technical Secretariat shall, in consultation with the States Parties, provide technical assistance to establish, operate and maintain such additional means of verification.
3. Additional means of verification of compliance with this Treaty might include hydroacoustic measurements in the sea and acoustic and ionospheric measurements in the atmosphere.

PROTOCOL III

Procedures for On-Site Inspections and Monitoring

Part I

Procedures for International On-Site Inspections

1. The basic rules for verification through on-site inspection are laid down in Article IV of this Treaty.

2. The purpose of an international on-site inspection is purely fact-finding, and the Team of International Inspectors (hereinafter referred to as the Inspection Team) dispatched by the Technical Secretariat shall not make any assessment as to the nature of the event inspected. The Inspection Team shall present a factual report of the observations made during the inspection. As far as possible, this report shall represent the consensus view of the participating experts. If and where consensus cannot be achieved, the report shall reflect the views of all the participating inspectors.

3. The Inspection Team shall begin its inspection in the specified area to be inspected not later than seven days after it receives a request for inspection from the Executive Council. This area must be continuous and not exceed 1,000 km² or a distance of 50 km in any direction. An inspection may last for a maximum time period of seven days after the arrival of the Inspection Team at the point of entry in the territory of the State Party to be inspected.

4. During an international on-site inspection, the Inspection Team shall be entitled to

- conduct visual inspections of the area from the air and on the ground;
- conduct inspections of the area using infrared means of observation from the air and on the ground;
- take photographs in the visual and infrared parts of the spectrum from the air and on the ground;
- measure radioactive radiation in the atmosphere above the area, at ground level and in water;
- conduct temporary seismological measurements in the area.

5. The Director-General of the Technical Secretariat shall notify the inspected State Party not less than [12] hours prior to the planned arrival of the Inspection Team at the point of entry. Simultaneously the members of the Executive Council shall be informed about the request.

6. An international on-site inspection shall be carried out by the personnel and experts of the Technical Secretariat. The rules and detailed procedures for such on-site inspections are laid down in the Manual for International On-Site Inspections. The Inspectors shall be selected taking into account available expertise and must not include any national of the requesting State Party. The Inspection Team shall be headed by an officer from the Technical

Secretariat and contain additional Inspectors. The Inspection Team shall further comprise the necessary technicians, interpreters and secretaries provided by the Technical Secretariat. The total number of an Inspection Team shall not exceed

At all times while the inspecting personnel are in the territory of the State Party to be inspected, their persons, property, personal baggage, archives and documents as well as their temporary official and living quarters shall be accorded the same privileges and immunities as provided in Articles 22, 23, 24, 29, 30, 31, 34, and 36 of the Vienna Convention on Diplomatic Relations to the persons, property, personal baggage, archives and documents of diplomatic agents as well as to the premises of diplomatic missions and private residences of diplomatic agents.

Without prejudice to their privileges and immunities, it shall be the duty of the inspecting personnel to respect the laws and regulations of the State in the territory of which the inspection is to be carried out, in so far as such laws and regulations do not impede in any way whatsoever the proper exercising of the rights and functions provided for by the Treaty and this Protocol.

Part II

Procedures for On-Site Monitoring of Large Non-Nuclear Explosions

1. In order to avoid misinterpretation of large non-nuclear explosions, the Party conducting such an explosion must follow specified rules and procedures. For an explosion with a yield exceeding 100 tons TNT equivalent or any group of explosions with an aggregate yield exceeding the same limit, the State Party conducting such an explosion shall notify the Technical Secretariat not later than 60 days prior to the event. This notification shall include
 - the time, location, purpose and yield of the explosion;
 - a full description of the event, including a timetable for loading the charge;
 - any other relevant information that a State Party wishes to submit.
2. A State Party conducting an explosion with a yield exceeding 10 tons but not exceeding 100 tons of TNT equivalent shall provide the Technical Secretariat with information on such an event not later than seven days after the explosion.
3. Personnel from the Technical Secretariat shall monitor on-site the preparations for, and the detonation of, any non-nuclear explosion with a yield exceeding 100 tons TNT equivalent.

Based on the information provided by the State Party conducting the explosion, the Director-General of the Technical Secretariat shall decide from what date observers shall follow the preparation work. The on-site observation shall include the conduct of the explosion and observation of its result. The detailed rules and procedures are laid down in the Operational Manual for On-Site Monitoring of Large Non-Nuclear Explosions.

4. The personnel conducting the on-site monitoring shall be allowed to follow the preparation of the explosion, including the loading of the charge or charges. They should further be allowed to take pictures and to make measurements of radioactive radiation in the air and in water in the vicinity of the event, prior to and after the explosion.

5. The Technical Secretariat shall establish a factual report of each large non-nuclear explosion monitored and submit the report to all States Parties and to the Executive Council.

6. On-site monitoring of a large non-nuclear explosion shall be carried out by the Technical Secretariat using its own personnel and experts provided by States Parties, at the request of the Director-General of the Technical Secretariat. The observers shall be selected taking into account available expertise and must not include any national of the requesting State Party. The Inspection Team shall be headed by an officer from the Technical Secretariat and contain additional observers. The Inspection Team shall further comprise the necessary technicians, interpreters and secretaries provided by the Technical Secretariat in accordance with the need in each particular case. The total number of such support personnel shall not exceed

At all times while the inspecting personnel are in the territory of the State Party to be inspected or in a territory under the jurisdiction or control of that State Party, their persons, property, personal baggage, archives and documents as well as their temporary official and living quarters shall be accorded the same privileges and immunities as provided in Articles 22, 23, 24, 29, 30, 31, 34 and 36 of the Vienna Convention on Diplomatic Relations to the persons, property, personal baggage, archives and documents of diplomatic agents as well as to the premises of diplomatic missions and private residences of diplomatic agents.

Without prejudice to their privileges and immunities, it shall be the duty of the inspecting personnel to respect the laws and regulations of the State in whose territory the inspection is to be carried out, in so far as such laws and regulations do not impede in any way whatsoever the proper exercising of the rights and functions provided for by the Treaty and this Protocol.

OPERATIONAL MANUALS

In addition to the Treaty and its Protocols the following Operational Manuals should be established to guide the operation of the various components of the verification system:

- Operational Manual for International Exchange of Seismological Data;
- Operational Manual for the Surveillance of Radionuclides in the Atmosphere;
- Operational Manual for Satellite Data Processing;
- Operational Manual for International On-site Inspections;
- Operational Manual for On-Site Observations of Large Non-Nuclear Explosions.

These manuals are not an integral part of the Treaty and can be changed by the Technical Secretariat in consultation with States Parties. The Executive Council shall be informed of changes in the Operational Manuals.

CONFERENCE ON DISARMAMENT

CD/1202
CD/NTB/WP.19
3 June 1993

Original: ENGLISH

LETTER DATED 3 JUNE 1993 FROM THE HEAD OF THE SWEDISH
DELEGATION ADDRESSED TO THE SECRETARY-GENERAL OF THE
CONFERENCE ON DISARMAMENT TRANSMITTING THE TEXT OF A
DRAFT COMPREHENSIVE TEST-BAN TREATY

I have the honour to send you, enclosed, a draft Comprehensive Test-Ban Treaty, which will be introduced in the Conference on Disarmament and in the Ad Hoc Committee on a Nuclear Test Ban today. It should be noted that two protocols to the Treaty are to be added later on.

I should be grateful if the draft Treaty could be issued as an official document of the Conference as well as a Working Paper in the Ad Hoc Committee and translated into all the official languages.

(Signed) Lars Norberg
Ambassador
Head of the Swedish Delegation
to the Conference on Disarmament

DRAFT COMPREHENSIVE NUCLEAR TEST-BAN TREATY

The States Parties to this Treaty, hereinafter referred to as the "States Parties",

Convinced that recent fundamental international political changes provide opportunities to take further effective measures against the proliferation of nuclear arms,

Welcoming the conclusion of the START I and START II agreements, envisaging drastic reductions in present strategic nuclear arsenals,

Underlining the importance of the prompt implementation of these and other international disarmament and arms regulation agreements,

Stressing the need for further reductions of tactical and strategical nuclear weapons and their delivery systems,

Declaring their intention to undertake further measures towards nuclear disarmament and against the proliferation of nuclear weapons,

Recalling the determination expressed by the Parties in the Preamble to the 1963 Treaty Banning Nuclear-Weapons Tests in the Atmosphere, in Outer Space and Under Water to seek to achieve the discontinuance of all test explosions of nuclear weapons for all time, and to continue negotiations to this end,

Recalling that the Parties in the above-mentioned Treaty undertake to prohibit, to prevent and not to carry out any nuclear-weapon test explosion, or any other nuclear explosion in the atmosphere, in outer space and under water,

Convinced that a ban on all nuclear-weapon test explosions, and any other nuclear explosions, is an important instrument in preventing the further proliferation of nuclear weapons,

Have agreed as follows:

Article I

Basic Obligations

1. Each State Party undertakes to prohibit, to prevent, and not to carry out, in any environment, any nuclear-weapon test explosion, or any other nuclear explosion at any place under its jurisdiction or control.
2. Each State Party undertakes, furthermore, to refrain from causing, encouraging, assisting, permitting or in any way participating in the carrying out anywhere of any nuclear explosion referred to in paragraph 1 of this Article.

Article II
Implementation

1. The States Parties, in order to achieve the objectives of the Treaty and to ensure the implementation of the provisions of the Treaty, entrust the International Atomic Energy Agency, hereinafter referred to as the "Agency", with verification of compliance with the Treaty, as defined in Article III B.
2. The States Parties undertake to cooperate in good faith with the Agency in the exercise of its functions in accordance with this Treaty.
3. In order to fulfil its obligations under the Treaty, each State Party shall designate or set up a National Authority and shall so inform the Agency upon entry into force of the Treaty for such a State Party. The National Authority shall serve as the national focal point for liaison with the Agency and with other States Parties.
4. Each State Party undertakes to take any measures it considers necessary to prohibit and prevent any activity in violation of the provisions of the Treaty anywhere under its jurisdiction or control.
5. Each State Party shall inform the Depositary of the legislative and administrative measures taken to implement the Treaty.

Article III
International Cooperation

A. States Parties

1. Each State Party undertakes to cooperate in good faith with each other and the Agency to facilitate the verification of compliance with this Treaty through:
 - international exchange of seismological data;
 - international exchange of measurements on radionuclides in the atmosphere;
 - additional relevant techniques, as specified in Protocol I, annexed to this Treaty.

The arrangements for these international cooperative measures are laid down in Protocol I.

Each State Party undertakes to establish the necessary facilities to participate in these cooperative measures and through its National Authority to establish the necessary communication channels with the Agency. These arrangements shall be operative on the entry into force of this Treaty.

2. Large non-nuclear explosions carried out by a State Party shall be conducted in accordance with provisions laid down in Protocol II, annexed to this Treaty.

B. The Agency

In the exercise of its functions in accordance with this Treaty, the Agency shall:

- coordinate international cooperative arrangements to exchange seismological data, data on radionuclides in the atmosphere and other data relevant to the monitoring of compliance with the Treaty;
- endeavour, through cooperation with the National Authorities of the States Parties and through other means, to clarify that no inconsistencies occur with regard to events relevant to compliance with the Treaty;
- verify, when inconsistencies are not clarified, compliance with the Treaty through on-site inspection in accordance with Article IV.

Article IV

Verification

1. Each State Party shall, in order to assist in the interpretation of an event that may be of relevance to the Treaty and has occurred at any place under its jurisdiction or control, provide such additional information that the Agency might request.
2. Each State Party may use national technical means of verification at its disposal in a manner consistent with generally recognized principles of international law to verify compliance with the Treaty.
3. If the nature of an event cannot be clarified through the measures specified in paragraphs 1 and 2 of this Article, each State Party is entitled to request an on-site inspection on the territory of any other State Party for the purpose of ascertaining whether or not a specified event was a nuclear explosion. The requesting State Party shall state the reasons for its request, including the evidence available. Such requests shall be addressed to the Director-General of the Agency, who shall bring the matter to the attention of the Board of Governors of the Agency.
4. If the Board of Governors decides to conduct an on-site inspection, the relevant State Party is under obligation to comply with the Board's decision. Such inspections shall be conducted by the Agency, and the result shall be

reported to the Board of Governors and all States Parties. The Board of Governors shall report any findings to the Security Council of the United Nations. Procedures for such inspections, including the rights and functions of the inspecting personnel, are laid down in Protocol II.

5. A State Party, on whose territory an event has occurred, may invite the Agency to conduct an on-site inspection.

Article V

Complaints

Any State Party which finds that any other State Party is acting in breach of obligations deriving from the provisions of the Treaty, may lodge a complaint with the Security Council of the United Nations. Such a complaint shall include all possible evidence confirming its validity.

Article VI

Privileges and Immunities

1. The States Parties to this Treaty shall grant privileges and immunities to the representatives of States Parties and the Director-General and the personnel of the Agency in accordance with the Vienna Convention on Diplomatic Relations of 18 April 1961 in order to enable them to carry out the functions entrusted to them under this Treaty.

2. Provisions regarding privileges and immunities in connection with on-site inspections are contained in Protocol II.

Article VII

Annexes

The Protocols I and II to this Treaty constitute integral parts of the Treaty.

Article VIII

Amendments

1. At any time after the entry into force of this Treaty, any State Party may propose amendments to the Treaty or to any annexed Protocol. Any proposal for an amendment shall be communicated to the Depositary, who shall circulate it to all States Parties and seek their views on whether a conference should be convened to consider the proposal. If a majority, that shall not be less than thirty of the States Parties, including the nuclear-weapon States, so agree, the Depositary shall promptly convene a conference to which all States Parties shall be invited. The Conference may adopt amendments proposed, if a

majority of the States Parties present and voting, including the nuclear-weapon States, so agree. Amendments shall enter into force for each Party accepting them upon their adoption by the Conference and thereafter for each remaining Party on the date of acceptance of the amendments by such a Party.

2. Proposals for amendments of provisions of a technical nature to be specified in Protocols I and II will be subject to a simplified amendment procedure conducted and decided by the Board of Governors of the Agency.

Article IX

Review of the Treaty

Five years after the entry into force of this Treaty, or earlier if it is requested by a majority of the States Parties to the Treaty by submitting a proposal to this effect to the Depository, a conference of States Parties to the Treaty shall be held at, to review the operation of the Treaty, with a view to assuring that the purposes of the preamble and the provisions of the Treaty are being realized. Such review shall take into account any new scientific and technological developments relevant to the Treaty. At intervals of five years thereafter, a majority of the Parties to the Treaty may obtain, by submitting a proposal to this effect to the Depository, the convening of further conferences with the same objective of reviewing the operation of the Treaty.

Article X

Entry into force

1. This Treaty shall be open to all States for signature. Any State which does not sign this Treaty before its entry into force in accordance with this Article may accede to it at any time.

2. This Treaty shall be subject to ratification by Signatory States.

3. This Treaty shall enter into force upon the deposit of instruments of ratification by 40 Governments, including the nuclear-weapon States. For the purposes of this Treaty, a nuclear-weapon State is one which has manufactured and exploded a nuclear weapon or other nuclear explosive device prior to 1 January 1967.

4. For those States who instruments of ratification or accession are deposited after the entry into force of this Treaty, it shall enter into force on the date of the deposit of their instruments of ratification or accession.

Article XI

Depositary

1. The Secretary-General of the United Nations shall be the Depositary of this Treaty and shall receive the instruments of ratification and instruments of accession.
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 of accession and the date of the entry into force of this Treaty and of any amendments thereto, any notice of withdrawal, and the receipt of other notices. He shall also inform the Security Council of the United Nations of any notice of withdrawal.
3. This treaty shall be registered by the Depositary in accordance with Article 102 of the Charter of the United Nations.

Article XII

Duration and Withdrawal

1. This treaty is of a permanent nature and shall remain in force indefinitely, provided that in the event of a violation by any party of a provision of this Treaty essential to the achievement of the objectives of the Treaty or of the spirit of the Treaty, every other Party shall have the right to withdraw from the Treaty.
2. Withdrawal shall be effected by giving notice twelve months in advance to the Depositary who shall circulate such notice to all other Parties.

Article XIII

Official Languages

This Treaty, 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, who shall send duly certified copies thereof to the Governments of the signatory and acceding States.

IN WITNESS WHEREOF, the undersigned, duly authorized thereto, have signed this Treaty.

Protocol I

(to be added)

Protocol II

(to be added)

CONFERENCE ON DISARMAMENT

CD/1232
CD/NTB/WP.33
6 December 1993

Original: ENGLISH

LETTER DATED 6 DECEMBER 1993 FROM THE HEAD OF THE
DELEGATION OF SWEDEN ADDRESSED TO THE SECRETARY-GENERAL
OF THE CONFERENCE ON DISARMAMENT TRANSMITTING THE TEXT
OF A DRAFT COMPREHENSIVE NUCLEAR TEST BAN TREATY AND
ITS-ANNEXED DRAFT PROTOCOL

I have the honour to send you, enclosed, a draft
Comprehensive Nuclear Test Ban Treaty and its annexed draft
Protocol. The draft Treaty is a revision of the draft Treaty
text which was submitted on 3 June 1993 (CD/1202).

I should be grateful if the draft could be issued as an
official document of the Conference and as a Working Paper of the
Ad Hoc Committee on a Nuclear Test Ban.

(Signed) LARS NORBERG
Ambassador
Head of Delegation

Amendments in the Swedish Draft Nuclear Test Ban Treaty
compared with the Draft of 3 June 1993

Article I: In para 2 "preparing" added.

Article III: Change of heading. In A 1 drafting changes and addition of "hydroacoustic data". In B: Drafting changes and addition of "at the request of a State Party" in second paragraph.

Article IV: I para 3 "for the purpose of ascertaining whether or not a specified event was a nuclear explosion" changed into "for the purpose of ascertaining compliance with this Treaty". Para 4 partly new text.

Article VI: Drafting change

Article VII: Drafting change

Article VIII: New article

Article IX: Old article VIII

Article X: Old article IX

Article XI: Old article X. Drafting change

Article XII: New article

Article XIII: Old article XI

Article XIV: Old article XII

Article XV: Old article XIII

DRAFT COMPREHENSIVE NUCLEAR TEST-BAN TREATY

The States Parties to this Treaty, hereinafter referred to as the "States Parties",

Convinced that recent fundamental international political changes provide opportunities to take further effective measures against the proliferation of nuclear arms,

Welcoming the conclusion of the START I and START II agreements, envisaging drastic reductions in present strategic nuclear arsenals,

Underlining the importance of the prompt implementation of these and other international disarmament and arms regulation agreements,

Stressing the need for further reductions of tactical and strategical nuclear weapons and their delivery systems,

Declaring their intention to undertake further measures towards nuclear disarmament and against the proliferation of nuclear weapons,

Recalling the determination expressed by the Parties in the Preamble to the 1963 Treaty Banning Nuclear Weapons Tests in the Atmosphere, in Outer Space and Under Water to seek to achieve the discontinuance of all test explosions of nuclear weapons for all time, and to continue negotiations to this end,

Recalling that the Parties in the above-mentioned Treaty undertake to prohibit, to prevent and not to carry out any nuclear weapon test explosion, or any other nuclear explosion in the atmosphere, in outer space and under water,

Convinced that a ban on all nuclear weapon test explosions, and any other nuclear explosions, is an important instrument in preventing the further proliferation of nuclear weapons,

Have agreed as follows:

Article I

Basic Obligations

1. Each State Party undertakes to prohibit, to prevent, and not to carry out, in any environment, any nuclear weapon test explosion, or any other nuclear explosion at any place under its jurisdiction or control.

2. Each State Party undertakes, furthermore, to refrain from causing, encouraging, assisting, preparing, permitting or in any way participating in the carrying out anywhere of any nuclear explosion referred to in paragraph 1 of this Article.

Article II

Implementation

1. The States Parties, in order to achieve the objectives of the Treaty and to ensure the implementation of the provisions of the Treaty, entrust the International Atomic Energy Agency, hereinafter referred to as the "Agency", with verification of compliance with the Treaty, as defined in Article III B.

2. The States Parties undertake to cooperate in good faith with the Agency in the exercise of its functions in accordance with this Treaty.

3. In order to fulfil its obligations under the Treaty, each State Party shall designate or set up a National Authority and shall so inform the Agency upon entry into force of the Treaty for such a State Party. The National Authority shall serve as the national focal point for liaison with the Agency and with other States Parties.

4. Each State Party undertakes to take any measures it considers necessary to prohibit and prevent any activity in violation of the provisions of the Treaty anywhere under its jurisdiction or control.

5. Each State Party shall inform the Depositary of the legislative and administrative measures taken to implement the Treaty.

Article III

Obligations of States Parties and the Agency

A. States Parties.

1. Each State Party undertakes to establish in cooperation with the Agency an effective international and universal monitoring regime. The regime includes the establishment of international monitoring systems based on seismological data, hydroacoustic data and data on radionuclides in the atmosphere and the use of additional relevant techniques.

The arrangements for these international monitoring measures are laid down in the Protocol, annexed to this Treaty.

Each State Party undertakes to establish the necessary facilities to participate in these cooperative measures and through its National Authority to establish the necessary communication channels with the Agency. These arrangements shall be operative on the entry into force of this Treaty.

2. Large non-nuclear explosions carried out by a State Party shall be conducted in accordance with provisions laid down in the Protocol, annexed to this Treaty.

B. The Agency

In the exercise of its functions in accordance with this Treaty,
the Agency shall

- coordinate the international monitoring régime including the exchange of seismological data, data on radionuclides in the atmosphere and other data relevant to the monitoring of compliance with the Treaty;

- endeavour, at the request of a State Party, through cooperation with the National Authorities of the States Parties and through other means, to clarify inconsistencies that may occur with regard to events relevant to compliance with the Treaty.

- verify, when inconsistencies are not clarified, compliance with the Treaty through on-site inspection in accordance with Article IV;

ARTICLE IV

Verification

1. Each State Party shall, in order to assist in the interpretation of an event that may be of relevance to the Treaty at any place under its jurisdiction or control, provide such additional information that the Agency might request.
2. Each State Party may use national technical means of verification at its disposal in a manner consistent with generally recognized principles of international law to verify compliance with the Treaty.
3. If the nature of an event can not be clarified through the measures specified in paragraphs 1 and 2 of this Article, each State Party is entitled to request an on-site inspection on the territory of any other State Party for the purpose of ascertaining compliance with this Treaty. The requesting State Party shall state the reasons for its request, including the evidence available. Such requests shall be addressed to the Director General of the Agency, who shall bring the matter to the attention of the Board of Governors of the Agency.
4. If the Board of Governors decides to conduct an on-site inspection, the relevant State Party is under obligation to comply with the Board's decision. Such inspections shall be conducted by the Agency, and the report shall be transmitted by the Director-General of the Agency to the Board of Governors and all States Parties. The Board of Governors shall decide on and report any findings of non-compliance essential to the achievement of the objectives of the Treaty or of the spirit of the Treaty, to the Security Council of the United Nations and all States Parties. Decisions on questions mentioned in this paragraph shall be made by the Board of Governors by two-thirds majority of those present and voting. Procedures for such inspections, including the rights and functions of the inspecting personnel, are laid down in the Protocol, annexed to this Treaty.
5. A State Party, on whose territory an event has occurred, may invite the Agency to conduct an on-site inspection.

ARTICLE V

Complaints

Any State Party which finds that any other State Party is acting in breach of obligations deriving from the provisions of the Treaty, may lodge a complaint with the Security Council of the United Nations. Such a complaint shall include all possible evidence confirming its validity.

Article VI

Privileges and Immunities

1. In order to enable them to carry out the functions entrusted to them under this Treaty, the States Parties to this Treaty shall grant privileges and immunities to the Director-General and personnel of the Agency in accordance with the Vienna Convention on Diplomatic Relations of 18 April 1961.

2. Provisions regarding privileges and immunities in connection with on-site inspections are contained in the Protocol, annexed to this Treaty.

Article VII

Status of Protocol

The Protocol to this Treaty constitutes an integral part of
the Treaty.

Article VIII

Settlement of Disputes

If any dispute arises between two or more State Parties or between two or more States Parties and the Agency concerning the interpretation or application of the present Treaty, the Parties concerned shall consult among themselves with a view to having the dispute resolved by negotiation, inquiry, mediation, conciliation, arbitration, or other peaceful means of their own choice. Any dispute may, with the consent of all parties to the dispute, be referred to the International Court of Justice for settlement.

Article IX

Amendments

At any time after the entry into force of this Treaty, any State Party may propose amendments to the Treaty or to the annexed Protocol. Any proposal for an amendment shall be communicated to the Depositary, who shall circulate it to all States Parties and seek their views on whether a conference should be convened to consider the proposal. If a majority, that shall not be less than thirty of the States Parties, including the nuclear-weapon States, so agree, the Depositary shall promptly convene a conference to which all States Parties shall be invited. The Conference may adopt amendments proposed, if a majority of the States Parties present and voting, including the nuclear-weapon States, so agree. Amendments shall enter into force for each Party accepting them upon their adoption by the Conference and thereafter for each remaining Party on the date of acceptance of the amendments by such a Party.

Article X

Review of the Treaty

Five years after the entry into force of this Treaty, or earlier if it is requested by a majority of the States Parties to the Treaty by submitting a proposal to this effect to the Depositary, a conference of States Parties to the Treaty shall be held at, to review the operation of the Treaty, with a view to assuring that the purposes of the preamble and the provisions of the Treaty are being realized. Such review shall take into account any new scientific and technological developments relevant to the Treaty. At intervals of five years thereafter, a majority of the Parties to the Treaty may obtain, by submitting a proposal to this effect to the Depositary, the convening of further conferences with the same objective of reviewing the operation of the Treaty.

Article XI

Entry into force

1. This Treaty shall be open to all States for signature. Any State which does not sign this Treaty before its entry into force in accordance with this Article may accede to it at any time.
2. This Treaty shall be subject to ratification by Signatory States.
3. This Treaty shall enter into force upon the deposit of instruments of ratification by forty States, including the nuclear-weapon States. For the purposes of this Treaty, a nuclear-weapon State is one which has manufactured and exploded a nuclear weapon or other nuclear explosive device prior to 1 January 1967.
4. For those States whose instruments of ratification or accession are deposited after the entry into force of this Treaty, it shall enter into force on the date of the deposit of their instruments of ratification or accession.

Article XII

Reservations

The Articles of this Treaty, including the Articles of the annexed Protocol which constitutes an integral part of the Treaty, shall not be subject to reservations.

Article XIII

Depositary

1. The Secretary-General of the United Nations shall be the Depositary of this Treaty and shall receive the instruments of ratification and instruments of accession.

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 of accession and the date of the entry into force of this Treaty and of any amendments thereto, any notice of withdrawal, and the receipt of other notices. He shall also inform the Security Council of the United Nations of any notice of withdrawal.

3. This Treaty shall be registered by the Depositary in accordance with Article 102 of the Charter of the United Nations.

Article XIV

Duration and Withdrawal

1. This Treaty is of a permanent nature and shall remain in force indefinitely, provided that in the event of a violation by any party of a provision of this Treaty essential to the achievement of the objectives of the Treaty or of the spirit of the Treaty, every other Party shall have the right to withdraw from the Treaty.

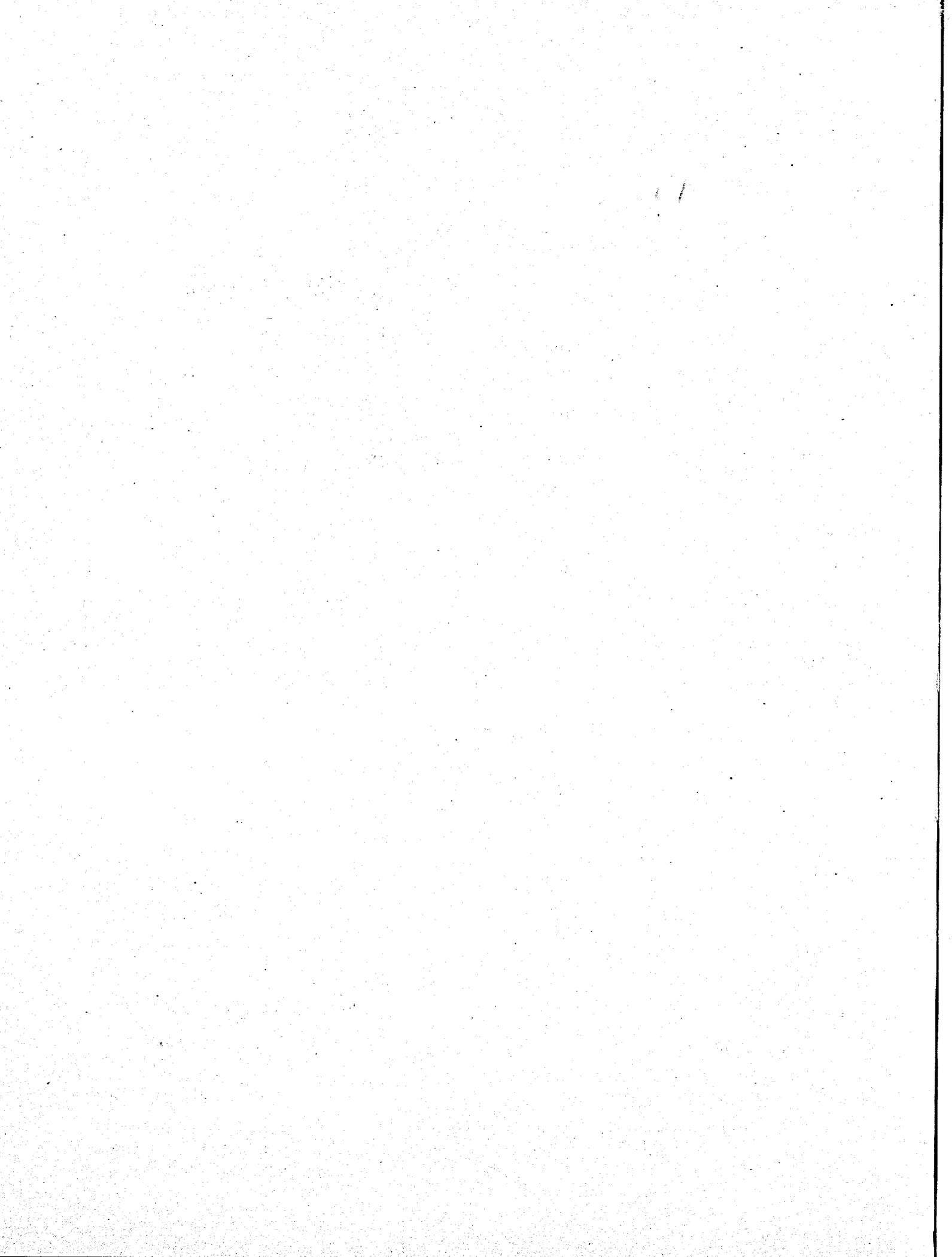
2. Withdrawal shall be effected by giving notice twelve months in advance to the Depositary who shall circulate such notice to all other Parties.

Article XV

Official Languages

This Treaty, 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, who shall send duly certified copies thereof to the Governments of the signatory and acceding States.

In witness whereof, the undersigned, duly authorized thereto, have signed this Treaty.



P R O T O C O L
T O T H E
D R A F T C O M P R E H E N S I V E N U C L E A R T E S T - B A N T R E A T Y

S E C T I O N I - G E N E R A L P R O V I S I O N S

Article 1. The International Atomic Energy Agency, hereinafter called the Agency, shall be entrusted with verification functions specified in Articles III B. and IV of the Treaty.

Article 2. Each State Party undertakes, in accordance with Article III A. 1. of the Treaty, to cooperate in good faith with each other and the Agency to facilitate the verification of compliance with this Treaty.

Article 3. The costs for the Agency's verification functions, mentioned in Article 1, shall be borne by the States Parties in accordance with the United Nations scale of assessment.

SECTION II - THE AGENCY

Article 4. In performing its verification functions, mentioned in Article 1, the Agency shall,

- establish and operate an International Data Centre to be the central facility of the international monitoring system based on seismological data, data on radionuclides in the atmosphere, hydroacoustic data, satellite data and other data relevant to the verification of the Treaty. Easy and free access to all services of the Centre shall be granted to all Parties to the Treaty;
- establish and operate networks of seismological and hydro-acoustic stations and stations to monitor radionuclides in the atmosphere;
- conduct on-site inspections and observations relevant to the verification of the Treaty;
- cooperate with National Authorities of the States Parties to resolve uncertainties regarding compliance with the Treaty;
- assist States Parties on other issues of verification of the Treaty.

Article 5. The Agency shall establish, and the Board of Governors of the Agency shall approve, the following Operational Manuals to guide the operation of the various components of the verification system:

- Operational Manual for International Exchange of Seismological Data;
- Operational Manual for International Exchange of Data on Radionuclides in the Atmosphere;

- Operational Manual for International Exchange of Hydroacoustic Data;
- Operational Manual for Satellite Data Processing;
- Operational Manual for International On-site Inspections;
- Operational Manual for On-Site Observations of Non-Nuclear Explosions.

These Manuals are not integral parts of the Treaty and can be changed by the Board of Governors of the Agency. The Agency shall inform the States Parties of any changes in the Operational Manuals.

Article 6. The Agency shall coordinate the operation of the international monitoring network and in particular

- operate the International Data Centre to compile, process and report on seismic data, hydroacoustic data and data on radionuclides in the atmosphere;
- operate a specified network of seismological stations, hydroacoustic stations and stations to measure radionuclides in the atmosphere;
- ensure that the operation of participating seismological stations, hydroacoustic stations and stations to measure radionuclides in the atmosphere and their reporting are in compliance with the respective Operational Manuals;
- provide technical support for the installation and operation of seismological stations, hydroacoustic stations and stations to measure radionuclides in the atmosphere;
- compile and evaluate results and experiences of the operation of the monitoring network.

Article 7. The Agency shall assist States Parties in utilizing satellite data in order to clarify seismic and other events in relation to this Treaty. The Agency shall operate the International Data Centre to compile, process and report on satellite observations, provided by States Parties or obtained from other sources.

Article 8. The Agency shall receive, compile and report to all States Parties any additional information that a State Party may provide to assist in the interpretation of an event which has occurred on its territory.

The Agency shall forward requests for information made by any State Party to any other State Party on any event relevant to this Treaty occurring on the territory of the latter State. The Agency shall receive, compile and report on any information received in response to such requests.

Article 9. The Agency shall facilitate consultations among States Parties to resolve issues related to the verification of the Treaty.

Article 10. The Agency shall, as specified in the Operational Manual for On-Site Observations of Non-Nuclear Explosions, mentioned in Article 5, conduct on-site monitoring of non-nuclear explosions in excess of 500 tons TNT equivalent, and report the result of such observations to the States Parties. The Agency shall also compile and distribute a monthly list of reported non-nuclear explosions in excess of 100 tons TNT equivalent. The Agency shall also conduct routine inspections at sites which States Parties have declared to be routinely used for the conduct of non-nuclear explosions in excess of 100 tons TNT equivalent.

Article 11. An Advisory Board of international experts shall be established by the Board of Governors of the Agency to provide scientific expertise on verification measures and to assist the Board of Governors in evaluating the methodology and the scientific quality of the procedure used and in assessing the value of new methods to be considered for the verification of this Treaty and which the Board of Governors may wish to report to the Review Conference, mentioned in Article IX of the Treaty.

SECTION III - THE GLOBAL MONITORING SYSTEM

Article 12. Each State Party undertakes to participate in the establishment and the operation of an international monitoring system. This obligation includes the establishment and operation of a two-tiered network of high quality seismological stations. The first tier, referred to as a network of Alpha stations, is established and operated by the Agency and provides uninterrupted data transmitted on-line to the International Data Center. The second tier, referred to as a network of Beta stations, is established and operated by the States Parties and provides data in near real time upon request by the International Data Center.

The States Parties are also obliged to participate in the establishment and operation of a network of high quality stations to measure radionuclides in the atmosphere. The stations are established and operated by the Agency and provide data promptly to the International Data Centre.

The States Parties are also committed to the establishment and operation of a network of high quality hydroacoustic stations in the oceans. These stations are established and operated by the Agency and provide uninterrupted data transmitted on-line to the International Data Center.

Article 13. Each State Party shall have the right to receive all data and information available from the International Monitoring Systems and shall make the necessary arrangement with the Agency through its National Authority.

Article 14. The Agency shall, in cooperation with the States Parties, establish and operate a specified network of high quality seismological stations. This network consists initially of the stations specified in Table 1, annexed to this Protocol. These stations shall fulfill the technical and operational requirements summarized in table 2 and further specified in the Operational Manual for International Exchange of Seismological Data. Uninterrupted data from the Alpha stations shall be transmitted on-line to the International Data Center.

Article 15. The Agency shall control the quality of the network of Alpha stations and evaluate its overall performance. The Board of Governors of the Agency may amend the network by technically upgrading stations and by adding or deleting stations in the annexed Table 1, which is not an integral part of the Treaty.

Article 16. The Agency shall make the necessary legal and other arrangements with the States Parties to establish and operate one or several Alpha stations on its territory. For an existing facility, a State Party shall give the Agency authority to use the station as an Alpha station as specified in the Operational Manual for International Exchange of Seismological Data and to make necessary changes in the equipment and the operational procedures to meet these requirements. A State Party shall cooperate with the Agency to establish a new station at a site to be agreed upon. The State Party shall provide the required land for the station free of charge and cooperate with the Agency in establishing the station and the infrastructure needed to support it. A State Party shall also transfer authority to operate the station or stations to the Agency and cooperate with the Agency in the routine operation.

Article 17. To supplement the Alpha network, a number of additional high quality stations referred to as Beta stations shall be established. The Beta stations to be used initially are listed in Table 3, annexed to this Protocol. The Beta stations shall be established and operated by the State Party on which territory it is situated. The Agency shall, if requested, provide technical assistance to a State Party in this regard. The Beta stations shall meet the technical and operational requirements specified in the Operational Manual for International Exchange of Seismological Data. Data from the Beta stations is to be requested by the International Data Center and shall be immediately available through on-line computer connections.

Article 18. The Agency shall control the quality of the network of Beta stations and evaluate its overall performance. The Board of Governors of the Agency may amend the network by adding or deleting stations in the annexed Table 3, which is not an integral part of the Treaty.

Article 19. The International Data Centre shall routinely receive all seismological data contributed to the international exchange by its participants, process and distribute these data to all participants within two days, store all data contributed by participants as well as the results of the processing at the Centre. The procedures to be used at the Centre are laid down in the Operational Manual for International Exchange of Seismological Data. The Centre shall further coordinate requests for additional seismological data from one State Party to another Party and make such data available to all States Parties.

Article 20. Each State Party is encouraged to assist in the assessment of the nature of the seismic events located by the International Data Centre by contributing any additional information available about events located in its own territory.

Article 21. The Agency shall, in cooperation with the States Parties, establish and operate a specified network of high quality stations to measure radionuclides in the atmosphere. This network consists initially of the stations specified in Table 4, annexed to this Protocol. These stations shall fulfill the technical and operational requirements summarized in Table 5 and further specified in the Operational Manual for International Exchange of Data on Radionuclides in the Atmosphere.

Article 22. The Agency shall control the quality of the network of stations to measure radionuclides in the atmosphere and evaluate its overall performance. The Board of Governors of the Agency may decide to amend the network by adding or deleting stations in the annexed Table 4, which is not an integral part of the Treaty.

Article 23. The Agency shall make the necessary legal and other arrangements with the States Parties to establish and operate one or several stations on its territory to measure radioactivity in the atmosphere. For an existing facility a State Party shall give the Agency authority to use the station as a station to measure radionuclides in the atmosphere as specified in the Operational Manual for International Exchange of Data on Radionuclides in the Atmosphere and to make necessary changes in the equipment and the operational procedures to meet these requirements. A State Party shall cooperate with the Agency to establish a new station at a site to be agreed upon. The State Party shall provide the required land for the station free of charge and cooperate with the Agency in establishing the station and the infrastructure needed to support it. A State Party shall also transfer authority to operate the station or stations to the Agency and cooperate with the Agency in the routine operation.

Article 24. In addition to routinely submitted measurements, each State Party may provide any other relevant measurement on radionuclides in the atmosphere. Each State Party may also request additional data from a third party through the Agency. The procedures for making such requests are laid down in the Operational Manual for International Exchange of Data on Radionuclides in the Atmosphere.

Article 25. The International Data Centre shall receive all measurements on radionuclides in the atmosphere contributed to the international exchange by its participants and routinely process these measurements according to established procedures. The Centre shall, at the request by a State Party, evaluate an observed release of radionuclides in the atmosphere as well as the time and location of the source. In this analysis, relevant wind trajectories obtained from meteorological data shall be used. The results of the analysis shall be distributed to all participants within one week, and the records thereof be kept at the Centre. The procedures to be used in the analysis at the Centre are laid down in the Operational Manual for International Exchange of Data on Radionuclides in the Atmosphere. The Centre shall also coordinate requests for additional measurements from one State Party to another and circulate the information obtained as a result of such requests.

Article 26. The Agency shall, in cooperation with the States Parties, establish and operate a specified network of high quality hydroacoustic stations. This network consists initially of the stations specified in Table 6, annexed to this Protocol. These stations shall fulfill the technical and operational requirements summarized in Table 7 and further specified in the Operational Manual for International Exchange of Hydroacoustic Data. Uninterrupted data from the stations shall be transmitted on-line to the International Data Center.

Article 27. The Agency shall control the quality of the hydroacoustic stations and evaluate their overall performance. The Board of Governors of the Agency may decide to amend the network by adding or deleting stations in the annexed Table 6, which is not an integral part of the Treaty.

Article 28. A State Party shall, at the Agency's request, cooperate with the Agency in establishing and operating one or several hydroacoustic stations on its territory. For an existing facility, a State Party shall give the Agency authority to use the station as an hydroacoustic station as specified in the Operational Manual for International Exchange of Hydroacoustic Data and to make necessary changes in the equipment and the operational procedures to meet these requirements. A State Party shall cooperate with the Agency to establish a new station at a site to be agreed upon. The State Party shall provide the required land for the station free of charge and cooperate with the Agency in establishing the station and the infrastructure needed to support it. A State Party shall also transfer authority to operate the station or stations to the Agency and cooperate with the Agency in the routine operation.

Article 29. The International Data Centre shall routinely receive data from hydroacoustic stations, process and distribute these data to all participants within two days, store all data contributed by participants as well as the results of the processing at the Centre. The procedures to be used at the Centre are laid down in the Operational Manual for International Exchange of Hydroacoustic Data.

Article 30. Each State Party undertakes to make satellite image data available on terms to be agreed by the Agency. The Agency shall, upon request, assist States Parties in the processing of satellite image data to facilitate the interpretation of events relevant to this Treaty. The procedures to be used by the Agency are laid down in the Operational Manual for Satellite Data Processing.

Article 31. The Agency shall facilitate cooperation among States Parties in using additional means of verification which any State Party may find useful. The Agency shall receive, compile and circulate any data relevant to the verification of this Treaty which any State Party makes available.

Article 32. The Agency shall, in consultation with the States Parties, provide technical support to establish, operate and maintain such additional means of verification.

Article 33. Additional means of verification of compliance with this Treaty may include acoustic and ionospheric measurements in the atmosphere.

SECTION IV: PROCEDURES FOR ON-SITE INSPECTIONS AND MONITORING

PART 1: Procedures for On-Site Inspections

Article 34. The basic rules for verification through on-site inspection are laid down in Article IV of this Treaty.

Article 35. The purpose of an international on-site inspection is to verify compliance with the Treaty. A team of inspectors (hereinafter referred to as the Inspection Team) shall be dispatched by the Agency and shall present a report to the Board of Governors of the Agency on the observations made during the inspection.

Article 36. The Inspection Team shall begin its inspection in the specified area to be inspected not later than seven days after the Board of Governors of the Agency has decided to conduct an inspection. This area must be continuous and not exceed 1,000 km² or a distance of 50 km in any direction. An inspection shall normally not exceed seven days after the arrival of the Inspection Team at the site in the territory of the State Party to be inspected.

Article 37. In accordance with the Agency's basic rights to use its own communication systems and means of transport and to take samples and bringing such samples out of the inspected country, the Inspection Team shall, during an international on-site inspection, be entitled to

- conduct visual inspections of the area from the air and on the ground;
- conduct inspections of the area using infrared means of observation from the air and on the ground;

- take photographs in the visual and infrared parts of the spectrum from the air and on the ground;
- measure radiation and levels of radioactivity in the atmosphere above the area, at ground level and in water;
- conduct temporary seismological measurements in the area.

Article 38. The Director-General of the Agency shall notify the inspected State Party not less than 12 hours prior to the planned arrival of the Inspection Team at the point of entry as defined in the Manual.

Article 39. An international on-site inspection shall be carried out by the personnel and experts of the Agency. The rules and detailed procedures for such on-site inspections are laid down in the Manual for International On-Site Inspections.

At all times while the inspecting personnel are in the territory of the State Party to be inspected, their persons, property, personal baggage, archives and documents as well as their temporary official and living quarters shall be accorded the same privileges and immunities as provided in the Vienna Convention on Diplomatic Relations to the persons, property, personal baggage, archives and documents of diplomatic agents as well as to the premises of diplomatic missions and private residences of diplomatic agents.

Without prejudice to their privileges and immunities, it shall be the duty of the inspecting personnel to respect the laws and regulations of the State in the territory of which the inspection is to be carried out, as long as such laws and regulations are not in conflict with the proper exercising of the rights and functions provided for by the Treaty and this Protocol.

PART 2: Procedures for On-Site Monitoring of Non-Nuclear Explosions

Article 40. For an explosion with a yield exceeding 500 tons TNT equivalent or any group of explosions with an aggregate yield exceeding the same limit, the State Party conducting such an explosion shall notify the Agency not later than 15 days prior to the event. This notification shall include

- the time, location, purpose and yield of the explosion;
- a full description of the event, including a timetable for loading the charge;
- any other relevant information that a State Party wishes to submit.

Article 41. A State Party conducting an explosion with a yield exceeding 100 tons but not exceeding 500 tons TNT equivalent shall provide the Agency with information on such an event not later than seven days after the explosion.

Article 42. Personnel from the Agency shall monitor on-site the preparations for, and the detonation of, any non-nuclear explosion with a yield exceeding 500 tons of TNT equivalent.

Based on the information provided by the State Party conducting the explosion, the Director-General of the Agency shall decide from what date observers shall follow the preparation work. The on-site observation shall include the conduct of the explosion and observation of its result. The detailed rules and procedures are laid down in the Operational Manual for On-Site Monitoring of Non-Nuclear Explosions.

Article 43. A State Party, which regularly conducts explosions with yields exceeding 100 tons TNT equivalent within a limited area, e.g. a mine, might establish a declared site for non-nuclear explosions. In the declaration the State Party shall submit to the Agency a description of the planned explosive activities, the purpose of the explosions and of the site itself. A declared site shall be open to on-site observation by the Agency at any time and the Agency might place on-site recording equipment at the site as defined in the Operation Manual for On-Site Monitoring. For explosions at declared sites a State Party is not obliged to provide information prior to or after an explosion as specified in articles 40 and 41.

Article 44. The personnel conducting the on-site monitoring shall be allowed to follow the preparation of the explosion, including the loading of the charge or charges. They should further be allowed to take pictures and to make measurements of radiation and levels of radioactivity in the air and in water in the vicinity of the event, prior to and after the explosion.

Article 45. The Agency shall establish a factual report of each non-nuclear explosion monitored and submit the report to all States Parties and to the Board of Governors of the Agency.

Article 46. On-site monitoring of a non-nuclear explosion shall be carried out by personnel and experts of the Agency. The rules and detailed procedures for such on-site monitoring are laid down in the Manual for On-Site Observations of Non-Nuclear Explosions.

At all times while the monitoring personnel are present in the territory of the State Party to be inspected or in a territory under the jurisdiction or control of that State party, their persons, property, personal baggage, archives and documents as well as their temporary official and living quarters shall be accorded the same privileges and immunities as provided in the Vienna

Convention on Diplomatic Relations to the persons, property, personal baggage, archives and documents of diplomatic agents as well as to the premises of diplomatic missions and private residences of diplomatic agents.

Without prejudice to their privileges and immunities, it shall be the duty of the monitoring personnel to respect the laws and regulations of the State in whose territory the inspection is to be carried out, as long as such laws and regulations are not in conflict with the proper exercising of the rights and functions provided for by the Treaty and this Protocol.

Table 1
 INITIAL LIST OF ALPHA STATIONS

Station	Code	Location	Configuration
1 NORSAR, NORESS, Norway	NORO, NR	61.040, 11.215	array
2 ARCESS, Norway	ARAO	69.555, 25.300	array
3 Spitsbergen	SPAO	78.178, 16.770	array
4 FINESS, Finland	FLAO	61.444, 26.079	array
5 GERESS, Germany	GEC2	48.836, 13.704	array
6 Peleduy, Russia	PDYO	58.0, 114.0	array
7 Norilsk, Russia	XNS(NR107)	69.400, 88.100	array
8 Zhetysay, Russia	ZAL	53.940, 84.805	3-C
9 Khabar, Russia	KBZO	43.729, 42.898	array
10 Eastern Siberia, Russia	XES, SEY	62.9, 152.4	3-C
11 Akshinsk, Kazakhstan	AKIU	50.434, 58.018	regional array
12 Alibek, Turkmenistan	GEYO	37.930, 58.118	regional array
13 Ulanuchl, China	WMO	43.821, 87.695	3-C
14 Eastern China	ENHO	30.372, 109.487	regional array
15 Hallar, China	HIA	49.267, 119.742	3-C
16 Paklan	PAKO	33.650, 73.252	regional array
17 Matsushiro, Japan	MAT	36.542, 138.207	regional array
18 Indonesia	XIN	-2.5, 103.4	3-C
19 New Guinea	XNO	-5.0, 140	3-C
20 Alice Springs, Australia	ASAR	-23.666, 133.905	Teleseismic array
21 Warramunga, Australia	WRA	-19.944, 134.341	Teleseismic array
22 Stephens Creek, Australia	STK	-31.882, 141.592	3-C
23 Cool, Australia	COOL	30.883, 121.145	3-C
24 Mawson, Antarctica	MAW	-67.604, 62.871	3-C
25 Korean Research Array	XKOO	37.128	Teleseismic array
26 Thailand	XTHO	19.99	Teleseismic array
27 Somoso, Spain	ESLA	39.675, -3.965	Teleseismic array
28 Turkey	XTUD	39.34	Teleseismic array
29 Ivory Coast	DBIC	6.670, -4.856	3-C
30 Banjul, Central African Rep.	BQCA	5.176, 18.424	3-C
31 Lobatse, Botswana	LBTB	-25.015, 25.597	3-C
32 Boshof, South Africa	BOSA	28.613, 25.416	Regional array
33 Luxor, Egypt	LUXO	26.0, 33.0	Regional array
34 Nairobi, Kenya	NAI	-1.274, 36.804	3-C

35	Northern Africa	XAF, TAM	72.8	5.5	3-C
36	Paso Flores, Argentina	PLCA	-40.731	-70.550	3-C
37	Villa Florida, Paraguay	CPUP	-26.331	-57.329	3-C
38	La Paz, Bolivia	LPAZ	-16.288	-68.131	3-C
39	Brasilia, Brazil	BDFB	-16.644	-48.014	Regional array
40	Northern South America	XSA, ROQ7, PSO7	4.6	-74.0	3-C
41	Gauribidanur, India	ODA	13.604	77.436	Teleseismic array
42	South Pole, Antarctica	SPA	90.0	0.0	3-C
43	Vanda, Antarctica	VNDA	-77.519	161.846	3-C
44	Lajitas, Texas	LTXO	29.334	-103.667	Regional array
45	Pinedale, Wyoming	PINO	42.780	-109.560	Teleseismic array
46	Goldstone, Calif	GSC	35.302	-116.805	3-C
47	Newcomb, New York	NCB	44.0	-74.0	3-C
48	Powhatan, Arkansas	POW	36.152	-91.185	3-C
49	North pole, Alaska	NPO	64.771	-146.886	3-C
50	Yellowknife, NW Territories	YKA	62.493	-114.605	Teleseismic array
51	Central Canada	XCC	55	-102	3-C
52	Eastern Canada	XEC	50.5	69.0	3-C
53	Blue Ice, Greenland	ILB	79.178	-39.370	3-C

Table 2
 STATION REQUIREMENTS FOR Alpha STATION

Category	Requirement
Pass Band	02-20 Hz (Alpha and Beta)*
Seismometer Noise	10 dB below Peterson low earth noise model
Calibration	within 5% in amplitude and 5° in phase
Sample Rate	40 samples per second ($\pm 50 \mu\text{s}$)
Resolution	18 dB below Petersons low noise model
Sensitivity	200.../nm @ 3 Hz
System Noise	10 dB below Petersons low earth noise curve
Dynamic Range	126 dB
Linearity	90 dB over the pass band
Timing Accuracy	1 ms (Network standard timing required)
Operating Temperature	-10° C to 45° C
Authentication	required
State of Health	a minimum of clock status, calibration status and vault status
Format	must be one of the official GSE formats
Protocol	TCP/IP (Beta)
Delay in Transmission	< 15 seconds
Data Frame Length	< 1 second
Data access	Priority given to IDC, then NDC
Disk Buffer	7 days
Data Availability	greater than 99%
Timely Data Transmission	greater than 98%
Station Location	known within 100 meters relative location of array elements
known	to within 1 meter
Seismometer Orientation	known within 1 degree

* 8.0 hertz for stations with "unique" capabilities

Table 3.
Initial list of Beta Stations (to be established)

Table 4
Initial list of Station to measure radioactivity in the atmosphere (to be established)

Table 5
Requirments for stations to measure radioactivity in the atmosphere (to be established)

Table 6
List of Hydroacoustic stations (to be established)

Table 7
Requirements for Hydmacoustic stations (to be established)

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