

THE LAW OF INTERNATIONAL ATOMIC ENERGY AGENCY SAFEGUARDS

by

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The prevention or at least the inhibition of the further proliferation of nuclear weapons has in recent years become the subject of extensive governmental consideration and negotiation — though up to now results have been meager. In particular, in connection with this as with all other types of disarmament or arms limitation measures, the necessity of control has been discussed. Though the International Atomic Energy Agency is occasionally, and recently rather more frequently, mentioned in this context¹, the existence of this organization and its actual and potential activities in this area are still generally ignored or, alternatively, overrated or otherwise misunderstood².

In fact the IAEA was established precisely to play a significant though limited rôle in connection with non-proliferation : to give assurance to the world community that certain nuclear activities, pledged (e.g. by reason of the receipt of international assistance) to purely peaceful uses, are in fact not diverted to military ends. In carrying out this part of its functions, the IAEA has in less than a decade established a control system under which, as of 30 June 1966, 29 agreements have been concluded between the IAEA and 23 of its Member States, covering 54 nuclear reactors as well as quantities of nuclear materials³. It can reasonably be expected that the applications of the IAEA's « safeguards » system will continue to expand to include in the near future most internationally assisted peaceful nuclear energy activities, as well as possibly some such activities not based on international co-operation.

Although the establishment and implementation of IAEA safeguards have many technical, political and administrative aspects worthy of study, the legal ones are equally important and

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¹ See, e.g., Article 3 of the draft non-proliferation treaty proposed by the United States at the 18-Nation Disarmament Conference (ENDC/152) reproduced in U.N. document A/5986 (also DC/227), Annex I; also the draft Treaty for the Denuclearization of Latin America referred to in footnote 48 below. See also the report of the Committee on Peaceful Uses of Atomic Energy of the National Citizens' Commission on International Co-operation (Washington, 1965).

² The literature on nuclear safeguards is small but gradually growing; a list is set forth in Annex B to this Article.

³ See IAEA document GC(X)/330, paras. 202-204. Since that date the Board of Governors of the IAEA has approved three more agreements with two additional Member States.

interesting. This is so since the application of IAEA safeguards depends on a complex of instruments (the Agency's Statute, various other international agreements, as well as regulations and resolutions) in which even legally trained strangers frequently lose their way and initiatives cannot always move with impunity.

The principal elements of the IAEA's control system, which are basically the same as those of the geographically or otherwise more limited systems administered for the same purpose⁴, are set forth in some detail in the second part of the annexed Technical Summary. It will be seen that they include an obligation on the part of Governments to keep certain records on those of its nuclear facilities and activities that are under control and to make routine and special reports thereon, and the right of the IAEA to conduct inspections within national territory. These are certainly serious and in part unprecedented interventions within the jurisdiction of sovereign States, and it goes without saying that such intervention requires the consent of the Government concerned. This consent can be given in many ways and with many qualifications, but is normally recorded in an international agreement — and thus a study of the legal aspects of any safeguards system is in considerable part a study of the relevant treaties.

That international safeguards must be based on treaties is true whether the control is carried out by another Government (e.g. the supplier of the controlled facility) under a bilateral agreement, or by an international organization. In the former situation the field of study is limited to an analysis of these treaties for only the nature and form of the consent of the controlled State is susceptible of analysis from an international law point of view, while only a political or technical study can or need be made of the reasons why a foreign national authority carries out (or neglects) particular control measures. However, if the controlling authority is an international organization, then any measures taken by it must also be justifiable in terms of its own internal law.

It is this interaction of treaty and intra-organization law which complicates the administration of safeguards by international organizations — but which at the same time makes this a vital field of study, both for itself and as a possible prototype of other control measures to be carried out by organizations in the future, with respect to disarmament and later perhaps in other fields requiring international action.

The legal structure of IAEA safeguards, which is potentially the only universal one of the existing systems, is for that reason also the most complex. Its operation is based on and controlled by a hierarchical construct of treaties and ancillary instruments. These will be discussed in detail below — but are summarized here in order to permit a quick survey :

- (a) The IAEA Statute — an international treaty, that created the organization and, *inter alia*, authorizes it to establish a safeguards system and specifies certain instances in which it is to be applied.
- (b) The safeguards system⁵ adopted by the Board of Governors of the IAEA and incorporated in several « documents », such as the Safeguards and the Inspectors Documents, and in other instruments, such as the Agreement on the Privileges and Immunities of the IAEA and the Rules of Procedure of the Board.
- (c) Agreements between Member States, or between Member States and the Agency, which require that particular nuclear activities or items be submitted to safeguards, either

⁴ The other safeguards systems are mentioned briefly on page 231 below.

⁵ The term « safeguards system » is used in various senses. Sometimes it merely refers to the Safeguards Document (footnote 29 below), as in the title to that Document itself. Sometimes it is defined to mean the Safeguards and Inspectors Documents (footnote 35 below) together (see, e.g., Denmark/U.K. Safeguards Transfer Agreement (footnote 55 below), Section 29). In this Article the term is used in a still broader sense to include all the instruments referred to in sub-paragraph (b) of the text above.

because of assistance rendered with regard to such activities or on a reciprocal or other basis.

- (d) « Safeguards agreements » between the Agency and one or more Member States⁶, which either list the items to be controlled or set forth a procedure for establishing such a list, and also indicate which part of, and how, the various instruments that constitute the safeguards system are to be applied.
- (e) Ancillary instruments, such as « safeguards letters », « supplemental agreements » and « subsidiary arrangements », which expand on or complete the provisions contained in safeguards agreements.
- (f) Internal IAEA regulations and rules relating to the exercise of the IAEA's safeguards functions.

These various instruments will be described and analyzed at greater length below and their interrelationships will be explored. This will establish the foundation for the discussion, in the light of these instruments, of a series of particular legal questions relating to safeguards, such as the formal arrangements relating to inspectors and inspections, the question of liability, etc.

However, it is not the purpose to explore here in detail all the legal problems arising in connection with safeguards. It is only desired to indicate the types of problems that arise and the solutions that have been adopted, and in particular to explain the legal framework by which international safeguards can be carried out within the jurisdiction of sovereign States.

LEGAL INSTRUMENTS RELATING TO SAFEGUARDS

A. STATUTE OF THE IAEA

The original concept of establishing an international agency dealing with atomic energy goes back to the 1946 Baruch Plan, in which the United States Government proposed to the United Nations Atomic Energy Commission the establishment of an International Atomic Development Authority⁷. That Authority was to operate all significant nuclear activities in the world, and to control those of lesser importance. That proposal came to nought, largely because of the unwillingness of the Soviet Government to consent to the creation of an international authority which would exercise such important functions within national States; later the cold war and the build-up of nuclear stocks in several countries made any further consideration of such a grandiose scheme impractical⁸.

In his « Atoms for Peace » speech before the General Assembly of the United Nations, President Eisenhower in December 1953 advanced a more modest proposal : that an

⁶ Neither the IAEA Statute nor the Safeguards Document (footnote 29 below) explicitly restricts the IAEA's safeguards functions to Member States, though certain minor legal problems might arise in case of safeguards application in a non-Member State and technically paragraph 82 of the Document might have to be amended. In practice practically all States likely to have nuclear programs possibly subject to IAEA control are already members (96 States as of 30 June 1966), so the question is largely academic.

⁷ See the three Memoranda submitted by the United States to Sub-Committee No. 1 of the U.N. Atomic Energy Commission on 2, 5 and 12 July 1946; U.N. document AEC/C.1/2 (17 July 1946) or A.E.C.O.R., 1st yr. Spec. Suppl.

⁸ All this is well described by J.L. Nogee in « Soviet Policy towards International Control of Atomic Energy » (University of Notre Dame Press, 1961).

international organization be established with which the nuclear powers could deposit some of their fissionable materials, that could then be used to assist those States with less-developed nuclear industries — but subject to an assurance that the assistance would not be used by the recipient for a weapons programme⁹. After this initiative it took almost three years for the statute of the new organization to be negotiated. The principal stages in this negotiation included a 7 and later 8-nation « Negotiating Group » meeting in Washington in 1955, which in 1956 was widened to include the Soviet Union and three other States; this 12-nation « Working Level Meeting » convened a Conference on the Statute of the International Atomic Energy Agency consisting of the member States of the United Nations and of the specialized agencies; in October 1956 the Conference unanimously adopted the Statute of the IAEA, which by July 1957 received a sufficient number of ratifications to enter into force¹⁰.

From the beginning, one of the two principal issues in drafting the IAEA Statute was the nature and extent of the control measures that were to be incorporated in it. The draft prepared by the Negotiating Group¹¹ foresaw that such controls would be exercised in connection with any assistance that the IAEA rendered to its Member States — either from its own resources or, more usually, by arranging for a nuclearly more developed State to provide the aid. However, by the time of the Working Level Meeting in 1956, several bilateral nuclear assistance programmes, principally that of the United States, had developed so considerably¹² that it was thought desirable to amend the draft Statute to include the possibility of the IAEA assuming safeguards with respect to assistance that had been rendered on a bilateral or multilateral basis by or through some other authority¹³. Finally, at the Statute Conference, the possibility of a State submitting to safeguards any of its own, unassisted nuclear energy activities was also added to the Statute¹⁴.

The Statute¹⁵, as finally adopted, contains a number of provisions concerning IAEA's safeguards functions :

- (1) Article II requires the IAEA to « ensure, so far as it is able, that assistance provided by it or at its request or under its supervision or control is not used in such a way as to further any military purpose ».
- (2) Article III.A.5 authorizes the IAEA to establish and administer safeguards for three purposes :
 - (a) To carry out the obligation established by Article II;
 - (b) To apply safeguards, at the request of the parties, to any bilateral or multilateral arrangement; and

⁹ U.N. document A/PV. 470 (8 December 1953).

¹⁰ See B.G. BECHHOEFER, « Negotiating the Statute of the International Atomic Energy Agency », XIII International Organizations 38-59 (1959).

¹¹ Draft circulated on 22 August 1955 and reproduced in Working Level Meeting (WLM) Doc. 2, Article XIII.C, D.

¹² One reason for so rapidly negotiating these agreements, which later became the principal competitors of the Agency, was to arouse the interest of these countries in nuclear energy and thus in the Agency; this object was successfully achieved.

¹³ See Article III.A.5 of the draft IAEA Statute prepared by the Working Level Meeting (WLM Doc. 31, Annex III) and reproduced in Conference on the Statute document IAEA/CS/3.

¹⁴ IAEA Statute (footnote 15 below), Article III.A.5, final clause.

¹⁵ The IAEA Statute is set forth in 276 UNTS 4 and in IAEA Legal Series No. 1 (Vienna, 1959), p. 49. An amendment is set forth in 47 UNTS 334; IAEA document INFCIRC/41.

- (c) To apply safeguards, at the request of a State, to any of its activities in the atomic energy field.
- (3) Article III.B.1 foresees that the IAEA may assist the United Nations in « furthering the establishment of safeguarded world-wide disarmament ».
- (4) Article III.B.2 requires the IAEA to establish controls over special fissionable materials received by it.
- (5) Article XI.F.4 requires the IAEA to include the following undertakings by Member States in all agreements under which the IAEA assists, or arranges to assist, a nuclear energy project :
 - (a) That the assistance « shall not be used in such a way as to further any military purpose »; and
 - (b) That the project shall be subject to IAEA safeguards, as specified in the agreement.
- (6) Article XII is the one principally devoted to safeguards. It sets forth in three paragraphs :
 - (a) The rights and responsibilities that the IAEA is to have when carrying out safeguards, to the extent that these are relevant to a particular situation; these are : the right to review the design of nuclear facilities, the right to require the maintenance of records, the right to require the submission of reports, the right to follow special fissionable material produced under safeguards through chemical reprocessing and throughout its future uses or to require the temporary deposit of the material with the IAEA until such a peaceful and safeguarded use can be found, the right to send its inspectors into Member States to account for safeguarded materials and to determine compliance with the relevant agreements, and finally the right to impose certain sanctions¹⁶.
 - (b) The requirement that the IAEA establish a staff of inspectors, and their responsibility in controlling the activities and nuclear material stocks of the IAEA itself¹⁷.
 - (c) The responsibility of the inspectors to report non-compliance by a State to the Director General of the IAEA and the further proceedings to be taken by him and by the Board of Governors upon receiving such a report — including a listing of possible sanctions.
- (7) Article XIV.B.1(b) provides that the cost of implementing safeguards shall be considered as an « administrative expense » of the IAEA, to be borne by all Member States in accordance with a scale to be fixed by the General Conference for all administrative expenses. However, Article XIV.C provides that such expenditures attributable to the application of safeguards to bilateral or multilateral arrangements (see paragraph (2)(b) above) are to be offset by any amounts recovered from Member States under the agreements whereby these safeguards responsibilities were assumed by the IAEA.
- (8) Article XVI.B.1, as well as Article III.B.4, reinforces the requirement established in Article XII.C that the Board of Governors of the IAEA is to report to the Security Council of the United Nations any non-compliance by a State with its safeguards obligations.

From this brief summary it should be apparent that the Statute of the IAEA does not in itself create any obligation for a Member State to submit any of its activities to safeguards. It does provide in an obligatory way that if the IAEA directly or indirectly assists a Member

¹⁶ The IAEA's control measures are summarized somewhat more fully in Part 2 of the Technical Summary (Annex A below).

¹⁷ See IAEA Statute, Articles III.B.2 (referred to in paragraph (4) of the text above) and IX.H.

State it must apply safeguards — but only in connection with such assistance. Furthermore, it makes it possible for States supplying assistance to each other to call upon the IAEA to carry out any related controls — but it does not oblige any Member State to provide assistance only subject to IAEA (or to any other) safeguards. Thus a State conducting nuclear activities entirely from its own resources will not become subject to IAEA safeguards except at its own request, and even a State receiving bilateral assistance will only be safeguarded by the IAEA if the assisting State requires it.

B. INSTRUMENTS ADOPTED BY THE BOARD OF GOVERNORS

The Statute itself creates the basis on which the IAEA can and in some cases must exercise safeguards, and it also outlines the types of control measures to be imposed. However, the drafters of the Statute, as a matter of deliberate compromise, avoided any full specification either of the circumstances, i.e. the type and amount of IAEA assistance, that would require the application of safeguards, or of all the items (aside from nuclear materials, reactors and chemical processing plants — which are all specifically named) to which safeguards would apply, or finally of the control procedures in a form detailed enough to constitute the full contents of an agreement by which a Member State would submit to safeguards. But already in negotiating its very first safeguards agreement, that relating to the supply of 3 tons of natural uranium to a 10 thermal megawatt research reactor project in Japan¹⁸, it was found that unless the IAEA established some fairly detailed rules on when and how it could apply safeguards to particular types of assistance, the negotiation of even minor agreements would become too lengthy, complicated and controversial.

Consequently the Board of Governors of the IAEA¹⁹ decided, not without considerable controversy, to supplement the general provisions of the Statute by some specific rules that would constitute the « safeguards system » of the IAEA. This system has come to be expressed in two documents, the so-called Safeguards and Inspectors Documents, and as to some special matters in the Agreement on the Privileges and Immunities of the IAEA.

1. The Safeguards Document

(a) *Development of the Safeguards Document*

During the Board discussion in January 1959 of the terms of the IAEA's first project agreement, it was suggested that the Secretariat should formulate the draft of a safeguards system based on the statutory pattern. By June the Secretariat had prepared a two-part draft, consisting on the one hand of some general principles and on the other of a detailed set of « Draft Regulations for the Application of Safeguards »²⁰. Both these parts combined provisions relating to the obligation of the Agency to prevent military diversion and to the

¹⁸ See the Project Agreement relating to the JRR-3 reactor in Japan, IAEA document INFCIRC/3, Part II; 339 UNTS 327.

¹⁹ An organ consisting at present of the representatives of 25 of the Member States of the IAEA, selected according to a complex formula (Article VI.A of the IAEA Statute) taking into account technological development and various political and geographic factors; these are discussed in footnote 18 of M. Willrich's article (cited in Annex B, No. II.7). It is this body that is charged with carrying out the functions of the IAEA (Article VI.F of the Statute) — including particularly those related to safeguards.

²⁰ This draft was set forth in a document of the Board of Governors, which are restricted in distribution « to Members of the Agency for Official Use Only ». Only the documents of the General Conference (marked GC()/...) and the Information Circulars (marked INFCIRC/...) are distributed without restriction and consequently only such documents are cited in this Article.

related but distinct obligation to assure that the projects it was associated with as well as others submitted to controls for this purpose did not constitute a hazard to health and safety²¹; the Draft Regulations also included a separate portion setting forth the inspection procedures common to both these functions. Neither part of this draft, nor the combination of the safeguards with the health and safety functions²², appealed to the Board. Working both in plenary session and through various committees, it caused the initial draft submitted by the Secretariat to the fundamentally revised²³ and provisionally approved the IAEA's first safeguards system in April 1960. It then submitted this system to the General Conference²⁴ « for consideration and appropriate action in accordance with the Statute »²⁵, and after the Conference had taken note of it and referred it back to the Board²⁶, the latter proceeded to the final adoption on 31 January 1961 of a slightly amended version of the system²⁷. Three years later, by a similar but now more smoothly operating procedure, it extended the system to include reactors of a larger size than originally covered²⁸.

In 1964 the Board proceeded to a revision of the entire system, to which definitive

²¹ IAEA Statute, Article III.A.6.

²² Although the IAEA Statute refers separately to the IAEA's safeguards (Article III.A.5) and to its health and safety responsibilities (III.A.6), in Article XII, entitled « The Agency's Safeguards », the two functions are considerably intermixed : thus Article XII.A.2 pertains only to health and safety measures and Articles XII.A.6, XII.B and XII.C entirely juxtapose the two functions. Confusion is further compounded by the fact that in U.S. domestic terminology the word « safeguards » may refer to safety (e.g. the function of the Advisory Committee on Reactor Safeguards), while Chapter VII of the English text of the EURATOM Treaty (footnote 159 below) refers to safeguards as « Safety Control ».

²³ In particular, it required the separation out of the less controversial provisions relating to health and safety, which eventually became a separate document entitled « The Agency's Health and Safety Measures » (INFCIRC/18), functionally corresponding, in its field, to the Safeguards Document. This actually caused a trifurcation of the original draft since the inspection provisions, being common to both systems of control, were relegated to still another document (now GC(V)/INF/39, Annex).

²⁴ An organ consisting of the representatives of all Member States of the IAEA and meeting annually.

²⁵ See part B of the resolution reproduced in document GC(IV)/108/Rev.1, to which the text of the provisionally approved Safeguards Document was annexed. The language of the resolution was kept carefully vague, in order to avoid controversy on the question whether the General Conference was merely being asked for a recommendation, which it can give pursuant to Article V.D of the Statute, or whether it was asked to take a decision pursuant to Article V.F.1; the Conference resolution (GC(IV)/RES/71) was equally so formulated as to avoid answering this question. In any case it has become an established practice to submit the various extensions and revisions of the Safeguards Document to the General Conference, each time on the basis of a similarly worded resolution of the Board, and by now it is probably generally felt that such submission is necessary. It should, however, be noted that in the case of the first document the Board, in giving its final approval made some changes — nominally in response to points raised in the debate at the Conference — but thereby the Conference did not actually consider the final text. Also, the provisionally approved extension of the Safeguards Document to reprocessing plants has for the present only been transmitted to the Conference for information (GC(X)/INF/86).

²⁶ GC(IV)/RES/71.

²⁷ INFCIRC/26.

²⁸ See documents GC(VII)/235, GC(V)/RES/144 and finally INFCIRC/26/Add.1.

approval was given in September 1965²⁹. In June 1966 it provisionally approved an extension of this revised system to reprocessing plants which it merely communicated to the General Conference for information³⁰.

(b) *Contents of the Safeguards Document*

The Agency's Safeguards System (1965) is set forth in a document of 85 paragraphs, which deals with several different types of subject matter²⁹.

Part I is entitled « General Considerations » and consists of three sub-parts. The first of these deals with the purposes and scope of the Document. The second is entitled « The Agency's Obligations » and sets forth in six paragraphs various restrictions that the Agency is to observe in applying safeguards : three of these are designed to make certain that the controls exercised will in no case hamper or make less economic legitimate peaceful activities; one requires the Director General to consult with States about the implementation of safeguards; two others are to assure States that information provided to the IAEA or its staff in connection with safeguards will be held confidential, in particular if it relates to industrial or commercial secrets³¹. The third sub-part includes certain considerations that the IAEA is to observe in entering into safeguards agreements.

Part II is somewhat misleadingly entitled « Circumstances Requiring Safeguards » and in effect lists the conditions under which nuclear materials³² are to be subject to safeguards, as well as the conditions under which they may be exempted from safeguards or upon which safeguards might be temporarily suspended or permanently terminated.

Part III, entitled « Safeguards Procedures », contains the meat of the Document. It describes in broad terms the control procedures to be applied to nuclear materials under safeguards, but for practical reasons does so primarily in relation to the facilities with which these materials are from time to time associated. Listed first are the general procedures that relate to materials in any type of facility : provisions are made concerning the review of the design of the facility, for the keeping of records, the submission of reports and the carrying out of inspections. These general procedures are followed by special ones for materials in reactors, in research and development facilities, in sealed storage, or in other locations. The Document is so designed that from time to time further special procedures may be added to cover other types of facilities, such as those provisionally added in June 1966 with respect to chemical plants³⁰.

Part IV contains definitions.

(c) *Legal Status of the Safeguards Document*

What is the legal status of the Safeguards Document ? There is no simple answer to this question.

In the first place, it is clear that the Safeguards Document does not constitute international legislation binding on Member States. Nothing in its Statute gives the IAEA authority

²⁹ See documents GC(IX)/294, GC(IX)/RES/186 and finally INFCIRC/66. From here on, unless specifically indicated otherwise, it is this latter document that is meant when reference is made to the « Safeguards Document », or to the « revised » or « new Document ».

³⁰ GC(X)/INF/86.

³¹ INFCIRC/66, paras. 9-14. Mr. Willrich refers to these provisions as « safeguards against safeguards » (see the article cited in Annex B, No. II.7, at pp. 40-41) since he correctly characterizes them as « general admonitions against overzealous administration of safeguards by the Agency inspectorate ».

³² Nuclear materials are defined, by INFCIRC/66, para 77, as meaning any « source or special fissionable material as defined in Article XX of the Statute ». The meaning of these terms is discussed in Part I of the Technical Summary (Annex A).

to promulgate regulations that would have such an effect. Moreover, out of an abundance of caution, paragraph 4 of the Document states that its provisions « will only become legally binding upon the entry into force of a safeguards agreement and to the extent that they are incorporated therein ».

The quoted paragraph indicates the principal way in which provisions of the Safeguards Document acquire legal force — through incorporation into safeguards agreements. In practice the entire Document is never incorporated as a whole into any agreement since certain provisions of it cannot suitably be used in this way; in particular two of the sub-parts of Part I deal with the use of the Document itself and with the function of safeguards agreements. However the provisions setting forth the control procedures or the various restrictions on the IAEA, as well as those relating to exemptions, to the suspension and termination of safeguards, and to out-of-State transfers of safeguarded nuclear materials are usually incorporated by reference. Other provisions, such as those relating to the scope of safeguards, are not in a form permitting direct incorporation and these are sometimes paraphrased.

However, the Safeguards Document also performs other important functions. One of these is directly indicated by the statement in paragraph 3 that the principles and procedures set forth in it « are established for the information of Member States... and for the guidance of the organs of the Agency itself, to enable the Board and the Director General to determine readily what provisions should be included in agreements relating to safeguards and how to interpret such provisions ». In effect, the Secretariat uses the Document as a guide in formulating and negotiating safeguards agreements, and the Director General will not accept a provision which runs counter to the Safeguards Document without calling the Board's attention thereto in submitting the agreement for approval. The Board itself is of course free to depart from the Document that it has promulgated, but in practice it has never explicitly done so.

Related to this function of the Document (i.e. guidance in formulating safeguards agreements) are the standards it provides for deciding when no safeguards agreement at all is required — e.g. when the assistance provided is of a type or amount that falls outside the scope of the safeguards system ³³.

Another legal function of the Safeguards Document derives from the procedure, set forth in a number of safeguards agreements, for establishing additional provisions concerning operations or transactions not foreseen by the original agreement. In such a case, as indicated below ³⁴, it is generally provided that the Board may promulgate such supplementary provisions « subject to paragraph A of Article XII of the Statute and to any relevant principles that have been or may be established thereunder ». The Safeguards Document sets forth these « principles », and thus when the Board is exercising its authority to make supplementary provisions it must do so in accordance with that Document.

Finally the Safeguards Document provides guidance, in a quasi-legal way, on how safeguards are to be implemented under existing agreements when situations arise that are not strictly covered by the agreement but for which the adoption of formal supplementary provisions by the Board seems inappropriate. The need for this situation has arisen, for example, when the scope of operations under a safeguards agreement has exceeded the scope of the Safeguards Document on which it was based — e.g. when safeguarded nuclear materials have been introduced into fuel fabricating plants which were not covered by the original Document at all and may only be covered by the revised Document after a further extension now under consideration. In such a situation the tendency is to derive analogous

³³ For instance, no safeguards are required on the supply of ordinary radio-isotopes (regardless of the quantity), or of books or films, or the services of a medical expert.

³⁴ See the « Safeguards Letters » discussed on pages 213-214 below.

rules either from the Document on which the agreement is based, or if necessary from more advanced versions of the Document — though legal force is only given to such an extension by the explicit or implicit consent of the State concerned.

2. The Inspectors Document

The Inspectors Document was originally part of the first Secretariat draft of the Safeguards Document. However, the Board immediately required it to be separated out and it was considered by the Board and by a special committee at several series of meetings until it was finally placed in effect by the Board on 25 June 1961. Unlike the Safeguards Document it was not submitted to the General Conference, but was only communicated to it twice for information ³⁵.

The Document itself consists of 14 paragraphs which cover four different areas. The first of these is the method by which IAEA inspectors are to be designated to States. The second deals with the method of announcing and carrying out inspection visits. The third states the rights of access and sketches some inspection procedures, and provides that reports are to be made to the State on each inspection. The final area covered is that of privileges and immunities of inspectors : inspectors shall be granted the rights necessary for the performance of their functions and this should in general be done by reference to the relevant provisions of the IAEA's Privileges and Immunities Agreement, but any disputes in this area should be resolved pursuant to the appropriate provisions of the safeguards agreement ³⁶.

The legal status of the Inspectors Document is precisely the same as that of the Safeguards Document. Its provisions too attain full legal force only by incorporation into safeguards agreements ³⁷; it too serves as a guide in negotiating such agreements ³⁷; and it too constitutes a standard that would have to be observed by the Board in establishing any supplementary safeguards provisions under agreements that permit it to do so.

3. Privileges and Immunities Agreement

Article XV.C of the IAEA Statute provides that the legal capacity, privileges, and immunities of the IAEA itself and of its staff and of the representatives to it shall be defined in a separate agreement or agreements between the organization and its Members. Pursuant to that provision the Board of Governors on 1 July 1959 adopted the Agreement on the Privileges and Immunities of the IAEA which it submitted to the Member States for acceptance ³⁸. Those States depositing instruments of acceptance thereby become parties to the Agreement.

³⁵ Under cover of documents GC(IV)/INF/27 and GC(V)/INF/39. The annex to the latter document (which differs only editorially from the annex to the earlier one) is the « Inspectors Document ». It should be noted that this Document is also designed to apply to IAEA health and safety inspectors.

³⁶ The disputes procedures included in safeguards agreements are discussed on pages 225-227 below; the provision of the Inspectors Document referred to in the text (GC(V)/INF/39, Annex, para 14) is meant to avoid any question about whether such disputes should instead be settled in accordance with the disputes provision in Section 34 of the Privileges and Immunities Agreement (INFCIRC/9/Rev.1) — which requires obtaining an advisory opinion from the International Court of Justice.

³⁷ GC(V)/INF/39, para 3.

³⁸ INFCIRC/9/Rev.1; 374 UNTS 147.

The text of the Agreement is based largely on that of the Convention on the Privileges and Immunities of the Specialized Agencies³⁹; however, in recognition of the IAEA's special safeguards functions, the Agreement provides that IAEA officials acting as inspectors shall enjoy certain special privileges which usually appertain only to experts on mission for the organization⁴⁰. In particular it is provided that inspectors, while exercising their functions or travelling in their official capacity en route to and from the performance of these functions, shall be immune from personal arrest or detention and their personal baggage shall be accorded the same immunities and facilities as that of members of comparable rank of diplomatic missions, and shall in any case be immune from seizure⁴¹. Subject to any appropriate security precautions agreed to between the IAEA and the State, all papers and documents of inspectors are inviolable and for the purpose of their communications with the IAEA they have the right to use codes and to receive papers or correspondence by courier or in sealed bags⁴².

The legal status of the Privileges and Immunities Agreement is in the first instance the same as that of the similar Conventions respectively relating to the United Nations and to the specialized agencies : i.e. States are only bound if they have deposited an instrument of acceptance of the Agreement. However, in the same way as the United Nations and the specialized agencies have used their Conventions by incorporating them in whole or appropriate part into international agreements with States that have not deposited such instruments, the IAEA also does so in concluding any treaty with any State, whether or not the latter is party to the Agreement⁴³, if in the implementation of the treaty the IAEA may need to expose itself or any member of its staff or its property to the jurisdiction of the State. In particular the Inspectors Document requires the IAEA to provide for the privileges and immunities of inspectors by including appropriate provisions of the Privileges and Immunities Agreement in all safeguards agreements, provided that all parties to that agreement so agree⁴⁴. Customarily, therefore, the Agreement is incorporated by reference into all safeguards agreements⁴⁵ and thereby acquires legal status with respect to all States subject to inspection, whether or not each of them has formally « accepted » the Agreement.

³⁹ 33 UNTS 261.

⁴⁰ INFCIRC/9/Rev.1, Section 18(b).

⁴¹ *Idem*, Section 23(a) and (f).

⁴² *Idem*, Sections 23(c) and (d) and 24.

⁴³ The reason for doing so in the case of States already parties to the Privileges and Immunities Agreement is that the IAEA's Agreement, unlike the two Conventions, is explicitly subject to denunciation by Member States (Section 39); such a denunciation would of course not be effective with respect to any other treaty that remains in force and incorporates all or parts of the Agreement.

⁴⁴ GC(V)/INF/39, Annex, para. 13. The qualification at the end of that provision seems unnecessary, since the Inspectors Document by itself has no legal force (see above) and safeguards agreements obviously can only enter into effect when all parties agree to all their provisions.

⁴⁵ Except that, in agreements concerning the exercise of safeguards in the United States, a reference to the U.S. International Organization Immunities Act (59 Stat. 669 (1945)) is substituted for one to the IAEA's Agreement — see e.g. the Agreement for the Application of Agency safeguards to United States Reactor Facilities (INFCIRC/57; 525 UNTS ..., No. 7580 — hereafter the « U.S. Submission Agreement »), Section 15; that domestic Act is by no means equivalent to the IAEA's Privileges and Immunities Agreement, especially with regard to the special rights these granted to inspectors, but the IAEA Board has accepted the Act as sufficient for the purposes of the limited functions that inspectors can perform in a country that in any case has so large a military program that there would be no temptation to divert from the items submitted to IAEA safeguards.

In summary, with respect to a State not party to the Privileges and Immunities Agreement but desiring to become a party to a safeguards agreement, the Agreement has in effect the same legal status as the Safeguards or Inspectors Document.

C. AGREEMENTS PROVIDING FOR IAEA SAFEGUARDS

As indicated above, the Statute itself does not contain any obligation for a State to submit to IAEA safeguards. However, the obligation or the motive to do so may arise from some international agreement, to which the IAEA may or may not be a party.

Whenever the IAEA gives assistance to a nuclear project in a Member State it must do so on the basis of an agreement in which the relevant safeguards are specified. This is a statutory obligation binding both the IAEA and each of its Members. Therefore « Project Agreements » at the same time supply the obligation to submit to safeguards and also define the safeguards to be applied; from the latter point of view these Agreements will be discussed in section D below.

When Member States assist each other they are not obliged by the IAEA Statute to provide for safeguards, or indeed to provide for any type of restriction on the use of the assistance. Nevertheless, most bilateral agreements relating to such assistance do contain some restrictions and also provide in some way for the exercise of controls. Some agreements provide that this control be exercised by the supplying State, or if the assistance might be rendered reciprocally, by each State with respect to the assistance it has provided to the other. Other bilateral agreements provide that this control be exercised by the IAEA, or by some other international organization. Finally most provide that initially the control be that of the supplying State, but that sometime later this control function be shifted to the IAEA — e.g. when both States agree to such a change or when the IAEA's safeguards system achieves a certain degree of completeness or acceptance⁴⁶. Bilateral agreements that provide either in an obligatory or a facultative way for the IAEA to apply safeguards would thus provide the motive for a State to submit to such control.

Besides bilateral assistance agreements, States may enter into multilateral co-operative arrangements. When these foresee the exchange of substantial nuclear assistance or the establishment of facilities of potential military interest, safeguards may be provided for. Though the two existing European agreements provide for the related organizations to exercise these safeguards⁴⁷, it is likely that future agreements will instead provide for submission to the IAEA.

The obligation to submit to safeguards need not be based on the receipt of any assistance, but may result from some reciprocal arrangement whereby two or more States (which may indeed be hostile to one another)^{47a} agree to submit all or some agreed part of their nuclear activities to IAEA safeguards. Such an agreement is at present being evolved by the

In some cases certain formal limitations with respect to the Privileges and Immunities Agreement have been included — see the Project Agreement relating to a Triga reactor in Mexico (INFCIRC/52, Part II; 490 UNTS 361, No. 7165), Section 9.

⁴⁶ See India/United States Agreement for Co-operation concerning Civil Uses of Atomic Energy (488 UNTS 21; 14 UNT 1484), Article VIII.

⁴⁷ EURATOM in the case of the safeguards provided for in the treaty establishing that organization (footnote 159 below), and ENEA in the case of the European Security Control Convention (footnote 158 below).

^{47a} Such an arrangement was proposed, at the 10th regular Session of the IAEA General Conference, by Poland, Czechoslovakia and East Germany to the Federal Republic of Germany (GC(X)/OR.103, para. 56 (prov.); GC(X)/OR.104, para. 21 (prov.); GC(X)/INF/91).

Preparatory Commission for the Denuclearization of Latin America⁴⁸; that draft treaty foresees that upon its conclusion each State party thereto will submit all its nuclear activities and facilities to IAEA safeguards.

Since the IAEA is rarely a party to these agreements that motivate States to submit to its safeguards, Article XXII.B of the Statute foresees that States may provide in such agreements for prior IAEA approval. However, up to now, no use has been made of this provision.

Finally it should be pointed out that a State may submit some or all of its nuclear activities to safeguards, even if it is not legally obliged to do so by any international instrument. The motives that might lead a State to do so could include a desire to assist the IAEA in establishing safeguards⁴⁹, the setting of an unilateral example to other States⁵⁰, or internal or external political pressures or ambitions.

D. SAFEGUARDS AGREEMENTS BETWEEN THE IAEA AND MEMBER STATES

Safeguards, whether by an international or by a foreign national authority, cannot be carried out within the jurisdiction of a State without its consent given in an international agreement. Nor, on the other hand, can the IAEA be obliged to carry out safeguards except on the basis of an agreement to which it is a party. The Statute itself does not constitute an agreement fulfilling either of these requirements, nor of course does the Safeguards Document; the agreements described in section C above may fulfil the first requirement⁵¹ but, since the IAEA itself is not a party to most of them, they rarely fulfil the second.

The Statute foresees that the IAEA will enter into special agreements with those States in which it is to carry out safeguards. With respect to Agency Projects⁵², the Statute provides that the Project Agreement shall constitute that agreement⁵². In the case of bilateral or multilateral submissions the obligation to conclude such agreements is only obliquely referred to, while in the case of unilateral submissions this requirement can only be derived indirectly from the Statute : Article III.A.5 authorizes the IAEA to apply safeguards if requested to do so by the States concerned, and Article XIV.C refers to « agreements regarding the application of safeguards between the Agency and parties to bilateral or multilateral arrangements ». Though these types of agreements are not referred to elsewhere in the Statute, it is convenient that the request by one or more States and the IAEA's approval of that request should be recorded in a formal agreement and this has in fact been done in each case.

Paragraph 15 of the revised Safeguards Document requires the conclusion of a safeguards agreement as a condition for the IAEA to implement safeguards in a State; three situations (projects, submission of bilateral or multilateral arrangements, and unilateral submissions)

⁴⁸ See both versions of Article 9 of the draft Treaty on the Denuclearization of Latin America, in the Annex to Resolution 14(III) of the Preparatory Commission, document COPREDAL/38, reproduced in U.N. document A/6328.

⁴⁹ See the Preamble to the U.S. Submission Agreement (footnote 45 above).

⁵⁰ The proposal for the Agreement referred to in footnote 49 above was first made by the United States at the 18-Nation Disarmament Conference in Geneva, in the hope of inducing the Soviet Union to make a similar gesture (ENDC/PV.172, p. 17; see previously, ENDC/PV.164, p. 9, and ENDC/PV.166, p. 19).

⁵¹ This is a specialized and somewhat misleading term, derived from Article XI of the IAEA Statute, which refers to nuclear projects initiated by Member States and assisted by the IAEA at the States' request.

⁵² IAEA Statute, Article XI.F.4.

are specified, and paragraph 82 of the Document calls all these agreements : « safeguards agreements »⁵³.

The IAEA has therefore entered into three types of safeguards agreements : those relating to IAEA projects (« Project Agreements »)⁵⁴, those relating to an arrangement between States in which bilateral national safeguards are provided for (« Safeguards Transfer Agreements »)⁵⁵, and those relating to a unilateral submission by a State (« Unilateral Safeguards Submission Agreements »)⁵⁶. Project and Unilateral Submission Agreements are always bilateral in form (IAEA - State); the Safeguards Transfer Agreements have been trilateral (IAEA - both States), principally to provide a convenient method for obliging the Supplying State to join in notifying the IAEA of any assistance rendered to the Receiving State and also to suspend its safeguards while those of the IAEA are applied. Other types of safeguards agreements can be anticipated : e.g. « Safeguards Execution Agreements » relating to arrangements between two States in which no national safeguards had been provided for; potentially even simpler would be a single bilateral agreement with a State relating to all existing or future arrangements under which it could receive nuclear assistance from any State^{56a}.

The content of safeguards agreements of course depends in part on their type. Thus, Project Agreements contain a number of provisions relating to the nature and terms of the assistance to be rendered, to the required health and safety measures, and to the rights to any inventions or discoveries arising from the project⁵⁷. Safeguards Transfer Agreements provide for the suspension, on the entry into force of IAEA safeguards, of any bilateral safeguards, and for their reinstatement should IAEA safeguards at any point terminate or be temporarily withdrawn⁵⁸. However, aside from such functional variations, the principal subjects covered by safeguards agreements are the following :

1. A definition of the items to which safeguards are to apply primarily

This can either be done in the form of a list (in which case the agreement is « closed-ended ») or by establishing some rule according to which the items may be specified (« open-ended » agreements). Project Agreements are generally of the « closed-ended » type, specifying those items that were supplied by or through the IAEA, as well as the

⁵³ Paragraphs 13 and 14 of the Inspectors Document (footnote 35 above) also foresee conclusion of « project or safeguards agreements », but under the terminology of the new Safeguards Document « project agreements » are subsumed under the title of « Safeguards agreements ».

⁵⁴ E.g. the Mexican Triga Project Agreement (footnote 45 above), concluded under the old Safeguards Document; and the Project Agreement relating to a Lockheed Reactor in Uruguay (INFCIRC/67, Part II; UNTS, No. 8123), concluded pursuant to the new Document.

⁵⁵ E.g. the Safeguards Transfer Agreement relating to the Austria/U.S.A. Co-operation Agreement (INFCIRC/76; UNTS, No. 8113), concluded pursuant to the old Safeguards Document; and the Safeguards Transfer Agreement relating to the Denmark/United Kingdom Co-operation Arrangement (INFCIRC/63; UNTS, No. 8120), concluded pursuant to the new Document.

⁵⁶ E.g. the U.S. Submission Agreement (footnote 45 above) concluded pursuant to the old Safeguards Document.

^{56a} See proposal by South Africa, GC(X)/OR.103, paras. 43-45 (prov.).

⁵⁷ The points to be covered in Project Agreements are listed in IAEA Statute Article XI.F.

⁵⁸ See, e.g., Denmark/U.K. Safeguards Transfer Agreement (footnote 55 above), Section 6.

facility to which the assistance directly relates. The Unilateral Safeguards Submission Agreements have similarly been closed-ended, in that particular reactor facilities were submitted by the Governments concerned. On the other hand, the Safeguards Transfer Agreements have all been open-ended; in these Agreements it is provided that the two Governments jointly notify the IAEA initially of all items subject to bilateral safeguards on the entry into force of the Safeguards Transfer Agreement and from time to time thereafter of all safeguardable items transferred from one State to the other later; the IAEA must assume the responsibility of safeguarding these items unless it states (usually within 30 days of receipt of the notification) that it is unable to do so.

It should be noted that, whichever form of agreement is used, the Safeguards Document provides little (mainly negative) guidance as to the items that are to be submitted to safeguards⁵⁹. Under Safeguards Transfer and Unilateral Submission Agreements this is left mostly to the States concerned (which of course may be bound in this respect by the terms of the agreements mentioned in section C above); under Project Agreements any nuclear material or wholly supplied principal nuclear facility must be covered, but if a principal nuclear facility is only supplied in part it will only be covered if the Board (subject of course to the consent signified by the assisted State in entering into the Agreement) decides that the facility was « substantially supplied »⁶⁰.

2. Rules for specifying the items to which safeguards are to apply derivatively

Whether the safeguards agreement is open or closed-ended, a number of provisions, based on the Safeguards Document, specify the rules according to which safeguards are applied derivatively to other items in some way connected with those subject to primary application⁶¹. Thus in every case special fissionable material produced in or by the use of any safeguarded items (including previously produced special fissionable material) must be permanently controlled. Other items may be safeguarded temporarily, such as nuclear material used (but not « improved ») in a safeguarded principal nuclear facility, or otherwise unsafeguarded facilities while they contain any safeguarded nuclear material.

3. Rules for exemptions, suspensions and terminations

Also directly based on the Safeguards Document (often by incorporating by reference the relevant paragraphs) are a number of provisions providing for the IAEA to exempt certain items from safeguards (because of their military insignificance), or temporarily to suspend or permanently to terminate safeguards under specified conditions.

4. Rules for transfers of safeguarded items

A number of provisions are generally included covering the possible transfer of safeguarded items within the State in which they are being safeguarded, from that State to the other State party to the agreement (if it is trilateral in form), or from the safeguarded State to any State not party to the agreement. The purpose of these provisions is always to make sure that such a transfer does not reduce the Agency's ability to safeguard items with respect to which its responsibility continues.

⁵⁹ INFCIRC/66, para. 19, foresees submission of nuclear materials and principal nuclear facilities (which are defined in paragraph 78 of the Document to exclude mines and ore processing plants). However, see page 234 below where the possibility of submitting non-nuclear materials and specialized equipment is discussed.

⁶⁰ INFCIRC/66, paras. 19 (a), 19(d) (i) and 20.

⁶¹ These rules are discussed further on pages 216-217 and 233-234 below.

5. Specification of the safeguards procedures

If the safeguards agreement is closed-ended, it is possible to set out the *safeguards* procedures to be applied in some detail (e.g. frequency of required routine reports and maximum permissible frequency of routine inspections) — and this was done in the case of the early Project Agreements as well as the first Unilateral Submission Agreement. These procedures were of course taken from the Safeguards Document. However, if the safeguards agreement is open-ended it is not possible to specify the exact procedures; instead the entire procedural portion of the Safeguards Document is incorporated by reference, and the actual procedures applicable to a given operation or facility are specified in a subsidiary arrangement of the type described in section G below. In view of the greater flexibility of the latter approach it is likely that it will be adopted even in the case of closed-ended agreements ⁶², especially since experience has shown that even if the procedures are spelled out in some detail in the safeguards agreement (and too much detail is impractical as well as psychologically undesirable) subsidiary arrangements to record further points or to change established ones cannot be avoided.

6. Specification of certain collateral obligations of, and restrictions on the IAEA

In early safeguards agreements several of the obligations and restrictions, now codified in the revised Safeguards Document ⁶³, were set out in full. Recently only the relevant paragraphs of the new Document have been incorporated by reference into the agreements.

7. Specification of certain procedures regarding inspections and IAEA inspectors

These points are always covered by incorporating by reference all, or the relevant parts, of the Inspectors Document and of the Privileges and Immunities Agreement ⁶⁴.

8. The application of sanctions

As indicated below ⁶⁴, some device is always used for incorporating in each safeguards agreement the provisions of the IAEA Statute relating to the application of sanctions.

9. Specification of certain financial matters

Some safeguards agreements contain provisions regarding the distribution of the costs of implementing safeguards and defining the types of expenses for which the IAEA is to be liable. In some agreements provisions are made concerning the coverage of any liability for damage that might be caused by IAEA inspectors. These provisions and the problems to which they relate are discussed below ⁶⁵.

10. Settlement of disputes

As indicated below ⁶⁶, some procedure for the settlement of disputes is included in every safeguards agreement.

⁶² This has already been done in case of the U.S. Submission Agreement (footnote 45 above), Section 12.

⁶³ INFCIRC/66, paras. 9-14. These restrictions are briefly listed on page 203 above.

⁶⁴ See page 222.

⁶⁵ See pages 227-230.

⁶⁶ See pages 225-227.

11. Changes in safeguards procedures

Various provisions have been included in most safeguards agreements relating to changes that may be required or desirable, either because the State wishes to perform operations with safeguarded nuclear items which are not contemplated in the original agreement and as to which consequently no safeguards procedures have been specified, or because the applicable provisions of the Safeguards Document have in the interim been revised.

As to changes required because of novel operations, a number of agreements provide that if additional safeguards provisions are made necessary, these may be established by the Board in conformity with the Statute and the current safeguards system, after the Director General has consulted with the Government; the new provisions are then set forth in a « Safeguards Letter », described in the next section.

As to changes that may be desirable because of a revision of the IAEA's safeguards system, it is usually left to the Government concerned to request that a safeguards agreement be appropriately amended⁶⁷. It would be inappropriate for the IAEA to have the right to require that such an amendment be made, for that would practically amount to a right of unilateral revision; however, since most changes in the Safeguards Document have up to now tended to relax the system, it is expected that States will generally desire to make these adjustments.

If a request is received by the IAEA the granting of which will involve the conclusion of a safeguards agreement (i.e. either a request for assistance involving nuclear materials or facilities, or for the application of safeguards), the terms of such an agreement are first negotiated between the Secretariat of the IAEA and the Government or Governments concerned. As much as possible these negotiations use as a point of departure either a model text designed specifically for that purpose or the last previous agreement of a similar type that had been approved by the Board. After these negotiations have been concluded, the Director General submits the text to the Board for approval; he does so under cover of a note or memorandum addressed to the members of the Board in which he recites the request, describes the proposed scope of the agreement, and comments on any special features of the proposed text that he feels should receive the special attention of the Board. In particular, he may record any relevant correspondence between the Secretariat and the Governments, or sometimes only between the Governments, which for some reason it is not considered desirable to reflect directly in the agreement itself. Consequently these covering memoranda may be useful tools for the interpretation of the agreement.

Neither the Statute nor the Safeguards Document itself requires that safeguards agreements be approved by the Board, but the custom has from the beginning been that such approval be secured. This is consistent with Article VI.F of the Statute which provides that « the Board of Governors shall have authority to carry out the functions of the Agency... » — though of course that provision would not prevent the Board from making a restricted delegation to the Director General, as it has with respect to most other types of agreements. As a matter of fact, the practice has been to submit to the Board the text of each safeguards agreement; the only time when this has not been done is when the Board has authorized the Director General to enter into a Project Agreement with a Member State covering the supply of such a small quantity of nuclear material that, according to the Safeguards Document, all of it is to be exempted from safeguards.

After the Board has approved an agreement it is signed by or for the Director General

⁶⁷ See, e.g., Denmark/U.K. Safeguards Transfer Agreement (footnote 55 above), Section 30. INFCIRC/66, para. 6, foresees that States parties to safeguards agreements concluded under the old Document may request the Agency to substitute the provisions of the new Document.

and by representatives of the Government(s). Each agreement of course specifies how it is to enter into force:

- (a) Most safeguards agreements enter into force directly on signature, or on a later date specified in the agreement.
- (b) Some agreements require ratification by the Governments concerned. Of course no ratification by the IAEA is ever required, since the previous approval of the Board provides all the necessary (and possible) authority.
- (c) A number of Safeguards Transfer Agreements provided that they would enter into force only after the IAEA had received and accepted a joint notification from the two Governments of the items to be initially safeguarded⁶⁸. This device was designed to make it possible to sign the agreement soon after Board's approval and still to delay entry into force until the two Governments had fully agreed on the items to be initially notified to the IAEA and the IAEA had negotiated all necessary subsidiary arrangements for safeguarding those items. Recently this method has been abandoned, in part because extended negotiations on the contents of the initial notification and on the terms of the arrangements had sometimes delayed the entry into force of a signed agreement for long periods (there being no deadlines to require quick action).

E. SAFEGUARDS LETTERS

Some safeguards agreements do not specify fully or by reference the safeguards to be applied in all situations. Initially this happened in the case of the Project Agreements concluded before the first Safeguards Document had been approved, when no safeguards procedures existed to which reference could be made or on the basis of which negotiations could be conducted. This has also been true in the case of Project Agreements in which particular operations and items were specified, but in which it was left open for the State to conduct additional operations or to involve other facilities or materials; in such cases, because of the speculative nature of such extensions, no safeguards provisions to cover them could be included in the agreement. In the more recent Project Agreements this contingency has been avoided by relying on the example set in the case of open-ended agreements, i.e. incorporating by reference in the formal agreement submitted to the Board the entire procedural portions of the Safeguards Document, and leaving it to the subsidiary arrangements (which the Secretariat can conclude with the Government from time to time as necessary) to specify the detailed safeguards applicable to particular operations and facilities⁶⁹.

In all agreements with incomplete procedures a clause has been included authorizing the IAEA to establish any necessary additional safeguards procedures⁷⁰. Since to some extent this is a blank cheque signed by the State and to be completed by the IAEA, a number of protective devices have been included in these clauses :

- (1) It is specified that any procedures thus established must be subject to Article XII.A of the Statute;
- (2) The procedures must also be subject to any relevant safeguards principles that had been or might be established pursuant to the Statute (e.g. the Safeguards Document

⁶⁸ See, e.g., the Austria/U.S.A. Safeguards Transfer Agreement (footnote 55 above), Section 26.

⁶⁹ See, e.g., Uruguayan Lockheed Project Agreement (footnote 54 above), Annex A, para. 6.

⁷⁰ See, e.g., Japanese JRR-3 Project Agreement (footnote 18 above), Article III.2; Mexican Triga Project Agreement (footnote 45 above), Section 8.

in force at the time the new procedures are established) — a provision that prevents the IAEA from discriminating against the State;

- (3) The Director General must first consult with the Government of the State concerning the additional procedures; and
- (4) The procedures must be adopted by the Board of Governors — and thus cannot depend solely upon a decision of the Director General.

Once such procedures have been adopted by the Board they are communicated to the State in a letter. They thereupon become binding on the State in the same way as the safeguards agreement itself, since that agreement in each case provides that the Government agrees to comply with any provisions promulgated by this method.

Up to now, three such letters have been approved and sent : two to Japan, in connection with the first reactor project supported by the Agency, and one to Finland, in connection with the second such project. In fact the first letter sent to Japan⁷¹ and the letter sent to Finland⁷² were negotiated together with the Project Agreements themselves, and the Governments would not have entered into those Agreements had they been dissatisfied with the letters. The second letter to Japan⁷³, approved soon after the first Safeguards Document was promulgated, in effect cancelled all safeguards on the project since the assistance supplied to it (3,042 kilograms of natural uranium) fell under the newly adopted exemption limits (10 tons of natural or slightly depleted uranium)⁷⁴.

F. SUPPLEMENTARY AGREEMENTS

The revised Safeguards Document provides that certain control procedures must be specified in the safeguards agreements themselves. For example, such a requirement is established with respect to the procedures for implementing the IAEA's right to have access to certain facilities « at all times »⁷⁵. Since in open-ended agreements that are initially to apply only to small facilities there is no need to include (and first negotiate) such procedures, it may instead be provided that, should the need for such procedures arise, then the IAEA and the Government concerned will conclude an appropriate agreement supplementing the safeguards agreement⁷⁶. Unlike Safeguards Letters, these Supplementary Agreements require the explicit and not merely the implicit agreement of the State. Also, unlike the Safeguards Letters which of course are technically not agreements, and unlike the subsidiary arrangements discussed below which are considered to be merely administrative, the Supplementary Agreements are to be registered with both the IAEA⁷⁶ and the United Nations⁷⁷.

G. SUBSIDIARY ARRANGEMENTS

As indicated above, in many safeguards agreements it is not practical or desirable to set forth the detailed safeguards procedures to be applied to particular facilities or operations. In such a case these procedures are established by means of subsidiary arrangements entered into between the Secretariat and the appropriate governmental authority. Usually this is

⁷¹ INFCIRC/3, pages 12-15.

⁷² INFCIRC/24/Add. 1.

⁷³ INFCIRC/3/Mod. 2, Part. I.

⁷⁴ INFCIRC/26, para. 32(a)(i).

⁷⁵ INFCIRC/66, para. 50.

⁷⁶ See the Bradwell Unilateral Safeguards Submission Agreement (INFCIRC/86, part I), Section 14; for the text of the Supplementary Agreement, see *idem*, part II.

⁷⁶ IAEA Statute, Article XXII.B.

⁷⁷ *Idem*, and U.N. Charter, Article 102.

done by means of an exchange of letters, in which the IAEA, after appropriate negotiations, originates proposals which are then accepted for the Government concerned.

These arrangements cover details such as the precise records to be kept of each facility and the form of the periodic and special reports to be submitted to the IAEA, definitions of what quantities of materials are considered significant from the point of view of various rules in the Safeguards Document, procedures for the exemption of items from safeguards or for temporarily suspending safeguards, and precise administrative procedures concerning the billing of any safeguards expenses to the IAEA.

Subsidiary arrangements are not submitted to the Board and this makes them a much more flexible device than the safeguards agreements themselves. If changes or additions are required, or if a waiver or temporary suspension of a particular provision appears reasonable, this can be done quickly and without waiting for one of the more and more infrequently scheduled meetings of the Board.

UNDERTAKING AGAINST MILITARY USE

Basic to all safeguards agreements is the undertaking, by the Governments, that certain items shall not be used « in such a way as to further any military purpose ». This undertaking has been included in all safeguards agreements, even if they related to another agreement (e.g. a bilateral arrangement) which already included a similar obligation.

The term « military purpose » is not further defined in the Statute⁷⁸ or in the Safeguards Document, nor is any clarification customarily included in safeguards agreements⁷⁹. The technical basis of the safeguards system is designed on the assumption that the undertaking applies primarily (perhaps solely) to nuclear bombs. Since no provision is made in the system for determining the destination of power produced in a controlled reactor, it appears that the supply of such power to a military installation is not considered to be a military use of the reactor; similarly the results of research performed with safeguarded items cannot be traced⁸⁰, so that the restriction would seem not to apply to any but explicitly military research. No decision has yet been required on whether a propulsion reactor for a naval vessel would be considered to be used for a military purpose.

Even though this undertaking has been described as basic to safeguards, it should be clear that it is neither part of nor a substitute for any part of the control system. Thus the suggestion sometimes made in connection with safeguards, that if a State undertakes a solemn obligation there is no call to control its compliance, has always been rejected by those responsible for the IAEA's system.

The IAEA cannot control any item that is not covered by the only-peaceful-purposes undertaking, since its safeguards system is only designed to keep items out of direct or indirect military channels. On the other hand the undertaking may extend to items not

⁷⁸ This term itself is used in Articles II, III.A.5, XI.F.4(a), XII.A.1, XII.A.6 and XII.B of the Statute; see, however, Articles III.B.2 and XII.A.5 where the term « peaceful purposes » is used. The failure to define these terms in the Statute is deliberate, as appears from the discussion at the Conference on the Statute (IAEA/CS/OR.35, pp. 66-81). It is interesting to note that Article 17 of the European Security Control Convention (footnote 158 below) includes a definition of « military purpose » — which is in effect the same as that which the IAEA is establishing by practice.

⁷⁹ Only the U.S. Submission Agreement (footnote 45 above) provides in Section 6 that research in a recognized basic area or for specific peaceful applications, the results of which are published or made available to the IAEA, shall in no case be considered military.

⁸⁰ *Idem*, Section 14.

subject to control, such as material exempted from safeguards; even though the IAEA has relinquished its rights to control such material (on the ground that its quantity appears to be of no military significance and any control measures would be unnecessarily bothersome to both the State and the Agency), the State's obligation to keep it from military uses continues.

COMMENCEMENT, CONTINUATION AND TERMINATION OF SAFEGUARDS

Within the framework of this Article it is not necessary or possible to examine all the esoteric rules, formulae, exceptions, and precedents determining the conditions under which nuclear materials are to be subject to safeguards, or the equally abstruse conditions relating to exemptions, and to the suspension and termination of safeguards. These are mostly technical in nature and justification, and relate to the quantity and quality of material that may be of military significance. Only a few aspects are of special legal interest.

A. COMMENCEMENT OF SAFEGUARDS

The commencement of safeguards in a State with respect to a given item raises no particular legal problems when based directly on assistance rendered by the IAEA (i.e. if it either is nuclear material supplied by or through the IAEA or is a principal nuclear facility⁸¹ wholly or, in the Board's view, substantially supplied) or on a submission by the State(s) concerned. These items are either specified in the safeguards agreement itself (closed-ended) or according to rules set forth therein (open-ended). Of course politically it may have been difficult to reach the accord reflected in the safeguards agreement⁸².

However, nuclear material can also become subject to safeguards in other ways. In particular, safeguarded nuclear material is, in effect, defined as including special fissionable material produced in or by the use of any safeguarded nuclear material or facility. Lawyers new to the field are disturbed by the apparent circularity of this definition, since the term « safeguarded nuclear material » appears in both parts. However, it must be realized that this is not a drafting defect, but actually reflects the physical reality that material as to which the IAEA's control extends may be used to produce more material to which such control should also extend.

The material that originally became subject to IAEA safeguards (e.g. through submission) is sometimes referred to as « first generation material »⁸³, material derived from that as « second generation material », etc. One can say that, for the purpose of considering its effect on subsequent generations of material, produced material of any « generation » is assimilated to first generation material; however, safeguards as to first generation material may be terminated by cancelling the reason for their original imposition (e.g. by restoring material to the State that originally supplied it⁸⁴), but produced material of whatever generation should in principle be considered as subject to persistent (if not perpetual) IAEA safe-

⁸¹ The term « principal nuclear facility » is defined in INFCIRC/66, para. 78, and the types of installation that fall within this definition are discussed in Part 1(b) of the Technical Summary (Annex A).

⁸² See the discussion by Willrich, Article cited in Annex B, No. II.7, at pp. 43-44.

⁸³ However, the « first generation produced material » referred to in INFCIRC/26, para. 4, is really « second generation material ». It is because of this confusion in terminology that these expressions have been abandoned in the revised Safeguards Document.

⁸⁴ INFCIRC/66, para. 26(a).

guards⁸⁵, unless its military value is completely destroyed or unless the contribution which the last previous generation made to its production is negligible⁸⁶.

Incidentally, the words « produced in or by the use of any safeguarded nuclear material », used in the above definition, also require elucidation. « Produced... by the use of... » in effect means that if atom A (e.g. U-235) is under safeguards and in fission it releases a neutron which is captured by previously unsafeguarded atom B (e.g. U-238) and thereby initiates a reaction that converts that atom into special fissionable material (Pu-239), then the altered atom B now comes under safeguards. « Produced in ... », however, could mean a number of things : E.g. in the previous example, if atom B was already under safeguards in its original state, then it will continue under safeguards in its « improved » state, even if atom A was not under safeguards. In addition, if safeguarded nuclear material is passed through either an isotope or a chemical separation plant, then both fractions of the resulting material (i.e. the enriched and the depleted uranium in the case of the isotope separation plant, and the plutonium and the residual uranium in the case of chemical separation) will continue to be subject to safeguards, though the IAEA's interest in one part (the depleted uranium or the residual uranium) may be so slight that it will terminate its safeguards with respect to it⁸⁷.

The nature of nuclear materials may be changed in various ways in nuclear facilities. In an isotope separation facility all the atoms are preserved, but the separation of the U-235 from the U-238 atoms makes the material altogether more valuable — from a monetary as well as from a military point of view. Similarly the chemical separation of plutonium out of irradiated fuel and the separation of uranium-233 out of irradiated thorium makes the separated materials more valuable than was the mixture. If the IAEA has no original safeguards interest in the material before separation, but had an interest in the facility in which the separation took place, then in general the IAEA will after such separation continue to control only the more valuable fraction of the material (the fraction that might be considered « improved ») and will generally automatically terminate safeguards as to the residue as soon as it has left the processing facility. A somewhat similar rule applies to a safeguarded reactor using unsafeguarded fuel⁸⁷.

B. CONTINUATION OF SAFEGUARDS AND SUBSTITUTION

Subject to the considerations stated above, IAEA safeguards will generally follow the atoms of safeguarded material. One exception to this rule is that States may, under certain defined conditions, substitute for safeguarded material other material that the IAEA considers to be its substantial equivalent or superior (generally from the point of view of its utility for military purposes)⁸⁸.

The rule as to substitution was established for practical and political reasons : if a State had agreed to IAEA safeguards with respect to a given facility and the nuclear material associated with it, and that material was to be transferred to another facility (in the same or another State), then according to the rule stated in the section C below, safeguards would follow that material into the new facility. However, if that facility is one that is also used for military purposes (e.g. a chemical separation plant processing material from both civil and military reactors), then the admission of IAEA control would not be practical or acceptable. Since such facilities mostly exist in the nuclearly developed countries, which in

⁸⁵ *Idem*, para. 16.

⁸⁶ *Idem*, paras. 26(c) and 23.

⁸⁷ The technical background of these rules is discussed in Part 1 of the Technical Summary (Annex A).

⁸⁸ INFCIRC/66, paras. 25 and 26(d).

any case dispose of stocks of unsafeguarded materials, it seemed convenient to permit them to put an equivalent amount of such material as a substitute for that which the IAEA was controlling; thereby they could save their semi-military facility from control without increasing their stock-pile of military materials.

However, the substitution rule also has other uses : e.g. if safeguarded and unsafeguarded materials with identical specifications are mixed (e.g. in a chemical processing plant) then there is no way (practical or even theoretical) of later separating the safeguarded from the unsafeguarded part. The substitution rule then permits the IAEA to keep under control an amount of material equivalent to that in which it originally had an interest, while the rest is removed from such control⁸⁹.

C. SAFEGUARDS ON TRANSFER OF NUCLEAR MATERIAL

Since safeguards as to any given item depend on an agreement between the IAEA and the State under whose jurisdiction it is located, no major legal problems arise from the transfer of items within such jurisdiction. Of course, if the items are transferred to a facility as to which the IAEA has not previously made any safeguards arrangements, then these have to be made on (and preferably before) such transfer. Should a State wish to transfer the materials to a facility within its jurisdiction that the IAEA for some reason (technical or political) cannot control, then such transfer would of course have to be prohibited, and the IAEA has explicitly reserved the right to do so in the safeguards agreements where this was necessary⁹⁰.

A different type of problem arises when safeguarded items are transferred from one State to another. Since the right to exercise safeguards can only exist if agreed to by the State under whose jurisdiction the item is located, the IAEA can only allow the transfer of safeguarded items out of the State with which the IAEA has a safeguards agreement under one of the following conditions :

- (1) If by the very fact of such transfer safeguards are to terminate as to the item. This is so if the item is being transferred, in substantially unimproved form, back to the State that originally supplied it⁹¹. Thus if State A made a reactor available to State B subject to IAEA safeguards, then the IAEA would safeguard the reactor while it was within the jurisdiction of B; as soon as the reactor is returned to A, IAEA safeguards with respect to it would cease. However, if State A transferred natural uranium to State B and State B used that uranium under IAEA safeguards and produced plutonium in it, then upon the transfer of the uranium-plutonium mixture to A safeguards would continue with respect to the plutonium produced under safeguards but would terminate with respect to the uranium as soon as it is separated from the plutonium.
- (2) If the transfer is to be to a third State, or if the transfer is that of an improved item moving toward the original Supplying State, then generally IAEA safeguards must follow the item⁹². This requires the conclusion of a safeguards agreement relating

⁸⁹ See, e.g., the special procedures concerning mixtures of safeguarded and unsafeguarded nuclear materials in a reprocessing plant, GC(X)/INF/86, Annex, para. 6(b).

⁹⁰ See, e.g., the Mexican Triga Project Agreement (see footnote 45 above), Section 8; Denmark/U.K. Safeguards Transfer Agreement (footnote 55 above), Section 13.

⁹¹ INFCIRC/66, paras. 26(a) and 28(a).

⁹² *Idem*, para. 28(c).

to such item between the IAEA and the transferee State, unless a standing agreement exists under which the transfer can be accommodated ⁹³.

- (3) One alternative is provided for in the Safeguards Document and in certain safeguards agreements : if the transfer is to a State unwilling to accept IAEA safeguards but willing to accept other international safeguards that are consistent with those of the IAEA and accepted by it, then, with certain exceptions and restrictions, the safeguards responsibility can be transferred to another authority ⁹⁴.

D. EXPIRATION OF SAFEGUARDS AGREEMENTS

Since IAEA safeguards in each case depend on an agreement, they cease upon the expiration or denunciation of the agreement. Whether or not the undertaking to use such material only for peaceful purposes may be considered as persisting past the termination of the agreement, it is clear that the IAEA's control does not continue and therefore in effect the State is free to do as it wishes. This of course is undesirable, for thus there is no guarantee that items publicly dedicated to peaceful uses will actually remain so dedicated. Of course, even if safeguards do terminate, they have at least in the interim provided the desired assurance, and at the time of termination the world receives explicit notice of the extent of the threat represented by a State that had accumulated under safeguards substantial quantities of material of military potential with which it could then rapidly develop a military program.

In the light of these considerations, Project Agreements have always been drafted so as to contain no expiration date or right of denunciation. This of course is proper also in the light of some of the other obligations contained in these Agreements, such as those relating to health and safety and to information developed by reason of the IAEA's assistance. Thus the only way for a State to terminate its safeguards undertaking is to transfer the affected items, with the agreement of the IAEA, to some other State or to the IAEA itself; alternatively, if the items become or are made useless for any military purpose, the IAEA would terminate safeguards with respect to them ⁹⁵.

The original Safeguards Document provided that safeguards relating to bilateral or multilateral arrangements or to unilateral submissions should only be concluded for a specified period ⁹⁶. Consequently Safeguards Transfer Agreements concluded pursuant to that Document always had a termination date, which for convenience was usually adjusted to the term of the bilateral agreement to which it related ⁹⁷. On the termination of the Transfer

⁹³ All Safeguards Transfer Agreements constitute such agreements with respect to « improved » items moving toward the original Supplying State; see, e.g., Denmark/U.K. Safeguards Transfer Agreement (footnote 55 above), in particular Sections 3 and 10(b).

⁹⁴ INFCIRC/66, paras. 28(d) and 26(c), and see, e.g., Austria/U.S.A. Safeguards Transfer Agreement (footnote 55 above), Section 10 (b). This possibility is discussed at greater length on page 232 below.

⁹⁵ INFCIRC/66, para. 26(c).

⁹⁶ INFCIRC/26, para. 3.

⁹⁷ See, e.g., Austria/U.S.A. Safeguards Transfer Agreement (footnote 55 above), Section 27. In this, as in most of these Agreements, the date of termination was set one week before the termination of the bilateral agreement, so that if no accord on extension of the Transfer Agreement is concluded, that Agreement would expire first and safeguards would revert to the United States — which would then have a week's time to extend its bilateral agreement (and thereby its safeguards) or to demand the return of the items covered (see footnote 98 below).

Agreement, the safeguards under the bilateral agreement, which had been suspended while the Agreement with the IAEA was in force, would be revived; this would involve either the restoration of safeguards by the Supplying State in the Receiving State, or the return of all the supplied items, as well as a transfer of any material produced in or by their use, to the Supplying State where they would not be subject to any further international control⁹⁸.

The revised Safeguards Document has eliminated the requirement that certain safeguards agreements must be concluded for specified periods. As a matter of fact, it states that « it is desirable that safeguards agreements should provide for the continuation of safeguards... with respect to produced special fissionable material and to any materials substituted therefor »⁹⁹. In spite of these changes, up to now the States concerned have insisted, in the case of every Safeguards Transfer and Unilateral Submission Agreement concluded under the new Document, that it provide both for termination and denunciation. However, a provision has been included in some agreements to the effect that even after it has been denounced or the date for its normal termination has been reached, the agreement will remain in force indefinitely with respect to any special fissionable material that had been produced under safeguards¹⁰⁰. It should be noted that this provision does not violate the principle that safeguards can only be applied under a safeguards agreement with the State concerned, since it is carefully drafted so as to continue in force so much of the agreement as is necessary to cover the produced material; this residual agreement in effect has the same persistence as indicated above for Project Agreements.

SANCTIONS

On the one hand, the IAEA's safeguards functions are based on the consent of each State under control; on the other, the *raison d'être* for the system is at least a latent distrust of those very States. While it appears unlikely that a Government would enter into a safeguards agreement with the thought of violating it, the possibility cannot be excluded that due to a later change in policy (perhaps based on some advance in technology, but more likely on a new political situation) the State would desire to escape from its obligation, either overtly (by refusing to co-operate further with IAEA safeguards) or covertly (by apparently continuing to comply but actually supplying misleading information in the hope that, at least for a time, this would not be detected).

Against these eventualities sanctions must form a part of any effective safeguards system. These penalties should be designed to exercise the maximum legitimate general pressure on the State to comply and at the same time inhibit in particular the nuclear activity to which the violation relates.

Various types of violations are conceivable :

- (1) Use of safeguarded items to further any military purpose — commonly referred to as a « diversion ».
- (2) An interference with the control system in order to conceal a diversion.
- (3) An interference with the control system for some other reason, which may range from convenience (avoiding the burden of making reports), to embarrassment (at an unex-

⁹⁸ See, e.g., Article XII.C and also VII.B.5 and XI(b), of the Austria/U.S.A. Agreement for Co-operation Concerning Civil Uses of Atomic Energy (368 UNTS 199), to which the Safeguards Transfer Agreement cited in footnote 55 above relates.

⁹⁹ INFCIRC/66, para. 16.

¹⁰⁰ See, e.g., Denmark/U.K. Safeguards Transfer Agreement (footnote 55 above), Section 32.

plained loss), to nationalistic pride (objecting to outside checks). Of course what appears to be a violation based on one of these grounds could really be one based on a desire to conceal an actual diversion and therefore the control authority might have to treat it as such.

- (4) Some other violation of any provision of the safeguards agreement — e.g. the violation of the patent clause of a Project Agreement.

Article XII.C of the IAEA Statute summarizes both the sanctions to be used by the Agency as well as the procedures by which they are to be applied. In doing so it does not distinguish among types of violations¹⁰¹, since any violation of type 2 or 3 above must be treated as potentially relating to a diversion; the safeguards system as set forth in the revised Safeguards Document is in any case not designed to detect violations of type (4) above¹⁰².

If an inspector detects any violation (called « non-compliance » in the Statute) of a safeguards agreement, he must inform the Director General who must transmit such report to the Board¹⁰³. The Board must then determine whether or not it finds any non-compliance to have occurred. If the finding is positive it *must* call on the Member State to remedy such non-compliance, and *must* also report its finding to all Members of the IAEA as well as to the Security Council and General Assembly of the United Nations¹⁰⁴. If a State refuses to comply within a reasonable time, then the following further measures *may* be taken :

- (a) The Board may direct that all assistance being provided by the IAEA or by its Member States be curtailed or suspended — a step which would be calculated to shut down any nuclear energy activity that depends on the regular foreign supply of nuclear materials.
- (b) The Board may call for the return of materials and equipment made available to the State. This provision is reinforced by Article XII.A.7 of the Statute which lists this as one of the particular rights and responsibilities that the IAEA is to have with respect to safeguarded projects or arrangements¹⁰⁵.

¹⁰¹ These distinctions to some extent appear from a short list in Article XII.A.6 of the Statute, referring to the functions of inspectors.

¹⁰² The old Safeguards Document defined « diversion » in terms broad enough to include violations of the fourth type discussed above (INFCIRC/26, para. 17). The revised Document includes no definition of diversion and the types of violations to which the system relates can only be determined implicitly by studying the types of controls foreseen.

¹⁰³ Article XII.C of the IAEA Statute states : « ... the Director General ... *shall* thereupon transmit the report [of non-compliance] to the Board of Governors » (emphasis added). The plain wording would seem to leave no discretion to the Director General, and from this at least one commentator concluded that IAEA inspectors are particularly powerful (see the article by Wolff, cited in Annex B, No. I.4, at pp. 200-201). In practice of course the Director General can and does exercise considerable discretion on this point — as a matter of fact no violation has ever been reported to the Board even though numerous technical violations (e.g. a failure to submit a timely report, etc.) have occurred (and been cleared up between the Secretariat and the authorities of the State concerned).

¹⁰⁴ These reports apparently are to be sent before the State has any opportunity to comply with the Board's demands. In some recent Safeguards Transfer Agreements an attempt has been made to weaken this apparent automaticity (e.g. Austria/U.S.A. Safeguards Transfer Agreement (footnote 55 above), Section 15, first sentence).

¹⁰⁵ The two-fold recital of this sanction (which unfortunately is stated in slightly different terms in the two statutory Articles — see footnote 112 below) is probably due to a desire to make Article XII.A a complete catalogue of the IAEA's possible rights *vis-à-vis* the controlled State, while Article XII.C is to be complete with respect to sanctions.

- (c) The IAEA may also suspend any non-complying Member from the exercise of the privileges and rights of membership, in accordance with Article XIX.B of the Statute, which provides that such action may be taken by the General Conference acting by a two-thirds majority upon the recommendation of the Board.

The original Safeguards Document did not deal at all with sanctions, and the revised Document contents itself with referring to Articles XII.A.7 and XII.C of the Statute¹⁰⁶.

The IAEA has included some reference to sanctions in all safeguards agreements. This is necessary because, according to the Statute, the IAEA may exercise only those of its statutory rights in connection with a given safeguards agreement as are specified in that agreement. In most Project Agreements this is done by merely specifying that all the rights and responsibilities provided for in Article XII.A of the Statute are relevant to the project¹⁰⁷; no reference to Article XII.C is included, on the ground that the only measures to which the advance consent of the non-complying State must have been secured are those requiring it to do something (i.e. to return any assistance received — which is covered by Article XII.A.7). In the Safeguards Transfer Agreements a different practice has developed¹⁰⁸. In these, Article XII.C of the Statute (which includes the sanction referred to in Article XII.A.7) is incorporated by reference. In addition, a type of quasi-sanction has been introduced: it is provided that if the Board should determine that, as a result of any non-compliance by the State, the IAEA is not in a position effectively to safeguard certain items, then the IAEA may be temporarily relieved of its responsibility to apply such safeguards; the consequence of such a suspension of the IAEA's rôle is that the other State which originally had safeguards rights with respect to the item may reassert these rights (which otherwise are suspended by the Transfer Agreement) and apply either safeguards or sanctions of its own¹⁰⁹.

It is obvious that some of the sanctions provided for by the Statute may result in considerable expenditures (e.g. if a State is required to return an operating reactor or the fuel therefor) or damages (e.g. by reason of the shut-down of a facility). The Statute does not indicate how such costs are to be distributed¹¹⁰. In the latest safeguards agreements it is provided that the rules for the allocation of the normal costs of safeguards « shall not prejudice the allocation of expenses which are reasonably attributable to failure by a Party to comply with this Agreement »¹¹¹. No provision has yet been made in any instrument to specify the obligation that a Supplying State might have to accept the return of any item that the Board has required a non-complying Receiving State to restore to its supplier¹¹².

¹⁰⁶ INFCIRC/66, para. 18.

¹⁰⁷ See, e.g., the Mexican Triga Project Agreement (footnote 45 above), Section 6.

¹⁰⁸ See, e.g., Denmark/U.K. Safeguards Transfer Agreement (footnote 55 above), Section 22.

¹⁰⁹ This approach could not be used in the case of the proposed Safeguards Execution Agreements (see page 209 above) since these will not be backed by any bilateral safeguards.

¹¹⁰ This question was briefly raised at the Conference on the Statute (IAEA/CS/OR.33, pg. 16; IAEA/CS/COORD/Add. 1, para. 13), but there put off on the ground that « it would be for the appropriate organs of the Agency to deal with the situation... should such a situation arise » (IAEA/CS/10, para. 14).

¹¹¹ See, e.g., Denmark/U.K. Safeguards Transfer Agreement (footnote 55 above), Section 25, final sentence.

¹¹² Article XII.C of the Statute refers to the « return » of the material (presumably to whomever supplied it); Article XII.A.7 uses the expression « withdraw any materials... made available by the Agency or a member [State] » which implies that the transfer would in any case be to the IAEA.

It will be seen that in the case of a State that has succeeded in making itself independent of foreign nuclear assistance, the only effective sanction (on the likely assumption that the State will also decline to return any assistance previously received) may be that which results from the Board's report to the competent United Nations organs. Neither the Statute nor the IAEA's Relationship Agreement with the United Nations¹¹³ states what the consequences of such a report would be, but presumably the Security Council could consider them as falling under either Chapter VI or VII of the United Nations Charter and it or the General Assembly could take any consequent steps authorized by the Charter.

INSPECTION ARRANGEMENTS

It is the possibility of making inspections within a State that makes the several nuclear safeguards systems effective and that distinguishes them from other international control systems which must rely entirely on reports from States or organizations¹¹⁴. Inspectors can both check the truthfulness of the reports received (which constitute the prime source of information that the control authority has on safeguarded items) and also detect directly any diversion that has taken or is taking place. Of course it is intended that inspections, and indeed the very possibility of carrying them out, will deter a State from attempting any diversion. Thus it is not expected that an inspector will ever directly observe any serious violation; a safeguarded State, wishing to divert, is more likely to do so openly, if it is prepared to accept the consequences or as soon as it becomes clear that further concealment would be futile. However, this deterrence will only function if the inspections are known to be effective.

It is therefore necessary that the IAEA should have the right to dispatch inspectors on relatively short notice and without special agreement as to particular inspections. This requirement is not violated by the provision in the Safeguards Document, which is incorporated into safeguards agreements, that the maximum frequency of routine inspections of all but largest facilities should be limited in accordance with a formula related to the quantity of the material that might be diverted from the facility¹¹⁵; the IAEA can pace its inspections so as always to be in a position to make at least one more inspection of any significant facility at any time — so that the operator can never be certain that during a given period no more inspections will take place. In addition, special inspections may be conducted, upon still shorter notice, *inter alia* when « the study of a report indicates that such an inspection is desirable »¹¹⁶.

Inspection by an international organization within the jurisdiction of a State is thus the most effective means of control, but at the same time it is also the measure that raises the most complicated political and legal questions. It is therefore in connection with inspections that the pioneering aspects of the IAEA's safeguards system become most apparent. Having no precedents to rely on, an elaborate structure of requirements has been established concerning the introduction of IAEA inspectors into a State. These procedures can be classified into three stages (appointment, designation and dispatch), each with several steps.

¹¹³ INFCIRC/11, Part I; 281 UNTS 369; Article III.1(b) and 2 requires reports to the Security Council. These provisions were included in the Relationship Agreement on the basis of Articles III.B.4 and XVI.B.1 of the IAEA Statute.

¹¹⁴ See, e.g., the Single Convention on Narcotic Drugs, 1961 (U.N. document E/CONF.34/22).

¹¹⁵ INFCIRC/66, paras. 57, 60 and 68. In the case of large facilities or quantities of nuclear materials, the IAEA has the « right of access at all times » (para. 57).

¹¹⁶ *Idem*, para. 53 (a); see also paras. 53 (b) and 54.

A. APPOINTMENT OF INSPECTORS

Article XII.B of the Statute calls for the establishment by the IAEA of « a staff of inspectors ». The Statute does not indicate explicitly whether these inspectors are to be part of the staff of the IAEA, for whose appointment, organization and functioning the Director General is responsible pursuant to Article VII.B.

Without explicitly resolving this point, the following practice has developed, on the basis of several decisions of the Board, with respect to the appointment of IAEA inspectors¹¹⁷. The Director General, from time to time, nominates to the Board members of the staff of the IAEA whom he wishes to use as safeguards inspectors. Though these are usually professional officers of the Department of Safeguards and Inspection, some have been drawn from other technical divisions. The Director General indicates to the Board the names, nationalities and grades of the persons proposed, and also confidentially supplies the members of the Board with summaries of the relevant qualifications of the nominees. The Board thus is given the opportunity to pass both on the personal qualifications of individual inspectors and on the national make-up of the entire team — as changed from time to time¹¹⁸.

Once the Board has acted favorably with respect to an official, then the Director General can use him as an inspector — though this has up to now never been an official's only assignment. In principle a similar procedure applies even if an inspector is to be used only on an *ad hoc* basis, though occasionally the Board has allowed the Director General to use inspectors under particular agreements without submitting their names for approval.

B. DESIGNATION OF INSPECTORS

From among the officials whom the Director General has been authorized to use as inspectors, he may nominate one or more to be inspectors for a particular State. As a first step the Secretariat holds informal consultations with officials of the Government regarding the acceptability of the persons to be nominated for that State¹¹⁹. On the basis of these informal consultations, the Director General makes formal proposals, indicating the name, nationality, grade and qualifications of the nominees¹²⁰. The State may request further consultations but within 30 days of its receipt of the IAEA's proposal must indicate whether or not it will accept the officials named. If the answer is positive, then the Director General may make the designations, which continue in effect until either withdrawn by the Director General or later objected to by the State.

No criteria are stated anywhere regarding the basis on which a State may decide to object to a proposed or effective designation. However, if the State objects repeatedly, the Director General may submit the matter to the Board should in his opinion the inspections

¹¹⁷ The principal decision is reflected in GC(V)/INF/39, para. 2; the practical procedure has been altered somewhat as indicated in the text following.

¹¹⁸ As at 30 September 1966 the Director General was authorized to use 12 officials as inspectors for general purposes which group included the following nationalities : Argentina, Australia, France, Hungary, India, Japan, USSR (2), UK (2), USA (2) and Yugoslavia. In addition he was authorized to use 16 other officials as inspectors for special purposes.

¹¹⁹ This step is not specified in any formal instrument or decision, but was promised by the Director General in a statement he made to the Board.

¹²⁰ In accordance with para. 1 of the Inspectors Document (GC(V)/INF/39, Annex), which is incorporated into every Safeguards Agreement — see, e.g., Denmark/U.K. Safeguards Transfer Agreement (footnote 55 above), Section 23.

provided for in the relevant safeguards agreement be impeded by these refusals¹²¹. The Inspectors Document does not indicate what steps the Board may take upon receiving such a report — though at the least the Board might conclude that this is non-compliance with the obligation to co-operate with the IAEA in the administration of safeguards, an obligation explicitly included in most agreements¹²².

Once an inspector has been designated for a State, the Government is obliged to grant and renew his visas as speedily as possible¹²³. For this purpose the IAEA usually requests and the inspectors receive multiple-entry visas valid for at least six months or a year.

C. DISPATCH AND VISITS OF INSPECTORS

The final step in introducing an inspector into a State is the dispatch of one or more such officials. Their selection for any given visit is entirely at the discretion of the Director General. The only requirement is that an appropriate notice be given of each inspection, including the names of the inspectors, their approximate place and time of arrival and departure, and the items to be inspected¹²⁴. One week's notice must be given of most routine inspections, except that none need be given in relation to certain large facilities or large quantities of materials to which the IAEA has « access at all times »¹²⁵ or in relation to reprocessing plants¹²⁶; twenty-four hours' notice must be given in the case of special inspections, which may be made in the case of some unusual incident or unforeseen development¹²⁶.

The Statute and the Inspectors Document provide that the State may arrange to accompany inspectors, provided that they shall not thereby be delayed or otherwise impeded in the exercise of their functions¹²⁷; however, if a State chooses to do so, it cannot charge to the IAEA the costs it incurs thereby. The Inspectors Document also permits the State to specify the points of entry and departure from the State, and the routes and modes of travel within it¹²⁸.

SETTLEMENT OF DISPUTES

The revised Safeguards Document explicitly provides for consultations between the Director General and States regarding the application of the Document¹²⁹. Should some question as to a safeguards requirement arise between a member of the Secretariat (usually an inspector) and the operator of any facility or a government official, and remain unresolved after referral to the Inspector General¹³⁰, then as a first formal step the matter would be taken up between the Director General and a representative of the State.

¹²¹ GC(V)/INF/39, Annex, para. 2.

¹²² See, e.g., Denmark/U.K. Safeguards Transfer Agreement (footnote 55 above), Section 5.

¹²³ GC(V)/INF/39, Annex, para. 3.

¹²⁴ *Idem*, para. 4.

¹²⁵ INFCIRC/66, para. 50.

¹²⁶ GC(X)/INF/86, Annex, para. 3.

¹²⁷ IAEA Statute, Article XII.A.6; GC(V)/INF/39, Annex, para. 5.

¹²⁸ GC(V)/INF/39, Annex, para. 5.

¹²⁹ INFCIRC/66, para. 12.

¹³⁰ The Inspector General is the Deputy Director General in charge of the Department of Safeguards and Inspection, which at this time consists only of the Division of Safeguards and Inspection, headed by a Director.

Should the matter not be susceptible of settlement at that level, then either the Director General or the State could submit the matter to the Board Governors. For this purpose the rules of procedure of the Board provide that a Member State may require the convening of the Board within 72 hours to consider any matter of an urgent character arising out of Article XII.A.6 of the Statute (that relating to inspections)¹³¹. It is only after a question has been considered by the Board without an agreement with the State having been reached, that a genuine dispute might be said to exist between the IAEA and the State.

Article XI.F.6 of the Statute requires that Project Agreements include appropriate provisions regarding the settlement of disputes. No such requirement exists with regard to other types of safeguards agreements¹³², but without exception provisions concerning the settlement of disputes have been included in every safeguards agreement.

Article XVII.A of the Statute provides for the submission of any question or dispute concerning the interpretation or application of the Statute to the International Court of Justice, unless the parties concerned agree on another mode of settlement. Since the IAEA can of course not be party to a case before the Court¹³³, this mode of settlement is not open to it.

Article XVII.B separately authorizes both the General Conference and the Board to request the Court to give an advisory opinion on any legal question arising within the scope of the IAEA's activities, and the General Assembly of the United Nations has given the required general authorization thereto¹³⁴. It would therefore be possible to provide in safeguards agreements that disputes be settled by an advisory opinion requested by the IAEA and accepted as binding by it and the State; however, this procedure has not been incorporated into any safeguards agreement. Moreover, it is also provided in the Inspectors Document that even though the Privileges and Immunities Agreement is applied to IAEA inspectors and that Agreement provides for precisely this method of settling disputes¹³⁵, disputes concerning the privileges and immunities of inspectors are to be settled in accordance with the disputes clause of the pertinent safeguards agreement¹³⁶.

In all the safeguards agreements entered into by the IAEA up to now, the mechanism for settling disputes is the establishment of an arbitration tribunal. If the agreement is a bilateral one, such as Project Agreements and Unilateral Safeguards Submission Agreements, then the IAEA and the State are each to designate an arbitrator who together are to elect a third arbitrator to act as chairman; if either party fails to make its designation or the arbitrators fail to elect, then the President of the International Court of Justice is authorized to appoint the necessary additional arbitrators. If the agreement is a trilateral one, such as a Safeguards Transfer Agreement, then two alternative methods for establishing a tribunal are provided¹³⁷. If all three parties agree that the dispute concerns only two of them, then the procedure as indicated above is followed. However, if all three parties to the agreement are involved in the dispute, then each of the parties is to designate one arbitrator

¹³¹ Rule 11 (c) (document GOV/INF/60). Rule 50 allows the Board to invite any State not on the Board to be represented at a meeting.

¹³² It will be recalled (see page 208 above) that the Statute includes no explicit provisions concerning safeguards agreements other than project agreements.

¹³³ Statute of the International Court of Justice, Article 34 (1).

¹³⁴ This requirement is stated in Article XVII.B of the IAEA Statute as well as in Article 96 (2) of the U.N. Charter. Authorization was granted by U.N. General Assembly Resolution 1146 (XII).

¹³⁵ INFCIRC/9/Rev. 1, Section 34.

¹³⁶ GC(V)/INF/39, Annex, para. 14.

¹³⁷ See, e.g., Denmark/U.K. Safeguards Transfer Agreement (footnote 55 above), Section 27.

and these three by unanimous vote are to elect two others¹³⁸; in case of necessity the President of the Court again is authorized to appoint the additional arbitrators. Decisions are to be made by majority vote; the provisions relating to the powers and procedures of the tribunal are standard.

All safeguards agreements provide that, pending the settlement of a dispute, the Board may require that certain of its decisions be given effect by the parties, regardless of the pendency of the dispute¹³⁹. In many agreements this right is, however, restricted so as to apply only to certain basic decisions concerning the implementation of safeguards, such as decisions regarding the continued ability of the IAEA to apply safeguards, and regarding non-compliance and consequent sanctions¹⁴⁰; in these agreements, however, a special provision is included in the clause establishing the arbitral tribunal, by which that tribunal is authorized to take any interim decisions for which the Board is not competent¹⁴¹.

FINANCIAL PROVISIONS

A. COST OF SAFEGUARDS

It is too early to predict exactly what the cost of safeguarding a given installation will be once the IAEA's controls apply to a considerable number of significant nuclear operations around the world. Certainly such expenditures will never constitute an important fraction of the cost of establishing or operating a facility — and of course they will always be negligible compared to the cost of the nuclear arms race safeguards are designed to prevent. Still, even though these expenses are small in relative terms, some arrangements have to be made for them to be borne.

Article XIV.B.1(b) of the IAEA Statute provides that the cost of implementing safeguards under Project Agreements is to be considered an « administrative expense », apportioned among all Member States according to a scale annually established by the General Conference for all administrative costs¹⁴². This provision also covers safeguards applied to bilateral or multilateral arrangements, but Statute Article XIV.C foresees that the related safeguards agreements (e.g. Safeguards Transfer Agreements) might provide for the recovery of some of these costs by the IAEA — presumably from the Governments parties to the agreement. The Statute makes no explicit provision concerning the costs incurred with respect to unilateral submissions.

Even though these statutory provisions appear to cover adequately the principal situations, actually they leave open some large areas of doubt. These include :

¹³⁸ This formula is designed to permit a fair decision even if the interests of two of the parties (e.g. of the Governments, or of the IAEA and the Supplying State) should be similar, as against that of the third; the two neutral arbitrators can always swing the majority decision either way.

¹³⁹ See, e.g., Denmark/U.K. Safeguards Transfer Agreement (footnote 55 above), Section 28.

¹⁴⁰ See, e.g., Austria/U.S.A. Safeguards Transfer Agreement (footnote 55 above), Section 22. The weakest such clause is included in the Bradwell Unilateral Safeguards Submission Agreement with the United Kingdom (INFCIRC/86, Part I), Section 19.

¹⁴¹ *Idem*, Austria/U.S.A. Agreement, Section 21, final paragraph; Bradwell Agreement, Section 18, antepenultimate sentence.

¹⁴² Article XIV.D of the IAEA Statute provides that « in fixing the scale the General Conference shall be guided by the principles adopted... in assessing contributions... to the regular budget of the United Nations ». In fact, the Agency's scales of contribution have always been directly based on those of the U.N. though necessarily adapted to the slightly different membership.

- (1) Are the expenditures referred to in the Statute only those incurred by the IAEA itself (e.g. the travel costs of inspectors) or do they include those that might be incurred by the State (e.g. in preparing safeguards reports to the IAEA or in shutting down a facility for an inventory control) ?
- (2) How should expenses attributable to the failure of a party to comply with some provision of a safeguards agreement (e.g. an unnecessary inspection caused by a misleading report) be allocated ?
- (3) Must safeguards agreements relating to bilateral or multilateral arrangements include a provision for the IAEA to recover costs, and if so to which Government should they be charged ?
- (4) Can it be assumed that the silence of the Statute with regard to the costs of unilateral submission arrangements means that the same rule should apply, *mutatis mutandis*, as applies to bilateral and multilateral ones¹⁴³ ?

No reply to any of these questions is given in the Safeguards Document. The Inspectors Document is similarly unhelpful, except that it provides that if inspectors request and receive the use of any equipment, accommodation or transport, reasonable compensation shall be paid if agreed on¹⁴⁴. Consequently these questions must be resolved in the safeguards agreements themselves.

None of the Project Agreements include any provision regarding the distribution of expenses. This is in part due to the fact that all of these early projects relate to relatively small reactors, whose control will not involve any special costs. Since Project Agreements relate to assistance provided to a Member State by or through the IAEA, it would in any case not seem appropriate to include any provision placing additional costs on the organization.

The most recent Unilateral Submission Agreements and all Safeguards Transfer Agreements up to now have provided that costs incurred in connection with safeguards should ultimately be borne by the IAEA, regardless of whether they were originally incurred by the IAEA, or by the State or the controlled facility¹⁴⁵. This approach has been challenged since it does not take account of the possibility of the IAEA recovering expenses pursuant to Statute Article XIV.C¹⁴⁶; however the majority of the Board has adopted it, at least

¹⁴³ As indicated on page 199 above, the possibility of unilateral submission was an after-thought, and consequently the provisions relating to it were not fully integrated into the Statute. This was realized toward the end of the Conference on the Statute when this very point regarding financing was raised (IAEA/CS/OR.32, pp. 37-38, and IAEA/CS/OR.36, pp. 14-16). However, the Co-ordination Committee of the Conference, to which this point was referred at a very late stage, expressed the view that no further change in the proposed text of the Statute would be necessary since the organs of the Agency would be able to make any necessary arrangements with the State concerned (IAEA/CS/10, paras. 13 and 16).

¹⁴⁴ GC(V)/INF/39, Annex, para. 6.

¹⁴⁵ See, e.g., Denmark/U.K. Safeguards Transfer Agreement (footnote 55 above), Section 25.

¹⁴⁶ Though the legal Adviser of the IAEA has stated his view that Article XIV.C of the Statute is facultative, some States take the view that the Board is required to include a reimbursement provision in Safeguards Transfer and similar agreements (see debate at ninth regular session of the General Conference : e.g. Byelorussian S.S.R., GC(IX)/COM.2OR.40, para 22; Poland GC(IX)/OR.95, para. 7); however, other States felt that all safeguards expenditure should be borne by all Member States jointly since the exercise of the controls benefits the world community (e.g. Japan, GC(IX)/COM.2/OR.39, para. 45).

on a tentative basis, in order not to discourage submissions to IAEA safeguards and on the more basic ground that the imposition of international controls is in the interest of the world community rather than in that of the States directly concerned. The subsidiary arrangements circumscribe this liability by providing that certain expenses will not be charged to the IAEA (such as any incurred by the State in preparing routine reports or in having its officials accompany IAEA inspectors); furthermore, costs will only be reimbursed by the IAEA if before they are incurred the IAEA is informed of the proposed charge and has given its agreement.

The financial section of the more recent agreements specifically reserves the allocation of expenses that may arise due to the failure by any party to comply with the agreement ¹⁴⁷.

B. LIABILITY FOR DAMAGES

The nuclear energy industry has from its very beginning been unusually damage and damages conscious ¹⁴⁷. This is understandable in view of the theoretical possibility of catastrophic disaster that might result from certain types of accidents at nuclear installations. Consequently the possibility that inspectors might cause such an accident has always occupied the attention of the drafters of safeguards instruments, and at least some of the initial opposition to safeguards can be attributed to doubts on this question. Consequently, at the request of the IAEA Board, the Secretariat examined the question of liability with respect to the following situations involving physical damage :

- (1) Catastrophic accidents can only occur in connection with a nuclear facility. Therefore IAEA inspectors should never operate a nuclear facility; furthermore the operators of such facilities should be informed that any request made by an inspector for the carrying out of a particular operation is always subject to all necessary safety considerations and the operator must assume the responsibility for carrying out the operation ¹⁴⁸. If he does not believe that he can safely comply with the inspector's request, he must indicate to the inspector and if necessary to the IAEA why safe compliance is not possible;
- (2) The damages caused by shutting down a facility might of course be considerable (e.g. in the case of a nuclear power plant supplying electricity to a grid). The revised Safeguards Document therefore provides that a request for such a stoppage may only be made by explicit decision of the Board ¹⁴⁹ — which presumably would only do so if it had good cause to suspect that diversion is taking place;
- (3) IAEA inspectors might cause relatively minor accidents involving nuclear materials (e.g. in connection with sampling); and
- (4) IAEA inspectors might be involved in non-nuclear accidents, either while carrying out their inspection duties or while off the job.

The Secretariat concluded that the IAEA can not escape liability if any damage, nuclear or not, is improperly caused by an inspector in the course of his duties. However, if the possibility of causing a catastrophic disaster is eliminated on the grounds stated under (1)

¹⁴⁷ This concern is reflected in the formulation of several international agreements concerning nuclear liability, such as the Convention on the Liability of Operators of Nuclear Ships, (IAEA Legal Series No. 4 (Vienna, 1966), p. 36, and the Vienna Convention on Civil Liability for Nuclear Damage, (*idem*, p. 3).

¹⁴⁸ These prohibitions were subsequently included in INFCIRC/66, para. 48.

¹⁴⁹ INFCIRC/66, para 11.

above, then liability for other types of accidents can easily be regulated by normal means — e.g. liability insurance (which the IAEA carries) or self insurance.

The Statute is entirely silent as to such liability, unless the provisions on the cost of safeguards might be held to apply. Neither is this matter treated in the Safeguards or the Inspectors Document. Safeguards agreements provide :

- (a) Most early agreements have no liability provision whatsoever ¹⁵⁰;
- (b) One Project Agreement provides that the IAEA shall be held harmless in the case of any liability — but this provision was only included because the IAEA's participation in the project was such as to require a hold-harmless clause in any case ¹⁵¹;
- (c) One Unilateral Submission Agreement (now expired) required the IAEA to hold harmless the Government and its agents, but at the same time permitted the IAEA to be covered by the national system for indemnifying persons liable for nuclear accidents ¹⁵²;
- (d) Some recent agreements provide that to the extent that any insurance or other indemnity coverage applies to a nuclear facility, the Government shall arrange that such coverage apply to IAEA inspectors to the same extent as it applies to nationals of the State ¹⁵³.

One type of liability of particular concern in connection with international safeguards has been the possibility that inspectors or other officials may reveal confidential information of commercial value. It is recognized that thereby the IAEA too might become liable for damages ¹⁵⁴. To guard against such a possibility, the IAEA Statute provides that neither the Director General nor his staff may disclose any industrial or other confidential information coming to their knowledge by reason of their official duties for the IAEA ¹⁵⁵. This prohibition is also incorporated in the staff regulations ¹⁵⁶. In addition, the revised Safeguards Document provides that the IAEA is to take every precaution to protect commercial and industrial secrets as well as other information obtained in connection with the implementation of safeguards ¹⁵⁷, and these provisions are regularly incorporated into safeguards agreements. Aside from having established a system for the physical security of confidential papers, the IAEA familiarizes its inspectors fully with these multiple prohibitions and with the penalties that they might incur by their violation; furthermore, certain practical instructions are given to make it unlikely that restricted information be revealed unintentionally.

¹⁵⁰ See, e.g., the Mexican Triga Project Agreement (footnote 45 above).

¹⁵¹ Project Agreement relating to the Norwegian NORA reactor (INFCIRC/29, Part II; 402 UNTS 255), Section 21.

¹⁵² Agreement for the Application of Agency Safeguards to four United States Reactor Facilities (INFCIRC/36, 442 UNTS 49), Section 14.

¹⁵³ See, e.g., Denmark/U.K. Safeguards Transfer Agreement (footnote 55 above), Section 26. In some Safeguards Transfer Agreements such a provision has been included only in relation to one of the States parties to it, if the Secretariat could inform the Board that adequate assurance had been received that in the other State legislation or treaty provisions to the same effect exist; if this is the situation with regard to both States then of course the provision has been entirely omitted.

¹⁵⁴ No provision on this contingency is included in the IAEA Statute. However, this point is dealt with explicitly in the European Security Control Convention (footnote 158 below), Article 9 (c).

¹⁵⁵ IAEA Statute, Article VII.F.

¹⁵⁶ INFCIRC/6/Rev.1, Regulation 1.06.

¹⁵⁷ INFCIRC/66, para. 13; see also para. 14, which restricts the publication of safeguards information by the Agency itself.

INTERACTION WITH OTHER INTERNATIONAL SAFEGUARDS SYSTEMS

Although the IAEA administers the only world-wide safeguards system in the nuclear energy field, two other types of systems are in operation. One of these are the safeguards exercised on a bilateral basis by the United States, the United Kingdom, and by some other principal suppliers of nuclear assistance. In addition, two regional safeguards systems are administered by two overlapping European organizations : the European Nuclear Energy Agency (ENEA) of the Organization for Economic Co-operation and Development and the European Atomic Energy Community (EURATOM). The ENEA system¹⁵⁸ is in principle very similar to that of the IAEA, while the juridical structure of the EURATOM system¹⁵⁹ rests on a radically different approach : that of the automatic (though really only nominal) ownership by the Community of all special fissionable material located within the territory covered by the EURATOM treaty and not explicitly dedicated to a military purpose. However, the actual procedures of both these organizations, as well as those of the States exercising bilateral safeguards, are closely similar to those of the Agency.

It is not possible within the confines of this Article to compare the various safeguards systems, or even to present only their principal features. However, it is interesting to consider their possible interaction with the IAEA's system. This interaction can be of two types : overlap or supersession.

It is easy to see how, in principle, two or more safeguards systems might overlap, i.e. that in a particular case more than one safeguards authority might control the same item or operation. This can happen, for instance, if the IAEA supplies or assists in the supply of a reactor, and consequently safeguards both that reactor and any special fissionable material produced in it; at the same time the required nuclear fuel is received from another supplier who insists (as the IAEA does if it supplies fuel) on safeguarding the fuel, as well as the reactor while it contains the fuel, and any material produced in or by the use of the fuel. These situations actually do arise, and they will occur more and more frequently as international trade in nuclear materials becomes more and more fluid and multilateral.

Such an overlap of controls is of course troublesome for the operator of the controlled facility. Even if every effort is made to harmonize the control systems, so that the reports to be submitted to one authority are also accepted by the other, and perhaps their inspections are performed at the same time, still it is impossible to bring two systems administered by different authorities fully to a common denominator. However, two or more control systems of the type administered by the IAEA are not necessarily mutually exclusive, since each requires only that the safeguarded items not be used for a military purpose and that certain information be made available about the actual use of such items. The only possibility of a conflict arises if a safeguarded item is to be transferred to some other jurisdiction : then if each of the safeguarding authorities insists on continuing its control, some transferee must be found that is willing to accept such multiple control. If none is willing, then either the transaction will be prohibited by the authority whose control is to be excluded, or one of the systems must be superseded by the other.

Duplication of safeguards is obviously undesirable. Consequently, supersession of one safeguards system by another is foreseen in a number of instruments relating to safeguards. In principle such supersession might be of three types : transfer, reliance or delegation.

¹⁵⁸ The Convention on the Establishment of a Security Control in the Field of Nuclear Energy (European Security Control Convention), IAEA Legal Series No. 1 (Vienna, 1959), p. 187.

¹⁵⁹ Chapter VII of the Treaty Establishing the European Atomic Energy Community (EURATOM), 298 UNTS 167; IAEA Legal Series No. 1 (Vienna, 1959), p. 79.

1. The IAEA's Statute foresees the possibility that States may request the IAEA to apply its safeguards to bilateral or multilateral arrangements (a term broad enough to include international organizations)¹⁶⁰. Under this clause the IAEA has assumed the responsibility of administering safeguards under a number of bilateral arrangements. While it is not required by the Statute or the Safeguards Document that the assumption by the IAEA of such responsibility need necessarily result in the termination or interruption of the original safeguards, in practice the suspension of the original safeguards is provided for in each Safeguards Transfer Agreement¹⁶¹; as a matter of fact, such suspension is one of the principal inducements for the controlled State to agree to the imposition of IAEA safeguards — and contrarywise States are unlikely to agree to such an imposition if thereby the number of control authorities is increased. Thus in the situation foreseen in the Statute we can speak of a transfer of safeguards to the IAEA — though actually only the responsibility is transferred and not the rights or activities of the original control authority, since these are newly established between the IAEA and the safeguarded State in the safeguards agreement and the ancillary instruments. On the other hand the Statute is silent as to the possibility of the IAEA itself transferring its safeguards responsibilities to any other authority — and such a transfer would be contrary to the object of establishing nuclear safeguards on as world-wide a basis as possible.

The draft Treaty for the Denuclearization of Latin America may provide for an immediate transfer to the IAEA of all safeguards functions relating to nuclear activities. If this is accepted, then any possibility of duplication between the Treaty system and that of the IAEA will *a priori* be excluded⁴⁸.

2. As indicated previously, if a safeguarded item is transferred from the jurisdiction of the State with which the applicable safeguards agreement was concluded, then the IAEA must conclude an appropriate agreement with the receiving authority if it is to continue its control. If this is not possible, the IAEA will in general have to prohibit the transfer, and this is the situation with respect to Project Agreements. However, in the case of other types of safeguards agreements another possibility is provided for : the IAEA may permit such transfer if the item is to be subject, in the State to which it is being transferred, to safeguards other than those of the IAEA but generally consistent therewith and accepted by the IAEA¹⁶².

Neither the Safeguards Document nor any current safeguards agreement indicates on what criteria (technical, political or other) the judgment of the IAEA to rely on such other system is to be based, nor whether any agreement between the IAEA and the new safeguarding authority would be required. In principle no such formality would appear necessary if the IAEA can satisfy itself by other means of the reliability of the alternative system.

Of course in different situations the other safeguarding organization might instead terminate its safeguards in reliance on those of the IAEA. The procedure for doing so is explicitly foreseen in Article 2(b) of the European « Security Control Convention »¹⁵⁸ if ENEA safeguarded material is to be transferred to a State not party to the Convention.

3. The third possibility of supersession is delegation. This possibility lies somewhat between the two described above, i.e. it would require an agreement between the two safeguarding

¹⁶⁰ IAEA Statute, Article III.A.5.

¹⁶¹ See, e.g., Denmark/U.K. Safeguards Transfer Agreement (footnote 55 above), Section 6.

¹⁶² INFCIRC/66, para. 28(d).

authorities that, to avoid duplication of control, one authority would delegate to the other certain safeguards functions in defined situations provided that it receives from the other certain current information on the safeguarded items. Such a delegation, from ENEA to EURATOM, is explicitly foreseen in Article 16 (a) of the European Security Control Convention. This possibility is not mentioned in the IAEA Statute or the Safeguards Document, but it has been considered from time to time; since the Board has held that in certain situations the IAEA may yield to another authority, then *a fortiori* it should be able to delegate, and since it may accept the complete transfer of other safeguards it should be able to accept a delegation, at least if the functions to be exercised are consistent with its system¹⁶³.

It is hoped that eventually there will only be a single safeguards system in the world, since only such a system could provide assurance to the maximum number of States. Until this goal is achieved it is at least desirable that the IAEA system be considered as a standard for others. In part it should be possible to achieve this by means of the requirement that the IAEA will only yield its safeguards responsibilities if the alternative system is generally consistent with its own; however, most progress in this direction is likely to be achieved through the efforts of States that are subject to overlapping systems to make the control requirements as uniform as possible. In addition, the three organizations are co-operating on a technical level to keep any extensions of the systems (e.g. to reprocessing plants) as uniform as possible.

SOME CHARACTERISTICS AND THE LEGAL NATURE OF IAEA SAFEGUARDS

Enough has been said above to permit a recapitulation and evaluation of some of the principal characteristics of IAEA safeguards and to try to reach some conclusions as to their nature, expressed as far as possible in conventional legal terms.

A. THE EFFECT AND THE SUBJECTS OF SAFEGUARDS

When it is said that an item is « subject to IAEA safeguards » or is « safeguarded », really two types of relationships may be meant¹⁶⁴ :

- (1) It may be meant that the IAEA has the right to control the item — e.g. to receive reports on it or to inspect it.
- (2) It may in addition be meant that the item spreads a certain « contaminating » effect to other items it is associated with, so that these too become, temporarily or permanently, subject to safeguards; for example :
 - (a) An otherwise unsafeguarded facility that contains nuclear materials « safeguarded » in this second sense is, at least temporarily, itself subject to « safeguards » in the first sense¹⁶⁵;

¹⁶³ *Idem*, para. 5, second sentence.

¹⁶⁴ These two concepts were distinguished in the old Safeguards Document, in that the first was referred to as « application of safeguards » (INFCIRC/26, Parts III.C and V) and the second as « attachment of safeguards » (*idem*, Parts III.B and IV). Though the attachment/application duality was quite useful as a device to express the rules discussed in the text, it was eliminated from the revised Document because of the confusion that had often been caused by the use of these two similar sounding terms.

¹⁶⁵ *Idem*, para. 29.

- (b) Nuclear material produced in or by the use of any nuclear material or principal nuclear facility « safeguarded » in the second sense, is itself permanently¹⁶⁶ subject to safeguards in that sense (and also, therefore, in the first sense)¹⁶⁷.

The revised Safeguards Document, by its terms, explicitly provides only for the « safeguarding » (in either sense) of nuclear materials. This apparent limitation in scope, adopted for political reasons, does not detract from the fact that for all practical purposes principal nuclear facilities are, under the rules established by the Document itself, just as much subject to « safeguards » (in both the senses discussed above) as are nuclear materials.

The revised Document, unlike its predecessor¹⁶⁸ and again to enhance its political acceptability, makes no express provision regarding the safeguarding (in either sense) of non-nuclear materials (such as heavy water) or specialized nuclear equipment (such as reactor control systems) that may be required for the operation of principal nuclear facilities. However, the Board is not thereby precluded from acceding to the request of parties to bilateral arrangements that the safeguards agreements relating to these arrangements should also provide for the control of such materials and equipment. The Board has actually approved such agreements¹⁶⁹ — and these are being implemented by adapting to these items, as far as possible, the rules relating to nuclear materials and facilities.

B. THE IAEA'S SAFEGUARDS RIGHTS

It is clear that the IAEA does not, by reason of its safeguards functions, keep or acquire title to the items under its control. This is so even in the case of Project Agreements that frequently relate to items transferred by the IAEA to the State concerned¹⁷⁰, for once such transfer has been accomplished the safeguards applied to projects are (except for some minor restrictions on out-of-State transfers) precisely the same as those applied to bilateral or multilateral arrangements or to unilateral submissions. Only in the marginal case of the IAEA taking and paying for a sample of safeguarded material, or in the unlikely event of a State being required under the sanction provisions to return any assistance received, would questions concerning transfers of title to the IAEA arise out of safeguards.

In general, the IAEA does not have any right to possess or to demand possession of safeguarded items. To this, however, there are several restricted but important exceptions :

- (1) The IAEA may require the temporary deposit with it of « any excess of any [safeguarded] special fissionable materials... over what is needed for [safeguarded peaceful] uses in order to prevent stockpiling of these materials »¹⁷¹.
- (2) The IAEA may, as a sanction, « withdraw any materials and equipment made available by the Agency or a member [State] in furtherance of [an Agency] project »¹⁷².
- (3) IAEA inspectors may take samples of safeguarded materials¹⁷³.

¹⁶⁶ I.e. as long as the relevant safeguards agreement is in force.

¹⁶⁷ INFCIRC/66, paras. 19(d) and (e).

¹⁶⁸ INFCIRC/26, paras. 31 and 37.

¹⁶⁹ See, e.g., Safeguards Transfer Agreement relating to the Brazil/U.S.A. Co-operation Agreement (INFCIRC/...).

¹⁷⁰ See the Supply Agreement relating to the Mexican Triga Project (INFCIRC/52, Part I; 490 UNTS 383, No. 7166), Section 3(f).

¹⁷¹ IAEA Statute, Article XII.A.5.

¹⁷² IAEA Statute, Article XII.A.7.

¹⁷³ INFCIRC/66, para. 49(b); GC(V)/INF/39, Annex, para. 10(c).

The principal rights that the IAEA does have with regard to safeguarded items is to receive information about them (mainly records and reports, as well as design information on facilities) and to have access to them through its inspectors.

C. CONCLUSION AS TO THE LEGAL NATURE OF THE IAEA'S SAFEGUARDS RIGHTS

The IAEA's safeguards rights thus do not come under the heading of any property concept¹⁷⁴. They should rather be considered as merely « regulatory » — however, in a sense somewhat different from the conventional, national law use of that term.

Unlike regulatory systems under national law or even the safeguards exercised by the quasi-supranational EURATOM, IAEA safeguards are not based on any legislation to which the controlled State is subject, but derive directly from a contractual relationship between the IAEA and the State.

Furthermore these regulatory rights exist only through a juxtaposition of : a State that has entered into a safeguards agreement, and the items to which this agreement relates. Thus no safeguards agreement with the IAEA requires a State to refrain from all military nuclear activities (though a prior treaty that motivated the State to enter into the safeguards agreement may contain such a general prohibition), but only to refrain from using safeguarded items to further any military purpose.

One might thus consider safeguards to be a type of servitude on certain items. However, with due awareness of the danger of analogizing from national law, this servitude is really only *in personam* (i.e. with respect to the State) and not fully *in rem*. It is true that the State is prohibited from transferring safeguarded items beyond its jurisdiction, unless the IAEA has previously been able to make appropriate provisions for its further control. But this prohibition itself merely stems from the safeguards agreement relating to the item, and while the State would clearly be failing to comply (and thus become subject to sanctions) if it made such a transfer to a State not accepting such controls, it does not seem that the IAEA would have any right to restrain or control the use of these items in the transferee State without a safeguards agreement with it — though perhaps one could in the case of a Member State having accepted the transfer with full knowledge that the items were subject to safeguards, deduce an obligation to enter into such an agreement.

SUMMARY

The IAEA's safeguards system is not an automatic or inherently universal one, but is a careful construct based on a number of interrelated international agreements. The IAEA's Statute establishes the authority of the IAEA to apply safeguards, but does not by itself impose safeguards on any State. Usually some bilateral or multilateral arrangement between States, either establishing a supplier-receiver relationship or depending on reciprocity, provides the motivation for a State to submit to IAEA safeguards. The actual safeguards are imposed on the basis of safeguards agreements to which both the IAEA and the State to be controlled must be parties, and the details of the control arrangements are generally set forth in less formal instruments supplementing or subsidiary to the safeguards agreements.

¹⁷⁴ In this, too, the IAEA's safeguards differ from those of EURATOM, whose Treaty (footnote 159 above) provides explicitly in Article 86 that « The Community's right of ownership shall extend to all special fissionable material... subject to the safety [i.e. safeguards] control provided for in Chapter VII »; this special property right is circumscribed by Article 87.

IAEA safeguards are based on consent by the controlled State, a consent relating not only to the fact of safeguards *per se* but also to the particular items to be covered and to the control measures to be used; only the detailed application of these measures is not subject to approval by the State. An approach of this type does not lend itself to simplicity and is perhaps the principal reason for the complications to which so much of this Article is devoted. The other, related reason is the lack of automaticity and universality of the system. If it were to apply to all nuclear items and activities in a controlled State, all the subsidiary rules about exemption, suspension, substitution and termination could be avoided; if it were to apply to all Member States of the IAEA it would be possible to simplify the present multilayered structure of agreements — which resemble some of the Viennese cakes for which the Headquarters city of the IAEA is justly famous.

Until agreement is reached, probably in a United Nations forum, on universal disarmament or a non-proliferation arrangement, IAEA safeguards will have to depend on this complex « contractual » structure. However, this structure is flexible enough to make possible a very broad, world-wide coverage without any departure from the principles so far established.

It may be expected that many of the solutions developed by the IAEA in establishing its safeguards system will be relevant to any disarmament control system. These include in particular the arrangements relating to inspectors, and the type of legal arrangements that States will insist on in submitting to control arrangements. To this extent the IAEA's experience should provide useful precedents and examples.

ANNEX A

TECHNICAL SUMMARY

It is not necessary to be a nuclear physicist in order to understand safeguards law. However, it is useful to learn the terminology and to understand something about the interrelation among the various types of nuclear materials and facilities in order to understand the types of control measures that must be applied to assure that ostensibly peaceful activities are not diverted to military ends.

1. The atomic energy cycle

Atomic bombs consist of, and hydrogen bombs require, certain quantities of one of three isotopes in relatively pure form : uranium-233, uranium-235 or plutonium-239 (these are called « special fissionable materials »). It therefore is the ultimate purpose of safeguards to keep these materials out of military channels. Of these isotopes only uranium-235 exists in nature — in « natural uranium » — but it is always mixed with uranium-238 in a ratio of approximately 1:140; its separation from that other (chemically identical) isotope is an elaborate process, which up to now has been performed in large quantities only in tremendous gaseous diffusion isotope separation plants. Though uranium-233 and plutonium-239 do not exist in nature, it is relatively easy to produce them by placing, respectively, thorium or natural uranium (these are called « source materials ») in a nuclear reactor. Reactors may be fuelled with various mixtures of source and special fissionable materials (which collectively are called « nuclear materials »). Depending on that mixture and on the design of the reactor it will both use up some nuclear materials and produce others, as well as power, radioisotopes and neutron fluxes usable for experiments. Thus the peaceful and the potential military uses of nuclear energy are inevitably closely linked, for either at the input or the output (or both) of any nuclear reactor there appear materials that may be of a high military value.

(a) *The control of Nuclear Materials*

It is the primary purpose of the safeguards here under consideration to keep nuclear materials out of military channels. Potentially there are several places in the atomic energy cycle where the movement of such materials might be controlled, but some of these are more promising than others, either for technical or for political reasons. Thus special fissionable materials, which are the object of the control, should in general be watched at all times, except in relatively minor quantities or when they are in such a form that before direct use for a military purpose they must be processed in some elaborate fashion; in such a case the control can be intermittent, depending upon the length of time such processing must take.

Source materials are considerably further away from any military use, since they must first either be put through an isotope separation plant, or through a fuel element fabrication facility plus a reactor plus a chemical reprocessing plant. This makes it less dangerous that the comprehensive control of source materials is rendered difficult by their wide distribution throughout the world, so that almost every country can find some supplies within its borders — though for purely economic (as distinguished from military) reasons it might prefer to buy cheaper materials on the international market, even if these are only available subject to control.

(b) *The control of Nuclear Facilities*

Since a comprehensive control of source materials from their widely scattered origins is not practical, but such control should start at least as soon as such material is converted to special fissionable material by use of one or more principal nuclear facilities, it is usually convenient to relate the control, or at least its commencement, to one of these facilities. This approach is particularly promising since such facilities are more conspicuous than are materials, and also because it is these facilities that most countries cannot establish without external assistance — to which the obligation to accept control can be attached. As indicated, the significant nuclear facilities, listed in decreasing order of complexity and expense, are : isotope separation plants, reactors, reprocessing plants, fabrication plants (these four being called « principal nuclear facilities » in the IAEA's Safeguards Document), and finally mines and ore-processing facilities.

Full-scale isotope separation plants are so complex, large and expensive that only the five nuclear powers have established any and of these only three have plants in full operation. It is unlikely that many other countries will wish to establish such plants, but should they do so they would almost certainly need international assistance that would be liable to safeguards.

Reactors have been designed in various types and sizes, some of which are much more complex to build than others, and some of which must be fuelled with special fissionable materials, while for others the more readily available source materials suffice. While in principle a number of countries besides the existing nuclear powers are in a position to build reactors of a type and size necessary for the production of bomb-quality special fissionable materials, all of these find it more easy to do so if they receive external assistance and therefore up to now these facilities have proven to be the usual part of the cycle at which to start to exercise controls.

Chemical reprocessing plants are somewhat simpler to build than reactors, but it is not expected that many countries will do so since most should find it cheaper to rely on several conveniently located reprocessing centres. However, from the technical point of view the control of reprocessing facilities is important since it is at this stage that special fissionable materials are in forms from which they can most easily be diverted to military ends.

Fabrication plants are relatively sophisticated metallurgical units which are by no means

beyond the abilities of most industrial nations to construct. Consequently these do not offer as promising a basis for the start of controls as do reactors and processing facilities.

Finally mines and ore-processing plants can be erected whenever there are rich enough ores of uranium or thorium. Though less developed countries may find international assistance useful at this stage it can relatively easily be dispensed with, and thus it is difficult to tie the commencement of safeguards to this initial processing stage¹⁷⁵.

2. Safeguards control measures

In order to make certain that special fissionable materials ostensibly dedicated to peaceful purposes are not in fact diverted to any military channels or that ostensibly peaceful nuclear facilities do not produce material that are so diverted, certain control measures have been devised. The principal ones among these are the following :

- (a) A review of the design of nuclear facilities, with a view to establishing the expected production and/or consumption of nuclear materials and also to detect any hidden means of diversion¹⁷⁶;
- (b) The requirement that records be kept of the operation of facilities¹⁷⁷ and of the inventory, movement, production and use of nuclear materials;
- (c) The requirement that, on the basis of the above records, periodic reports be made to the controlling authority. In addition, special reports must be made in the case of certain unusual events, such as an accident resulting in the loss of materials¹⁷⁸;
- (d) Most important is the right of the controlling authority to send its inspectors to visit the materials and facilities to check on the truthfulness of the reports received and to ascertain that indeed no military diversion has taken place¹⁷⁹.

In addition to these principal control measures, other procedures may be of importance in certain circumstances. For example, it is foreseen that large quantities of special fissionable materials for which there is no immediate use are to be held in the custody of the controlling authority or at least in sealed storage, since their conversion from a pure form into a weapon would take less time than the interval between even very frequent inspections¹⁸⁰. On the other hand, large stocks of source materials may be sufficiently controlled if they are kept in sealed areas under the custody of a national authority, as long as the controlling authority is informed in advance of any removals¹⁸¹.

¹⁷⁵ This is the reason for the exclusion of these installations from the definition of « principal nuclear facility » (INFCIRC/66, para. 78), whereby they will not serve to burden with safeguards the nuclear materials that pass through them (INFCIRC/66, para. 19(d)).

¹⁷⁶ Statute Article, XII.A.1; INFCIRC/66, paras. 30-32, 62.

¹⁷⁷ Statute Article, XII.A.3; INFCIRC/66, paras. 33-36.

¹⁷⁸ Statute Article, XII.A.4; INFCIRC/66, paras. 37-44, 55, 59, 63, 67.

¹⁷⁹ Statute Article, XII.A.6; INFCIRC/66, paras. 45-54, 56-58, 60, 64, 68; GC(V)/INF/39, Annex, paras. 4-10.

¹⁸⁰ Statute Article XII.A.5. This procedure, whose inclusion in the IAEA Statute caused much controversy, has not yet been used nor have any implementing procedures been included in the Safeguards Document.

¹⁸¹ INFCIRC/66, paras. 61-65.

ANNEX B

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