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Study on the Comparison between IAEA and Euratom Safeguards by the Department of Safeguards

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Summary:

This paper analyzes the safeguard systems in the Euratom Treaty and the IAEA Statute. The study concludes that Euratom has tighter and more complex control of the materials for which it is responsible, but the methods used in the two systems are comparable and compatible.

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C O M P A R A I S O N

ENTRE LES SYSTEMES A.I.E.A.

ET EURATOM DE CONTROLE DE SECURITE

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DIRECTORATE FOR SAFEGUARDS
AND CONTROLS AND
PROPERTY RIGHTS

Brussels, March 2, 1967
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COMPARISON BETWEEN THE IAEA SAFEGUARDS SYSTEM AND THE EURATOM SAFEGUARDS SYSTEM

INTRODUCTION

The chapter in the Euratom Treaty which deals with safeguards and controls, provides for methods and procedures which are in many respects similar to those of the IAEA Statute. However, in comparing the two safeguards systems one should first look at the institutional framework within which the Euratom system is working.

Euratom safeguards are only one aspect of the Community's activities in the nuclear field. The compulsory notification of investment projects, supply on a Community-wide basis, the numerous research contracts and contracts of association or participation, resulting in the dovetailing of Euratom's programmes with those of the Member States, the ownership of special fissionable material, all these factors enable the Commission to have at all times a comprehensive view of nuclear activities in the Community.

The most important features of the Euratom safeguards system itself are:

1. It is mandatory; it has force of law in the territory of each of the Member States, a fact which, for example, invests the penalties laid down for non-compliance with a remarkable degree of effectiveness, far exceeding that usually obtained by provisions of international law. On the more general plane, the fact that the Euratom safeguards system is compulsory, rules out any possibility of discrimination between users in the Community.

2. It puts guardian and ward, i.e. the Commission and the users, in direct contact with each other.

3. It applies (compulsorily and without restriction as to duration) to all peaceful activities of its Member States.

Comparing the IAEA system on the same points, we see that:

1. The IAEA safeguards have a voluntary and contractual basis; i.e. they can only be applied by means of agreements negotiated on a country by country and a case by case basis.

2. In most questions the IAEA cannot deal directly with the holders of nuclear materials, but has to negotiate through the state concerned, with all the procedures and difficulties which this may involve.

3. The IAEA system applies only to those peaceful activities of its Member States, which they decide to subject to safeguards (and this only for a period specified in the safeguards agreement).

Thus, the principles of the Euratom Treaty and their application to safeguards give Euratom a tighter and more complete control over the materials for which it is responsible. However, the methods used in the application of both systems are comparable and certainly compatible.

I. AIMS OF SAFEGUARDS SYSTEM

A. I.A.E.A.

The aims of the International Atomic Energy Agency's safeguards system are set forth in Article III, section A, §5 of the Agency's Statute, which is worded as follows:

> "The Agency is authorized:
>
> .....
>
> "To establish and administer safeguards designed to ensure that special fissionable and other materials, services, equipment, facilities and information made available by the Agency or at its request or under its supervision or control are not used in such a way as to further any military purpose ....."

The IAEA's rights and responsibilities with respect to any project or other arrangement where it is called upon to apply safeguards are enumerated in Article XII of the Statute.

The IAEA safeguards are applied to:

(a) materials, services and equipment made available by the IAEA under a "safeguards agreement".

(b) safeguards commitments entered into under bilateral and multilateral arrangement, at the request of the parties concerned and after the conclusion of a safeguards agreement.

(c) a Member State's activities, at the request of that State, and after the conclusion of a safeguards agreement.

B. EURATOM

The task assigned to the Euratom Commission in the field of safeguards is set forth in Chapter VII, Article 77, of the Treaty. It consists in ensuring that in the territory of the six Member States of the European Community ores, source materials and special fissionable materials:

(a) are not diverted from their intended uses as stated by the users,

(b) are transferred in accordance with the Treaty provisions relating to supply,

and that:

(c) special undertakings entered into by the Community with respect to safeguards in its agreements for cooperation with a non-member country or an international organization are fulfilled.

C. COMPARISON

1. As regards nuclear facilities to which safeguards are attached, the IAEA's sole aim is to ensure that the materials are not used for military purposes.

The text of IAEA safeguards system, as it is worded now, applies only to reactors, reprocessing plants and safeguarded materials held at research centres; other facilities are to be governed by a system to be established at a later date (cf. §7 of doc. GC(IX) 294 - 21.4.1965).

Euratom safeguards, on the other hand, are exercised over all facilities in the Community and extend to all uses of materials to ascertain their conformity with the declarations made by the users. Furthermore, this supervision extends to ensuring compliance with the conditions governing the supply of materials and fulfilment of the safeguards commitments entered into by the Community under its Agreements for Cooperation with non-member countries or an international organization.

Thus, the Euratom system probes more deeply into the nuclear activities of Community facilities.

2. Application of the IAEA system depends on the terms of each separate safeguards agreement or upon the specific character of each individual project submitted to it. However, it follows in general the lines of the safeguards document.

By contrast, Euratom control applies automatically to all materials produced or used in or imported into Community territory and in accordance with rules and procedures previously established by Regulations adopted by the Community and directly applicable to Community enterprises.

3. In comparison to the aims of the Euratom safeguards system and the direct procedure involved in its application, the IAEA system appears to be of a more limited nature.

II. PRINCIPLES OF APPLICATION

A. I.A.E.A.

IAEA safeguards in a Member State are attached to "nuclear material"(1) (cf. Article III.A.5 of the Statute):

1. supplied by the IAEA under a supply arrangement between the IAEA and the Member State which provides for the application of safeguards (safeguards agreement);

2. supplied under a bilateral or multilateral arrangement to which the Member State is a party, provided that:

   (a) all the parties concerned request application of the IAEA safeguards system,

   (b) the IAEA has entered into a safeguards agreement with the Member State;

3. submitted by unilateral decision of the Member State to IAEA safeguards under a safeguards agreement between the IAEA and the Member State in question;

4. produced, processed or used in a "principal nuclear facility"(2):

   (a) wholly or substantially supplied (3) by the IAEA under the terms of an agreement between the IAEA and the Member State,

   (b) submitted to IAEA safeguards under a safeguards agreement by the parties to a bilateral or multilateral arrangement,

   (c) subject by unilateral decision of the Member State to IAEA safeguards under an agreement between the IAEA and the state in question;

5. produced by the use of other materials or equipment to which safeguards are attached;

6. to which safeguards are attached in place of other materials.

Only under the above mentioned conditions and after the conclusion of a safeguards agreement can IAEA safeguards be applied.

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(1) In this document "nuclear material" means materials, services, equipment, facilities and information.
(2) "Principal nuclear facility" means reactors, processing plants, isotope-separation plants and such other facilities or plants which may be designated by the Board.
(3) The Board will decide when a "principal nuclear facility" is to be regarded as "substantially supplied".

B. EURATOM

By the terms of the Treaty, safeguards are attached to all facilities producing, processing or using ores, source materials, special fissionable materials or irradiated fuels in the Community. Thus, the entire stock of ores, source materials, special fissionable materials and irradiated fuels in the Community is subject to continuous and permanent control, with the exception of stocks of materials earmarked for defence requirements, over which Euratom - and, for that matter, the IAEA too - has no power of control.

The aims and powers under the Euratom system are laid down in the Treaty. The implementation procedures are determined by means of regulations applicable directly to enterprises without any discrimination and without intervention by the Member States.

C. COMPARISON

The IAEA system is applied exclusively to prevent military use of assistance provided by the IAEA. Whether the system is to be applied is decided case by case on the basis of the possible military significance of the assistance provided.

The scope of the Euratom system is wider as it controls not only the use of ores, source and special fissile material, but also the application of the supply provisions of the Treaty and of special safeguards commitments under international agreements. Its application is mandatory, automatic and non-discriminatory.

Furthermore Euratom deals in all matters directly with the facilities whereas the IAEA has to pass through the Authorities of the Member States.

III. EXCEPTIONS TO THE APPLICATION OF SAFEGUARDS

A. I.A.E.A.

Provision is made for exceptions in the following cases:

- If the quantities of source materials and special fissionable materials are not above a certain limit, they may, at the request of the State concerned, be exempted from safeguards. This limit is fixed as follows:

  (a) 10 metric tons of natural uranium or depleted uranium with a uranium-235 content equal to or greater than 0.5%,

  (b) 20 metric tons of depleted uranium with a uranium-235 content of less than 0.5%,

  (c) 20 metric tons of thorium,

  (d) 1 kg (total) of plutonium and enriched uranium equivalent.

- Also exempt from safeguards, as far as reactors are concerned, are the following materials:

  (a) materials produced in the fuel of a reactor with an annual plutonium production rate not exceeding 100 grams,

  (b) materials produced in a reactor which has been assessed by the Board at a maximum power for continuous operation of less than 3 MW(th), provided that the total power of reactors thus exempted in any Member State does not exceed 6 MW(th),

  (c) materials used in a reactor having the same characteristics as set forth under (b) and subject to safeguards only due to this use; the same total power restriction as under (b) applies.

  (d) special fissionable materials produced in a reactor in which the ratio between the radioisotopes within the materials subject to IAEA safeguards and all radioisotopes in the reactor is below 0.3. Safeguards will in any event be attached to the fraction of materials produced which corresponds to this ratio.

  In other words, where a reactor has "mixed" loads and the ratio between materials to which safeguards are attached and the total materials, expressed in terms of the respective quantities of radioisotopes, does not exceed a certain limit, IAEA safeguards in respect of the special fissionable materials produced apply only to that fraction of the total materials which corresponds to this ratio.

B. EURATOM

The extent of the Euratom safeguards is laid down in Articles 77, 78 and 79 of the Treaty, which do not provide for any exceptions or suspensions, except for material "intended to meet defence requirements which is in the course of being specially prepared for this purpose or which after being so prepared is, in accordance with an operational plan, placed or stocked in a military establishment" (cf. Art. 84 of the Treaty).

This article does not, of course, apply to materials restricted to peaceful purposes, such as those covered by agreements for cooperation between the Community and non-member countries.

C. COMPARISON

Under neither system the Member State submits to safeguards material used for military purposes. This would in any case be contradictory to the aims of safeguards. The fact that the IAEA provides for the exemption of small quantities whereas Euratom does not, stems from the difference of ideas underlying the organization of the two systems. Whereas the IAEA wants to control everything which could be of military significance, Euratom, as a public authority of a closer multinational unit, wants to obtain a total and detailed picture of the situation in the Community in order to carry out its multiple tasks, of which the prevention of diversion from declared uses is only one.

IV. SUSPENSION - TERMINATION

A. I.A.E.A.

1. Suspension

The IAEA safeguards document provides (cf. §24 of doc. GC(IX)294) that safeguards applicable to nuclear materials may be suspended while the materials are transferred, under an arrangement or agreement approved by the IAEA, for the purpose of processing, reprocessing, testing, research or development, within the State concerned or to any other Member State or to an international organization, provided that the quantities of nuclear materials with respect to which safeguards are thus suspended in a Member State do not, at any time, exceed:

(a) 10 metric tons of natural uranium or depleted uranium with a uranium-235 content equal to or greater than 0.5%,

(b) 20 metric tons of depleted uranium with a uranium-235 content of less than 0.5%,

(c) 20 metric tons of thorium,

(d) 1 kg (total) of plutonium and enriched uranium equivalent.

It is also provided (cf. §25) that safeguards with respect to nuclear materials which are transferred for the purpose of processing or reprocessing may also be suspended for a limited time if the IAEA has signified its agreement to the State or States concerned and if at a specified time other nuclear materials not subject to safeguards are placed under safeguards as a substitute.

2. Termination

The IAEA document also provides (cf. §26 and 27) for termination of nuclear materials safeguards in various cases, and in particular:

- if materials to which safeguards have been attached by reason of their being supplied either directly or through the IAEA are returned to the State that originally supplied them. These measures apply provided that the materials were not improved while under safeguards and that any quantities of special fissionable materials that were produced in them under safeguards have been separated out;

- if the materials were subject to safeguards only by reason of their use in a principal nuclear facility from which they have been removed, and any special fissionable material that was produced in it under safeguards has been separated out, or safeguards with respect to such material have been terminated;

- if the IAEA decides that the materials in question have been consumed or diluted in such a way that they are no longer usable for any activity liable to necessitate the attachment of safeguards;

- if the State or States concerned have, with the agreement of the IAEA, placed under safeguards, as a substitute, quantities not otherwise subject to safeguards, of the same chemical element having the same weight and an equal or higher content of fissionable isotopes;

- if the materials is transferred to another State where it is subject to equivalent safeguards;

- if, due to expiration or otherwise, the conditions of the safeguards agreement no longer apply;

- if the State and the IAEA have agreed that safeguards on material to be used for non-nuclear purposes may be terminated.

3. Transfer out of a Member State

Finally, the safeguards document states that materials may be transferred outside the territory of a State (cf. §28) and consequently cease to be subject to the safeguards system in conditions which may be summarized as follows:

- the materials are being returned, without being improved, to the supplier State if they have been subject to safeguards only by reason of such supply;

- the IAEA has made arrangements to safeguard the materials in the State to which they are transferred;

- in the State to which they are transferred, the materials are subject to a safeguards system other than but generally consistent with the IAEA's, provided that such system has been accepted by the IAEA.

B. EURATOM

The Euratom system does not provide for either suspension or termination of safeguards for any reason whatsoever within the territory of the six member countries, except, as has been stated above, in the case of materials used in nuclear weapons establishments. This exception does not, of course, apply when such materials are restricted to peaceful uses.

The very scope of Euratom's task is a guarantee of effectiveness, extending as it does to methods of supplying such materials.

The Euratom safeguards system can afford to dispense with special rules governing movement of materials, since:

1. By reason of the fact that all enterprises are de jure subject to the safeguards system, the movement of specific materials from one enterprise to another in no way affects control of such materials.

2. The same applies, and for the same reasons, to the movement of a specific material from one Member State to another, the Euratom safeguards system being in no way affected by the territorial limit of its Member States.

3. If the materials are dispatched outside the territory of the six Community countries, Euratom safeguards cease to apply because of the territorial limits to which they are subject, by the very nature of the Treaty. However, the Treaty provides that the Commission shall authorize exports of source and special fissionable material only when this is not contrary to the general interests of the Community and the aims of the Treaty.

C. COMPARISON

As the IAEA safeguards do not automatically apply to all Member States, the various possibilities of suspension and termination are necessary in order to permit movement between the Member States of material subject to safeguards.

In the closed system of the Community in which every installation and all material are subject to safeguards, those clauses are not necessary and as far as suspension by substitution is concerned, also impossible.

V. PROCEDURES OF APPLICATION

IAEA safeguards are applied to facilities and materials in such facilities in accordance with agreements entered into by the IAEA with the State or States concerned. These agreements relate to the procedure to be adopted and may be divided into four main sections, i.e.

1. Examination of plans
2. Accounting system
3. Submission of operation reports
4. Inspections.

1. Examination of plans

A. I.A.E.A.

In order to ensure that principal nuclear facilities are designed or constructed in such a way as to permit the effective application of safeguards, the IAEA, as provided by Art. XII.A.1. of the Statute, has the right to examine the designs for the purpose of approval.

However, neither construction nor operation can be stopped except by explicit decision of the Board (cf. Art. 11 of the Safeguards Document).

The information necessary for the IAEA's decision will be determined jointly by the IAEA and the Member State and submitted by the latter.

B. EURATOM

The submission of declarations on and the examination of facility designs (basic technical characteristics) are prescribed by Article 78 of the Treaty and Regulation No. 7 enacted for its implementation. Such declarations are required to the extent that the relevant information is necessary to the fulfilment of the aims of the safeguards system.

In Regulation 7, Euratom lays down very specific rules concerning the procedure for the submission of declarations. These are transmitted to the Commission directly by the facilities.

The Euratom system also provides for examination of the plans, together with approval, in this case, firstly of the reprocessing facilities (Art. 78 of the Treaty) and secondly of the facilities which hold or use materials supplied under the terms of an agreement for cooperation making provision for such approval.

C. COMPARISON

Both systems require the submission of plans and technical data on the installations that hold or will use materials subject to safeguards. The IAEA requires prior approval of all installations under its control whereas Euratom limits this requirement to two specific cases which either are particularly critical from the safeguards point of view or concern material under international commitments. The IAEA's insistence on prior approval stems most likely from the fact that it is faced with countries of greatly varying technical and management standards.

This consideration does not apply in the Community. Here, however, the assurance of equal treatment is important and therefore the data which the facilities have to submit were laid down in a regulation. This information is supplemented by reports by the facilities under other articles of the Treaty such as the communication of investment projects under Article 41, health and safety studies, etc.

2. Accounting system

A. I.A.E.A.

The system to be adopted by the IAEA for the purpose of maintaining operating records for each facility and accounts for materials to which IAEA safeguards are applied has to be determined by agreement between the IAEA and the Member State concerned. It is the responsibility of the Member State to submit to the IAEA an accounting plan for examination and adoption by the latter.

B. EURATOM

The obligation to maintain operating records in order to account for ores, source materials and special fissionable materials used or produced is laid down in Article 79 of the Treaty and in Regulation 8, Article 2.

This obligation applies to the holders themselves. It does not involve any pre-established or stipulated plan. However, the records must be adequate to support the reports which the installations are required by Regulation 8 to submit periodically to the Commission.

C. COMPARISON

The two systems differ as regards principles, i.e.

- under the IAEA system, the method of maintaining accounts is determined in each individual case,

- under the Euratom system, facilities are free to adopt whatever method they please, provided that the system adopted makes it possible to back up the reports which they are required to submit to the Commission at regular intervals.

However, both institutions achieve similar results:

- the one by dealing with the Member State,

- the other by dealing directly with the facilities concerned.

3. Submission of reports

A. I.A.E.A.

The IAEA safeguards provide for the application of a system under which reports are submitted by the Member States to the IAEA, this system being agreed upon between the parties concerned. These reports will relate to the production, processing and use of materials covered by safeguards, whether in or outside principal nuclear facilities. The reports will deal with each individual facility and the safeguarded material outside the facilities in question.

These safeguards stipulate two types of report, i.e.

- routine reports,

- special reports.

(1) Routine reports

These reports in turn are of two types, i.e.

- Operating reports, which show the use that has been made of each principal nuclear facility since the last report. They must also, as far as possible, outline the programme of future work for these facilities.

- Accounting reports, which show the receipt, transfer out, inventory and use of all safeguarded nuclear material.

As regards the inventories in particular, the Safeguards Document states that they must indicate the nuclear and chemical composition and physical form of all materials and their location on the date of dispatch of the report.

Here it must be pointed out that the Safeguards Document does not lay down any regular intervals for the submission of reports, whether accounting or operating, merely stating that the first report must be submitted as soon as the facility concerned is in a condition to operate or has any safeguarded materials to account for.

(2) Special reports

The Safeguards Document lays down that special reports must be submitted by a State in the following cases:

(a) Incidents involving actual or potential loss or destruction of, or damage to, any safeguarded materials or principal nuclear facilities,

(b) Losses of materials in quantities exceeding the normal operating and handling losses that have been accepted by the IAEA as characteristic of the facility.

Furthermore, the Member State must give the IAEA at least two weeks' notice of any significant change in the stocks of safeguarded materials or of any substantial modification in safeguarded facilities.

B. EURATOM

As regards Euratom, the submission of reports (operating records) by producers and users of ores, source materials and special fissionable materials is made compulsory by the terms of Article 79 of the Treaty and Regulation 8, which lays down very specifically the intervals at which such reports have to be submitted and the data which they must contain.

(1) Periodical routine reports

(a) Producers of ores must submit the information required from them four times a year (15 January, 15 April, 15 July and 15 October).

(b) Producers and users of source materials and special fissionable materials must submit their reports each month, not later than on the 15th following the month concerned.

As regards the contents of these reports:

1. Producers of ores must state the quantities extracted, their uranium and thorium content and the status of stocks on the last day of the quarter concerned.

2. Producers and users of source materials and special fissionable materials must state the quantities of materials received or dispatched during the previous month, showing for each receipt and shipment the date, quantities, form and composition and the name of the supplier or consignee. Losses or differences of any kind whatsoever, as well as stocks at the beginning and the end of the month, must also be stated. This information must be submitted in the form of materials balance-sheets.

3. Stocks held by producers and users of source materials or special fissionable materials on the last day of the month to which the report relates must be shown in a separate document (inventory), in which the holders of such stocks must state the quantity, form and composition of the materials at each storage point, their location and the quantity, form and composition of the materials in actual use. This inventory must also contain appropriate remarks to account for any losses and differences in the balance-sheet for the same month.

This document (inventory), together with the information submitted pursuant to Regulation 7 concerning the use of materials and the actual facility, takes the place of an operating report.

All this information must be submitted to Euratom in accordance with a system of standard forms, the lay-out and content of which are set forth in Regulation 8.

(2) Special reports

(a) The Euratom Commission is notified immediately by means of a declaration (Statement II) of any import of materials from or export to non-Community countries.

(b) Losses in abnormal quantities or resulting from exceptional circumstances must be reported to the Commission immediately, together with the causes of such losses (Regulation 8, Art. 6).

C. COMPARISON

The information required under both systems is similar. Without any precise knowledge on the form of the actual reports submitted to the IAEA, no other comparison can be made.

The need for the IAEA to provide for prior notice of changes in stocks stems from the fact that its safeguards, as distinct from the Euratom system, are not exercised in a permanent and continuous manner and that they affect only certain facilities.

4. Inspections

A. I.A.E.A.

1. Staff of Inspectors

Article XII of the Statute (§6 et seq.) empowers the IAEA "to send into the territory of the (recipient) State or States inspectors ...".

The same provisions lay down the method of appointing inspectors, their powers, their relations with the Member States and the penalties to be applied in the event of duly established non-compliance with the terms of the Statute (In practice an inspector of the IAEA must be approved by the Member State before carrying out his first inspection on its territory. This goes beyond the consultation procedure envisaged in the Statute).

2. Procedure

The IAEA Safeguards Document lays down the conditions in which inspectors exercise their functions and the various procedures to be followed.

In this connection, the Safeguards provide for three types of inspections, i.e.

1. Routine inspections
2. Initial inspections of principal nuclear facilities
3. Special inspections.

1. Routine and initial inspections

These comprise:

- audit of facilities' records and reports,
- verification of the amount of safeguarded nuclear material by physical inspection, measurement and sampling,
- examination of principal nuclear facilities,
- check of the operations carried out at these facilities.

2. Special inspections

These may be carried out if any unforeseen circumstances call for immediate action or if the study of a report indicates that such an inspection is desirable.

3. Frequency

The Safeguards Document and its extension to reprocessing plants lay down a maximum number of inspections which cannot be exceeded. This frequency depends on the quantity of safeguarded material held or produced; it is not necessarily equal to the number of inspections carried out as the IAEA is free to go below the maximum frequency if it sees fit.

In deciding the frequency of inspections at reactors, the IAEA takes account of:

- whether the Member State concerned possesses irradiated-fuel-reprocessing facilities,
- the nature of the reactor,
- the nature and amount of nuclear materials produced or used in the reactor.

The annual number of inspections at a reprocessing plant takes into consideration:

- the yearly throughput,
- the rate of delivery of safeguarded material.

B. EURATOM

1. Inspectors

Euratom inspectors enjoy a special status. They are appointed by the Commission from among the staff of the Directorate for Safeguards and Controls. Once they have received their security clearance, they are appointed after consultation of the Member States. Thereafter, they exercise their functions unrestrictedly throughout the territory of the Community.

2. Inspection procedures

In the Euratom system, no special regulations have been enacted concerning inspection procedures as the Articles 81 and 82 of the Treaty give the Commission fully adequate powers in this respect, including that to carry out continuous inspections.

3. Frequency

The Euratom inspection system is laid down in Article 81 of the Treaty, which states in particular that "inspectors shall at any time have access to all places and data and to all persons, who, by reason of their occupation, deal with material, equipment or facilities subject to controls".

C. COMPARISON

1. The provisions relating to the inspectorate and the status, method of appointment and powers of inspectors in the two systems are in many respects similar, although the Euratom Commission is in fact freer in appointing its inspection staff.

2. With regard to the procedures and frequency provisions:

(a) For the IAEA, the inspection system has, in the overall safeguards set-up, a comparatively greater importance than for Euratom.

Because the IAEA is not as fully integrated as Euratom, it has not the same access to information from multiple sources as does the Commission, Thus, it has to rely considerably more on directly gathered information.

The introduction of maximum frequencies was probably politically necessary to assure the Member States against the possible abuses of the inspection powers.

It has not been necessary in the case of the Euratom system to lay down maximum frequency rules, in view of the extensive powers invested in the Commission.

(b) Finally, as has been said in the introduction, Euratom's safeguards and control system extends over a wider field than the IAEA's. It covers, for example, the examination of supply conditions and ensures that the external guarantees given by the Community in its agreements with non-member countries are respected.

Thus, the key which determines the distribution of Euratom inspection efforts has to include more factors than those taken into consideration by the IAEA.

Because of these various reasons, Euratom has preferred to maintain a more flexible inspection system.

5. Sanctions

A. I.A.E.A.

The sanctions which the IAEA may impose in the event of non-compliance with the safeguards commitments are laid down in Article XII C of the Statute.

The decision to impose these sanctions is taken by the Board but does not have the enforceability of a court judgment. Irrespective even of a judgment by the International Court of Justice, the ultimate application of sanctions depends on the readiness of the Member State concerned to enforce it.

B. EURATOM

The sanctions laid down under the Euratom Treaty are contained in Article 83. They are imposed by the Commission.

Under the terms of the Treaty, sanctions imposed by the Commission have the enforceability of a court judgment in the territory of the six Member States applicable to the facilities involved. The sole right of recourse consists in an appeal to the Court of Justice of the European Communities.

In addition, the property rights of the Community on special fissionable material subject to its control have the "advantage of providing vigourous confirmation of the Community's rights of control and sanction".

Finally, under Article 52, the Supply Agency, which possesses an exclusive monopoly on supplies of ores and nuclear fuels to Community users must legally oppose any delivery when the materials which have been ordered from it are to be put to a purpose which is illegal or contrary to the conditions imposed by the suppliers outside the Community.

C. COMPARISON

The system of sanctions provided under the Euratom Treaty constitutes a real code accompanied by the necessary procedures for its implementation. This legal set-up makes possible the imposition of Euratom sanctions without requiring an implementary decision on the part of the Member State concerned, as is the case for the IAEA.