International Atomic Energy Agency

GENERAL CONFERENCE

GC

GC(39)/19
21 August 1995

GENERAL Distr.
Original: ENGLISH

Thirty-ninth regular session
Item 20 of the provisional agenda
(GC(39)/1)

MEASURES AGAINST ILLICIT TRAFFICKING IN NUCLEAR MATERIALS AND OTHER RADIOACTIVE SOURCES

Report by the Director General to the General Conference

I. INTRODUCTION AND BACKGROUND

1. The Director General, in his statement to the thirty-eighth regular session of the General Conference, noted that the international community had been alarmed by cases in 1994 of illicit trafficking in nuclear materials and that the Secretariat had over the previous year received reports of many such incidents. He said he had consulted many Member States exposed to trafficking to identify ways in which the Agency might help mitigate the problem. The Director General indicated his readiness to convene a Round Table of government experts to recommend specific actions which could be taken by the Agency.

2. On the initiative of several Member States, the General Conference adopted a resolution on "Measures against Illicit Trafficking in Nuclear Material" (GC(XXXVIII)/RES/15, September 1994). In confirming that national governments and authorities carry the main responsibility in this field, the resolution called upon IAEA Member States to "take all necessary measures to prevent illicit trafficking in nuclear material". At the same time, it stressed the importance of close co-operation between states, both bilaterally and multilaterally, for overcoming the problems involved in this matter. The resolution invited the Director General to intensify Agency activities that were already supporting Member States in this area, such as those related to the establishment and upgrading of national systems of nuclear material accounting and control; to examine additional options available in the field of collecting, verifying, and analyzing data relating to incidents of illicit trafficking and the field of physical protection, in conformity with the Agency's Statute; and to prepare proposals, in consultation with a group of experts designated by Member States and competent international organizations, for submission to the IAEA Board of Governors.

3. In response to the requests contained in the resolution, a meeting of governmental experts, attended by 96 participants from 46 States and from three international organizations, was held from 2-3 November 1994 at IAEA Headquarters in Vienna. The discussion focused primarily on the areas in which the Agency is already active and those where it could intensify and expand its activities. While expressing the view that the primary responsibility for preventing and responding to illicit trafficking rests with the governments concerned, the experts urged that practical and effective complementary measures be taken at the international level - particularly by and through the IAEA - to address the problem of illicit trafficking.

4. Taking account of the views advanced by the governmental experts and discussions held with Missions, the Secretariat submitted a report in document GOV/2773 to the December 1994 session of the Board of Governors (Annex 1). It includes proposals for the intensification of the current Agency activities and for new activities in support of Member States' efforts against illicit trafficking. The proposals addressed legal instruments, physical protection of nuclear material, state systems of accounting and control, security of other radioactive sources, analysis of confiscated materials and a data base for illicit trafficking incidents.

5. After extensive discussion of document GOV/2773, the Board of Governors requested the Secretariat to continue developing the proposed actions through additional discussion and consultation with Member States, and decided to consider the matter further at the March 1995 session.

6. In response to this request, the Secretariat identified activities which could be carried out during 1995 and 1996 in support of Member States' efforts to prevent and respond to illicit trafficking. These were presented to the March 1995 session of the Board of Governors as a progress report on the Secretariat's continuing development of a programme in document GOV/2773/Add.1 (Annex 2). Specific activities for 1995 and 1996 were proposed in the areas of: physical protection; state systems of accounting and control; radiation safety infrastructure related to security of radioactive sources; and, an IAEA data base covering illicit trafficking of nuclear materials and other radioactive sources.

7. The Board at its March 1995 session requested the Director General to carry out the proposed activities on the understanding that, when implementing the measures in question, the Secretariat would take into account the comments made in the Board and would conduct further consultations with Member States, as appropriate.

8. On 11 July 1995, the U.N. Secretary-General sent a letter to the President of the Security Council noting his close contact with the Director General on the matter of illicit trafficking and suggesting that the Security Council may want to express its own concerns about the problem and its appreciation of the Agency's efforts. In response, the President of the Security Council, on 19 July, issued a statement which, inter alia, stated that "The members of the Council extend full support to the International Atomic Energy Agency and other international bodies for the work they are undertaking in this field".

II. STATUS OF SECRETARIAT ACTIONS

9. The Secretariat is focussing its actions related to measures against illicit trafficking in 1995-96 on four main areas :

- An IAEA data base on incidents of illicit trafficking in nuclear materials and other radioactive sources;

- Physical protection of nuclear material;

- State Systems of Accounting and Control for nuclear material; and

- Radiation safety infrastructure related to control and security of other radioactive sources.

The Deputy Director General for Safeguards is the coordinator of the overall programme. The status of each of these areas is described below in paragraphs 11-20.

10. The Agency is funding some of these activities under its regular programme and budget. However, intensification of the programme and new activities require additional resources. The resources needed to carry out the proposed activities in 1995 and 1996 have been estimated at approximately US$1.3 million and US$1.7 million, respectively. Extra-budgetary resources have been made available that will cover the costs foreseen in 1995. For 1996, under Programme S.7, 'Enhanced Security of Nuclear Materials and Other Radioactive Sources', the costs will be covered both by regular budget and extra-budgetary resources, most of which have already been pledged. Thereafter, the programme will continue to the extent permitted by availability of regular budget and extra-budgetary resources.

III. DATA BASE ON ILLICIT TRAFFICKING IN NUCLEAR MATERIAL AND OTHER RADIOACTIVE SOURCES

11. The Agency has informed Member States that it has upgraded its Data Base System on Illicit Trafficking and is prepared to accept information on illicit trafficking in nuclear materials and other radioactive sources and will begin issuing periodic summary reports. The Secretariat also invited Governments to indicate their interest in participating in this programme and identify their Point of Contact for the data base. The Secretariat has entered into this data base information it had previously collected from open sources since 1993: 39 incidents in 1993; 25 incidents in 1994; and 6 incidents in the first half of 1995.

12 . As part of the development of this enhanced data base, the Agency convened a meeting of representatives from 16 countries from 17-18 May 1995, to consider the provision of information from Governments and Agency reports to Governments. Useful suggestions were obtained and these are being reflected in the new IAEA data base noted above.

IV. PHYSICAL PROTECTION OF NUCLEAR MATERIAL

13. In addition to the International Training Course, which has been given under the Agency's TC programme by the Sandia National Laboratory, USA, for the past 15 years, a Regional Training Course on Physical Protection of Nuclear Facilities and Materials for individuals from the Russian Federation, Newly Independent States and Member States in Eastern Europe has been organized by the Agency. This will be the first time that this course will be given in Europe and the first with simultaneous interpretation and instructional material in English and Russian. The course will be held from 13-24 November 1995 at the Dukovany Nuclear Training Center in Brno, Czech Republic. The Secretariat is currently working out the final details of the course arrangements with the Czech Republic and the U.S. Government. Selection of the 30 participants will be made at the end of September.

14. In the coming months, the Secretariat will: assess the need for additional physical protection training; draft a basic reference manual on physical protection principles and practices; and, prepare for an International Conference on Physical Protection that has been included in the Agency's programme for 1997.

15. A consultants' meeting will also be held before the end of the year to obtain guidance on the scope and objectives of an Agency service to provide, only upon request, an international team of experts to review national regulatory programmes for the physical protection of nuclear materials or the implementation of physical protection systems at specific nuclear facilities.

16. Further objectives of the Agency's programme in this area are to provide fellowship assignments to individuals to receive "on-the-job" training in physical protection activities, and to procure selected pieces of equipment needed for specific facilities (which are currently not being provided by existing donor programmes).

V. STATE SYSTEMS OF ACCOUNTING AND CONTROL OF NUCLEAR MATERIAL

17. The Agency is continuing to facilitate co-ordination of the development and implementation of "Coordinated Technical Support Plans" in the Newly Independent States, for which funding is provided by Donor States. In June 1995 the Agency convened a Donor's meeting in Vienna with the objective of identifying additional assistance needed by Recipient States and new potential Donor States which may be interested in addressing these needs. Arrangements to enhance communication between all parties concerned were reviewed. In addition, an Implementation/Co-ordination Committee meeting was held in Belarus and a physical protection site survey was conducted in Uzbekistan.

18. The Agency is increasing its activities in providing training for State Systems of Accounting and Control (SSACs) and will administer in 1995 a regional course and two courses in individual States in addition to the traditional international course.

VI. RADIATION SAFETY INFRASTRUCTURE RELATED TO CONTROL AND SECURITY OF OTHER RADIOACTIVE SOURCES

19. In June 1995, the Agency convened a technical committee meeting in Vienna on the safe transport of radioactive materials. This meeting was attended by representatives from 20 Member States, Europol and the World Customs Organization. A major consideration by this committee was the illicit trafficking of radioactive materials through countries and, particularly at borders which the committee members identified as a high priority concern that needed immediate attention. They encouraged the Agency to provide additional guidance to its Member States for detecting and handling radioactive materials in such situations. In

addition, they strongly supported the Agency's role in fostering inter-agency cooperation on illicit trafficking, particularly to meet the specific needs of customs services and security authorities.

20. To consider how international agencies can address the concerns of national authorities and customs officials, the Secretariat is hosting an Interagency Coordination Meeting on the cross-border movement of radioactive materials, including nuclear materials, in September 1995. The organizations invited are the United Nations, Interpol, World Customs Organization, Europol, Euratom, the International Maritime Organization and the International Civil Aviation Organization. The meeting will seek to assess how support to States for combatting the illicit movement of these materials can be made more effective through better coordination among the competent international organizations.

21. In August the Agency conducted a training course in Tehran for a number of States in that region to address methods for improving the regulatory infrastructure of these countries. There was emphasis on the control of radioactive materials and measures to combat the illicit movement of these materials. In addition, the Agency is organizing an international training seminar for November 1995 in Vienna on the administrative control, inspection and security of radioactive materials.

ANNEX 1

GOV/2773
24 November 1994

International Atomic Energy Agency
BOARD OF GOVERNORS

RESTRICTED Distr.
Original: ENGLISH

For official use only

MEASURES AGAINST ILLICIT TRAFFICKING IN NUCLEAR MATERIALS AND OTHER RADIOACTIVE SOURCES

Report by the Director General

Introduction

1. In his statement to the thirty-eighth regular session of the General Conference in September 1994, the Director General addressed the concern of the international community about recent cases of illicit trafficking in nuclear materials, noting that uncontrolled movement of nuclear material involves both proliferation risks and radiation safety risks. The Director General stated that he was ready to convene a "Round Table" of government experts to systematically consider ideas about increasing IAEA activities to assist in preventing and responding to trafficking, and to recommend specific actions that could be taken promptly.

2. The General Conference adopted resolution GC(XXXVIII)/RES/15 which called upon Member States "to take all necessary measures to prevent illicit trafficking in nuclear material". The resolution also invited the Director General "to intensify the IAEA's activities through which the Agency is currently supporting Member States in this area", and to prepare proposals, in consultation with experts designated by Member States and competent international organizations, for submission to the IAEA Board of Governors if possible at its December 1994 session but not later than its March 1995 session.

3. A meeting of governmental experts was held on 2-3 November 1994 at IAEA Headquarters in Vienna, attended by 96 participants from 46 States and from three international organizations. A Secretariat discussion paper outlined the areas in which IAEA is already active or could become active. The actual and potential activities are relevant both to measures that might be taken to prevent illicit trafficking from arising and to measures that might be taken to respond to illicit trafficking which is occurring.

4. The meeting of experts shed much light on the issue of illegal trafficking in nuclear materials and other radioactive sources. While confirming that the primary responsibility for preventing and responding to such events rests with the governments concerned, the meeting urged that practical and effective complementary measures be taken at the international level - particularly by and through the IAEA - to address the problem of illicit trafficking.

5. In the meeting, a need was seen for proper distribution of tasks at the international level and for further Agency co-ordination support for bilateral work. There was support for the Agency providing a clearinghouse for information on illicit trafficking; intensifying education and training actions, directing them also at decision makers and the public; assisting States in improving physical protection and material accountancy and control; and helping States to establish the bases for controlling the use of radiation sources including their security. These and other ideas discussed at the meeting have been taken into account by the Secretariat in preparing the attached proposals pursuant to GC(XXXVIII)/RES/15.

6. The suggested action by the Board is set out on page 21 of the Attachment.

ATTACHMENT

Proposals by the Director General for the Intensification of the IAEA Activities in Support of Member States Efforts Against Illicit Trafficking in Nuclear Materials and Other Radioactive Sources

SECTION 1: OVERVIEW

1.1 Both States and international organizations have a role in dealing with illicit trafficking. An important precondition for preventing it is the existence of a national system for control of all radioactive sources, which covers nuclear and radioactive materials. Further, Governments are responsible for law enforcement within their borders and in particular for the prevention of illegal trade and trafficking in such sources. In addition, there are a range of bilateral and multilateral arrangements dealing with border control and law enforcement, to which Governments can have recourse in connection with this problem. Within the European Union, Euratom also has a role in addressing the problem.

1.2 The IAEA is concerned with ensuring the exclusively peaceful use of nuclear material and with providing standards, assistance and advice in connection with radiation safety. Its statutory mandate is sufficiently wide for it to deal with these issues - if Member States give the approval and resources to do so. A number of activities have been undertaken; however, the IAEA's potential to serve governments in this area has not been fully exploited.

1.3 The potential for intensifying IAEA activities can be considered under two main headings: Prevention and Response. The measures in the areas of prevention and response can create interrelated and reinforcing barriers to illicit trafficking.

1.4 With the broad ignorance that exists among traffickers as to what material would be of real interest to potential customers, it is not surprising that most cases have turned out to involve radioactive material from which weapons cannot be made. The quantities reported to date have been small. Another consideration is that traffickers may not be very knowledgeable about the risks associated with radioactive materials and run risks for their health and that of others by possessing and transporting them.

Prevention

1.5 Illicit trafficking should be addressed at its source. As a starting point, States deal with the causes and effects of these illicit actions within their own territory by providing the first layers of defence. These are the appropriate legal and regulatory structures and physical protection and security to prevent theft. However, adequate assurance that negligence or crime will not lead to nuclear or radioactive material going adrift may not be provided by these measures alone.

Response

1.6. National law enforcement agencies (if not the media) are the first to detect and assess the significance of trafficking incidents. Under its safeguards system the Agency receives information from governments about the location and quantities of nuclear material. Disappearance of nuclear material, e.g. through a theft, in a State with comprehensive safeguards must be reported to the Agency - and this has occurred.

1.7 In 1992 the IAEA set up a data base of media reports on nuclear material in trafficking and illicit activities involving other radioactive material, in order for it to be fully aware of such incidents. The information collected during the last year indicates that the number of significant cases was not large but several cases involved high enriched uranium or plutonium.

Structure of the proposals

1.8 The meeting of experts expressed a desire to expand the scope of work to include trafficking in all radioactive sources. Therefore, Agency activities are suggested in relation to both nuclear materials and to other radioactive sources. Overlap and duplication would have to be avoided.

1.9 While the need to create an international forum for dialogue and exchange of information in both areas was supported by a number of experts, it was also recognized that, in these two areas, the IAEA mandates are different. For example, binding international legal instruments already exist regarding nuclear material while they do not regarding other radioactive sources.

1.10 Section 2 presents and explains proposals related to illicit trafficking in nuclear material. The measures that relate to prevention are: Legal instruments, Physical protection, and State Systems of Accounting and Control; the measures that relate to response are: Analysis of Confiscated Materials, and Data Base on Illicit Trafficking in Nuclear Material.

1.11 Section 3 presents and explains proposals related to illicit trafficking in radioactive sources (other than nuclear material). The measures that relate to prevention are: Legal instruments, and Basic requirements; the measures related to response is the Data Base on Illicit Trafficking in Radioactive Sources.

1.12 Section 4 addresses the resources that would be required for the activities proposed in the field of illicit trafficking.

SECTION 2: ILLICIT TRAFFICKING IN NUCLEAR MATERIAL

2.1 This section discusses the areas of IAEA activities related to illicit trafficking in nuclear materials. Three areas fall under the heading of prevention: Legal Instruments, Physical Protection and State Systems of Accounting and Control; and two areas under the heading of response: Analysis of Confiscated Material, and an Agency Data Base on Illicit Trafficking in Nuclear Materials. Each of the following sub-sections on these five areas gives a summary of what the IAEA has done or is doing, the results of the discussion at the meeting of experts, and possible future actions to intensify or expand IAEA activities.

A. Prevention

I. Legal Instruments

2.2 The IAEA was involved in the development of two current legal instruments that are relevant to this issue: the Convention on the Physical Protection of Nuclear Material (reproduced in IAEA document INFCIRC/274/Rev. 1); and the IAEA recommendations on "The Physical Protection of Nuclear Material"(IAEA document INFCIRC/225/Rev.3).

2.3 In the context of illicit trafficking, the existence of an effective physical protection regime, at the national level and at the international level, is one barrier (among a number of interrelated barriers) to the illicit movement of nuclear material from a controlled environment to an uncontrolled environment.

2.4 Another legal instrument that deals with the physical protection of nuclear material and facilities, in the development of which the IAEA was not involved, is the Nuclear Suppliers' Group Guidelines. These Guidelines provide that all nuclear materials and facilities on the agreed trigger list should be placed under effective physical protection to prevent unauthorized use and handling. The Nuclear Suppliers' Group has agreed levels of physical protection that take account of international recommendations and recognize INFCIRC/225/Rev.3 as a useful basis for guiding recipient States in designing a system of physical protection measures and procedures (paragraph 3 and Annex C of the Guidelines).

2.5 The Convention on the Physical Protection of Nuclear Material entered into force on 8 February 1987 and there are currently 52 parties to it. The Convention applies "to nuclear material used for peaceful purposes while in international nuclear transport" (Article 2.1).

2.6 A major consequence of the fact that the Convention is to apply to nuclear material used for peaceful purposes while in international nuclear transport is that there is no obligation on the parties to ensure that nuclear material used for peaceful purposes while in domestic use, storage and transport is protected at the levels described in Annex I to the Convention (Articles 3 and 4).

2.7 Apart from the fact that the levels of physical protection prescribed by the Convention apply only to international transport, three other features of the Convention deserve mention. First, the Convention does not apply to the physical protection of nuclear material used for military purposes. Secondly, the Convention does not apply to nuclear facilities. Finally, the Convention applies to nuclear material, but does not apply to other radioactive sources.

2.8 However, the preamble to the Convention does contain paragraphs that stress "the importance of the physical protection of nuclear material in domestic use, storage and transport" and recognize "the importance of effective physical protection of nuclear material used for military purposes, and [express the] understanding that such material is and will continue to be accorded stringent physical protection".

2.9 A Review Conference of the Parties to the Convention was held in Vienna in September 1992. That Conference unanimously expressed its full support for the Convention in its present form and also recommended that the IAEA take certain action (referred to below) with respect to the IAEA recommendations on "The Physical Protection of Nuclear Material".

2.10 It might also be noted that, by virtue of Article 5(2)(a) of the Convention, "a State Party shall take appropriate steps to inform as soon as possible other States, which appear to it to be concerned, of any theft, robbery or other unlawful taking of nuclear material or credible threat thereof and to inform, where appropriate, international organizations". The IAEA has received communications pursuant to that Article about the seizure by Government authorities of materials apparently involved in illicit trafficking. Article 5 of the Convention deals with the issue of international co-operation on physical protection matters. A comparable provision also exists in paragraph 11 of the Nuclear Suppliers' Group Guidelines, which provides that "suppliers should promote international co-operation on the exchange of physical security information, protection of nuclear materials in transit, and recovery of stolen nuclear materials and equipment".

2.11 Unlike the Convention, the IAEA recommendations on "The Physical Protection of Nuclear Material" (INFCIRC/225/Rev.3) are intended to apply to the physical protection of nuclear material in use, storage and transport, whether domestic or international and whether peaceful or military. They also contain provisions relating to the sabotage of facilities. But, like the Convention, the recommendations focus on nuclear material and not on other radioactive sources.

2.12 Though focussed on the physical protection aspects, the recommendations do recognize the adverse health and safety consequences that could arise from the theft of nuclear material and the sabotage of facilities (and potential release of radioactivity). For example, they specify that they are in all cases additional to, and not a substitute for, other measures established for safety purposes for nuclear material in use, transit and storage and for facilities. They also indicate that activities should be licensed only when they comply with physical protection regulations as well as with relevant radiological safety regulations.

Possible future actions

2.13 At the meeting of experts, the Secretariat made suggestions for possible future action in relation to the Convention and INFCIRC/225/Rev.3 that fell into two broad categories: issues with respect to which modification of the Convention and INFCIRC/225/Rev.3 might be considered; and measures relating to better implementation of the Convention and INFCIRC/225/Rev .3.

Modification of the Convention and INFCIRC/225/Rev.3

2.14 The Secretariat suggested to the experts that States may wish to reflect on whether consideration should be given to the possible expansion of the scope of the Convention and of INFCIRC/225/Rev.3 to apply also to the security of other radioactive sources.

2.15 It also suggested to the experts that consideration might be given to the possible expansion of the scope of the Convention to apply also to one or more of the following: (i) nuclear facilities (including their protection against sabotage); (ii) domestic use, storage and transport; and (iii) military uses.

2.16 The general sense of the experts' meeting was that the time was not ripe for a revision of either instrument. Both instruments had been the subject of thorough review in the recent past and a further period of time should elapse to assess their implementation before embarking on any revision of them. With respect to the Convention, in particular, it was observed that any renegotiation of it would be a lengthy and time-consuming process. It was considered more important, and of higher priority, to consider how implementation of the two instruments might be improved.

2.17 Accepting that possible revision of the two instruments was not a high-priority matter, many experts expressed support for the possible expansion of the Convention to cover nuclear material in domestic use, storage and transport and nuclear facilities (including their protection against sabotage). Little support was expressed for the possible expansion of the Convention to cover military uses. With regard to the possible expansion of the scope of the two instruments to apply also to the security of other radioactive sources, there was general agreement that the technical grounds for any such expansion need to be established before this issue can be addressed. Some experts also suggested that consideration could be given to the development of recommendations (and possibly a Convention) dealing specifically with illicit trafficking.

Better implementation of the Convention and INFCIRC/225/Rev.3

2.18 There was general support for further consideration of suggestions regarding better implementation of the Convention. Article 5(2)(a) of the Convention is potentially relevant to those parts of this section dealing with the IAEA Data Base and with Analysis of Confiscated Materials. Operative paragraph 2(c) of GC(XXXVIII)/RES/15 focusses on

possible activities "in the field of collecting, verifying and analyzing data relating to incidents of illicit trafficking and the field of physical protection". In order to facilitate such collection, verification and analysis, all States could be urged to provide the requisite information to the IAEA. To some extent, this issue is addressed by Article 5.2(a) of the Convention. However, the value of that provision could be enhanced if States Parties to the Convention were to be urged to provide the information referred to in Article 5.2(a) to international organizations (and to the IAEA in particular) in all cases and also to provide information about instances of suspected theft, robbery or other unlawful taking. States not party to the Convention could also be urged to provide comparable information to the Agency. Further, it would seem useful, and not inconsistent with the Convention or INFCIRC/225/Rev.3, if the IAEA were, upon request, to communicate appropriate information about its collection, verification and analysis to all States (due account being taken of confidentiality requirements such as those of Article 6 of the Convention).

2.19 States Parties to the Convention might also wish to consider making more extensive use of the consultation mechanism contained in Article 5.3 of the Convention, particularly if the results of the examination and analysis of an incident, or a series of incidents, of illicit trafficking indicate areas where improvements in systems of physical protection could strengthen the barriers to illicit trafficking.

2.20 States might also wish to consider whether States should be urged to undertake, on a voluntary basis, to apply the provisions of INFCIRC/225/Rev.3.

2.21 For its part, the IAEA, as it has been doing in the past, should continue to keep INFCIRC/225/Rev.3 under review and provide a forum for its updating as necessary.

II. Physical Protection

2.22 Physical protection is the responsibility of States. State systems should establish conditions which would minimize the possibilities for unauthorized removal of nuclear material or for sabotage and provide for rapid and comprehensive measures to locate and recover missing nuclear material or for sabotage and provide for rapid and comprehensive measures to locate and recover missing nuclear material and to minimize the effects of sabotage.

2.23 The guidance contained in INFCIRC/225/Rev.3 details the elements needed in a State's system of physical protection, including appropriate regulations, licensing procedures, implementation and control procedures and quality assurance programmes. It sets up a system of categorization of nuclear material based on the potential hazard of the material and provides detailed requirements for each category in use and storage covering hardware (security devices), procedures (including the organization of guards and the performance of their duties) and facility design (including layout). Further requirements cover material in transit covering preparations (notifications and authorizations, route selection), protection

during transit (locks and guards) and emergency actions in the event of an attempt on the shipment.

2.24 INFCIRC/225/Rev.3 has received widespread international recognition. Many States use it as a criterion for nuclear trade and cooperation and it is specified in INFCIRC/224, Guidelines for Nuclear Transfers. Most industrial and developing countries have used it in the establishment and operation of their physical protection systems. The IAEA also uses it as a basis when advising Member States or assisting them in establishing their systems via Technical Co-operation projects. These projects have been established on an ad-hoc basis and have generally consisted of assembling an appropriate expert team to visit the country and provide advice related to the specific facilities or situations in the country.

2.25 As part of the Convention on Physical Protection, the IAEA maintains the list of National Contact Points. At present, there are 49 Member States which have provided these Points of Contact. The other activities of the IAEA have included administration of the International Training Course for the Physical Protection of Nuclear Materials. This course has been conducted 11 times over the past 15 years and has been well attended. The next course is scheduled to be held in March/April 1995. The course is financed by the U.S. Government and carried out at Sandia Laboratories in Albuquerque, New Mexico. The objective of the course is to familiarize professionals involved in the establishment of an integrated State system of physical protection of nuclear facilities with current concepts and technology, thereby assisting Member States in developing and implementing their State system with reference to system engineering, state-of-the-art technology and facility analysis.

2.26 At the meeting of experts, all who commented on measures in physical protection were in favour of the proposals for the Agency to provide additional assistance, training and guidance on physical protection.. It was felt that these were within the normal areas of work of the Agency and would contribute significantly to improvement of physical protection measures on the ground. Many delegates emphasized the need for good co-ordination with other international efforts and with bilateral arrangements between states; the aim of such co-ordination should be partly to ensure efficiency in achieving improvements from an economic viewpoint and partly to ensure effective utilization of the limited pool of available expertise.

2.27 The Agency's involvement in physical protection activities has in the past been quite limited. Therefore, in accordance with suggestions made at the meeting of experts, in preparation for taking actions regarding the development of an expanded technical support, assistance and training programme, the Agency will determine the status of the current activities in this area, i.e., bilateral and multilateral arrangements, including activities of other international organizations. In that respect, a focal point should be established within the Agency to assess physical protection deficiencies, needs and current activities with a view to making appropriate decisions about the possible future Agency actions noted below. The Agency should maintain such a focal point for continued co-ordination of activities in this field.

Possible Future Actions

2.28 The IAEA could provide additional assistance in the area of physical protection. Areas where this assistance could be expanded, if requested by Member States, are:

- To provide assistance in strengthening regulatory programmes related to physical protection programmes;
- To organize multilateral teams to provide on-site assistance in the upgrading of physical protection measures at specific facilities;
- To provide experts to conduct missions to assist States on particular areas of concern;
- To provide assistance in connection with an incident that occurs in a Member State that has limited technical resources, as it does under the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency; and
- To conduct joint research projects, particularly in applying state-of-the-art technology to countries with limited resources.

2.29 The IAEA could increase its activities in the area of training as needs are identified by the Member States. This could include, for example:

- Encouragement of broader participation and provision of additional sessions of the International Training Course on Physical Protection; these may be provided at other locations than Albuquerque, New Mexico;
- Symposia and Topical Meetings to exchange information and techniques related to the implementation of physical protection methods and procedures. These could also include the demonstration of actual procedures, equipment and techniques;
- Scientific visits by individuals in key positions to examine installations in other countries to learn how they conduct their physical protection programmes;
- Fellowships for individuals to obtain detailed training in the evaluation and design of physical protection systems; and
- Development of other training courses on physical protection as suggested by Member States.

2.30 The IAEA could provide additional guidance to Member States for assistance in implementing their physical protection programmes;

- Guidance on implementing details of INFCIRC/225/Rev.3. Examples are: providing recommended practices for the requirement for protecting nuclear materials and facilities; defining "prudent management practices"; and guidance on how to measure or determine the radiation level of 1 Gray per hour; and
- Guidance for particular areas of concern for Member States. An example is guidance on the establishment of an effective regulatory plan for the review of physical protection for various types of facilities.

III. State Systems of Accounting and Control

2.31 It is well understood that a primary deterrent to the theft of nuclear material is a strong State System of Accounting and Control (SSAC). Such systems recognize the complementary nature of material accounting and control and physical protection regulations and associated procedures. Material accounting and control is designed to assure that the location of all nuclear material in a State is known (and confirmed through periodic inventory taking) and physical protection regulations and associated procedures are designed to thwart any attempted theft or promptly detect an actual theft.

2.32 To develop the necessary human resources for an SSAC, extensive training of staff is necessary. The IAEA co-ordinates international and regional SSAC training programmes sponsored by a number of Member States: Argentina, Australia, Brazil, Japan, Russia and the USA. One or two programmes are offered per year to State authority and facility personnel, in order to either assist with the establishment of new SSACs or to enhance the effectiveness of existing State systems. It is estimated that over three hundred Member State personnel have attended these programmes over the last 15 years.

2.33 Where States lack a basic SSAC infrastructure and the resources and experience necessary to establish the required system, the IAEA together with States can assist in establishing or enhancing national systems of nuclear material control and accounting, physical protection and export/import control at the State and facility levels.

2.34 An important ongoing activity in this area has been the formulation and implementation of nuclear material control and physical protection co-ordinated support plans for the Newly Independent States (NIS) of the former Soviet Union. Since 1992, IAEA staff have conducted a number of fact-finding missions to most of the NIS States and a series of technical visits to most major nuclear facilities. Through these visits, information concerning individual State SSAC needs were compiled and distributed to potential donors. The IAEA has then worked with donors (Finland, Hungary, Japan, Sweden, UK, USA) to prepare agreed "Co-ordinated Technical Support Plans" to assist the NIS to improve their SSACs. To date, these plans have been agreed for Belarus, Latvia, Kazakstan and Ukraine.

2.35 The plans are based on a phased approach to the support, addressing first immediate needs, with emphasis on support to existing authorities, in improving legislative infrastructure and on SSAC requirements. A second phase will include completion of the legal infrastructure, improving operators' measurement systems and other components of material control and accounting, physical protection and export/import control systems.

2.36 The IAEA has been urged by donor States to continue providing the central coordination function for the support of the NIS under "Coordinated Technical Support Plans". At the meeting of experts, the IAEA was congratulated on its ongoing efforts and encouraged to intensify them for the NIS and for other States as required.

Possible Future Actions

2.37 As requested at the meeting of experts, the IAEA could intensify its co-ordination efforts: serving as a central point for collecting needs; co-ordinating the development of plans and contributing to the effective scheduling of activities under bilateral programmes; and assisting with finding donor States. In addition, the IAEA could increase its activities in the area of training to meet the needs of Member States, for example, by providing additional courses and encouraging broader participation.

B. Response

I. Analyzing Confiscated Nuclear Materials

2.38 In case of illicit trafficking of nuclear materials or in case of suspicion of such a traffic, analytical measurements are made on the confiscated material for a number of reasons. Measurements may be used:

(1) to identify or confirm the nuclear nature and properties of confiscated materials;
(2) to evaluate the radiological hazards that may have resulted from their illicit handling; and
(3) to provide clues about the origin of the confiscated material.

2.39 The IAEA Laboratories in Seibersdorf and their associated laboratories in Member States have extensive capabilities and a long practice in the analysis of materials encountered throughout the nuclear fuel cycle. Analyses of uranium and thorium ores and concentrates are done in support of ore exploration and processing. Samples of uranium concentrates, uranium, thorium or plutonium salts, oxides, fluorides, chlorides, carbides, nitrides, metals, metal alloys and irradiated spent fuels are analyzed for the purpose of nuclear material accountability verifications in the frame of IAEA safeguards inspection or related activities. The main object of these analyses is the determination of the content of fissile or fertile elements and their isotopic composition. But it is also possible to determine the chemical nature of the major components, the nature and content of minor constituents, or of chemical and radiochemical trace components.

2.40 The latter measurements can provide generic information about the mode and time of production of the confiscated materials, which can orient the investigations regarding their potential origin. It may be useful to subject to the same measurements a material suspected to be of the same origin as the confiscated one. If the two materials differ significantly in several properties they are most probably of different origins. If the materials are identical in all their properties they may have the same origin. However, such information will generally not be sufficient to identify the location from which the confiscated material was stolen.

2.41 The IAEA can provide assistance to States by performing qualitative and quantitative assays directly in the "field". The IAEA has available portable or transportable measuring instruments such as gamma ray spectrometers, neutron counters of X ray fluorescence analyzers. In the recent past there have been two requests for IAEA assistance in determining the nature of confiscated materials that were suspected to be smuggled enriched uranium compounds. An expert from the IAEA Laboratories was sent to examine the confiscated material and concluded that it was natural uranium ore concentrate. This was confirmed by the analyses done at Seibersdorf on samples of the material.

2.42 In line with the discussion at the meeting of experts, on request the Agency could assist a State to diagnose the origin of confiscated material. The confidentiality of information received by the Agency would be respected.

Possible future actions

2.43 The IAEA Laboratories are ready to continue to provide assistance in the future to Member States in determining the physical and chemical characteristics of confiscated materials. If such requests were to become frequent, the IAEA could arrange to provide quick assistance by outside experts or associated laboratories.

2.44 The IAEA could take steps to encourage the States concerned to collaborate in the analyses of confiscated or related materials and in the interpretation of the results of these analyses.

2.45 The IAEA could on request provide analytical assistance and technical advice in support of the investigations undertaken by States. This could involve the chemical and isotopic analysis of samples of confiscated or related materials, and a general characterization of the confiscated or related nuclear material as, for example, uranium ore concentrate, nuclear grade fuel material, etc.

II. Agency Data Base on Illicit Trafficking in Nuclear Materials

2.47 A data base of alleged trafficking incidents involving nuclear material is currently maintained by the Department of Safeguards. The main source of information is the Agency's Daily Press Review which is a collection of public media articles compiled by the Public Information Division. Additional sources of information are other public media publications subscribed to by the department and several governmental publications and commercial journals.

2.48 These sources are reviewed daily or upon receipt. When an incident is reported the details are recorded in the data base and distributed to the relevant staff in the Secretariat. The Department of Safeguards follows up on the incident through verbal contact with the Mission and/or safeguards authority of the State in which the incident occurred requesting

any additional information available. This verbal contact is followed by a written communication to the State. In cases where nuclear material has actually been confiscated by the State, inspection activities may be requested.

2.49 During the past two years with the increase in the number of trafficking incidents which have been reported, the Secretariat has frequently been approached by Member States and the media seeking additional and/or clarifying information. Because the maintenance of the data base is a relatively modest effort utilizing basic computer software and no analysis of the information contained in it is performed, the Secretariat could only give limited responses to such queries.

2.50 There was unanimous agreement among the governmental experts at the trafficking meeting that an expanded data base on trafficking incidents be maintained by the Agency which should provide a reliable source of information for the provision of a global overview of the situation would be desirable. With a few exceptions it was felt that the data base should contain information on incidents relating to both nuclear material and other radioactive sources. In doing so it was emphasized that it would be necessary to ensure that a clear distinction was maintained between proliferation and safety concerns.

2.51 There was also unanimous agreement that the Agency should not assume any investigative role. There were strong convictions on the part of a number of experts that the Agency was the best authority to act as a source of information in providing information concerning the general situation and as far as possible on specific incidents. Several opinions were expressed concerning the nature and extent of the data that should be contained in the data base and what could or should be made available to whom.

2.52 To create a reliable source of information for Member States and the Secretariat and, possibly, the media and public would involve a modification of the current data base to include nuclear materials and other radioactive sources, and of the procedures for its maintenance to enable the verification and analysis of the information collected Such a data base could also provide a basis for the assessment by Member States and the Agency of the real extent of the problem of illicit trafficking. This, in turn, could suggest areas where preventive action might be appropriate. The final decisions on the format of an Agency data base and reports provided from it must consider the technical, historical and organizational difference in monitoring and regulating nuclear material and other radioactive sources. Nevertheless, the Secretariat would aim for a consolidated data base and unified reporting specifications to the extent possible.

2.53 In connection with the measures described above and taking into account the opinions of the experts, it would be necessary for the Secretariat to agree with Member States, inter alia, on the extent and type of information Member States would be willing to provide, what information States would be willing to have the Agency make available to other Member States and what type, form and periodicity the reports, if any, to Member States should have.

The Basic Safety Standards

3.9 The BSS have recently been approved by the IAEA Board of Governors and are expected to be formally adopted soon by five other sponsoring organizations[3/]. They are mandatory for operations that are carried out by the IAEA or involve the use of materials, services, equipment, facilities and information made available by the IAEA or at its request or under its control or supervision. They are also to be used in operations carried out under any bilateral or multilateral arrangement whereby the parties request the IAEA to provide for the application of the BSS.

3.10 Except as noted in the preceding paragraph, Member States are under no formal obligation to include the requirements of the BSS in their nuclear regulatory systems. However, as the BSS do result from an international consensus, most States usually tailor their national regulatory systems to the general guidance provided by the BSS.

3.11 In relation to illicit trafficking, although the BSS do not include specific requirements, they provide relevant basic requirements for, *inter alia*, the control of radioactive sources and, in particular, for their security.

The BSS Requirements

3.12 Adoption of the BSS establish a general obligation that activities utilizing radioactive sources - including nuclear materials - are carried out in accordance with the requirements of the BSS, unless the radiation exposure caused by the source is excluded from the BSS or the source is exempted by the regulatory authority. (Only sources with very low activity and activity concentration of radioactive materials are expected to be automatically exempted from the BSS requirements.) The BSS, moreover, establish that the transport of radioactive sources is subject to the requirements of the IAEA Regulations for the Safe Transport of Radioactive Material[4/] and any applicable international convention.

3.13 In relation to illicit trafficking, relevant requirements of the BSS are those which are intended to ensure that the radioactive sources are kept under control. The more important requirements are those of notification and authorization by registration or licensing as well as those related to the security of radioactive sources.

3/ The Food and Agriculture Organization of the United Nations (FAO), the International Atomic Energy Agency (IAEA), the International Labour Organization (ILO), the Nuclear Energy Agency of the Organization for Economic Co-operation and Development (OECD/NEA), the Pan American Health Organization (PAHO) and the World Health Organization (WHO).

4/ The last edition of the IAEA Regulations for the Safe Transport of Radioactive Material was published as IAEA Safety Series no. 6, IAEA, Vienna, (1990).

3.14 The requirements of notification and of authorization by registration or licensing establish that any (legal or physical) person intending to carry out activities utilizing radiation sources shall notify an established national Regulatory Authority of such intention and apply to the Regulatory Authority for an authorization which shall take the form of either a registration or a license (depending on the type of source).

3.15 The requirement on security establishes that sources shall be kept secure by registrants and licensees so as to prevent theft or damage and to prevent any unauthorized use of such sources. They shall ensure that control of a source not be relinquished without compliance with all relevant requirements specified in the registration or license and without immediate communication to the Regulatory Authority of information regarding any decontrolled, lost, stolen or missing source.

3.16 Independent verification by the Regulatory Authority is a *sine qua non* condition of compliance with the BSS requirements. Thus although the BSS are intended to place the foregoing requirements on registrants and licensees, who have the primary responsibility for applying them, Governments, however, have responsibility for their enforcement, generally through a national infrastructure that includes the aforementioned Regulatory Authority.

3.17 The BSS assume that Governments undertake some responsibilities which they cannot delegate, such as the establishment of a national regulatory infrastructure, the provision of relevant education, training, information, facilities and services and the organization of a Regulatory Authority. In addition, they assume that Governments shall generally provide for certain essential control services and for interventions that exceed or that complement the capabilities of registrants and licensees.

3.18 Therefore, the BSS are based on the presumption that a national regulatory infrastructure is in place enabling the Government to discharge its responsibilities in relation to the control of sources. Essential parts of a national infrastructure are: legislation and regulations; a Regulatory Authority empowered to authorize and inspect regulated activities and to enforce the legislation and regulations; sufficient resources; and adequate numbers of trained personnel. Such a Regulatory Authority should be independent of any Government departments and agencies that are responsible for the promotion and development of the activities being regulated.

3.19 National infrastructures must also provide for adequate arrangements to be made by the responsible persons for the education and training of specialists in the control of radioactive sources, as well as for the exchange of information among specialists. A related responsibility is to set up appropriate means of informing the public, its representatives and the information media about the aspects of activities involving the control of radiation sources, and about the regulatory processes. This provides information to facilitate the political process of setting national priorities and allocating resources for controlling purposes and also helps to make the regulatory process more readily understandable.

3.20 Further, national infrastructures must provide facilities and services that are essential for the control of radiation sources, but are beyond the capabilities required of the registrants and licensees. Services could include the provision of central registries of relevant sources. The provision of such services at the national level should not detract from the ultimate responsibility for the control borne by registrants and licensees.

3.21 Should a Member State lack elements of a solid infrastructure of radiation safety as required by the BSS, the control and security of radioactive sources would not be appropriate and the illicit trafficking of such sources will be facilitated.

Discussion at the expert meeting

3.22 Many of the experts at the meeting expressed a desire to include consideration of radioactive sources in the Secretariat proposals concerned with measures to prevent illicit trafficking. The experts pointed out that the public does not make a distinction between nuclear materials and other radioactive sources. However, for Agency planning purposes the delegates suggested separate consideration since they noted that the treatment of nuclear materials and other radioactive sources are different for many technical, organizational, political and historical reasons and, mainly, because the formal obligations of States with respect to nuclear materials and radioactive sources are fundamentally different. With respect to an Agency database, the experts fully supported the need to keep information about the trafficking of other radioactive sources, but recognized that the distinction between nuclear material and other radioactive sources should be maintained.

3.23 There was complete agreement on the need to improve the radiation safety infrastructure of many States in accordance with the relevant requirements of the BSS, particularly those States where illicit trafficking is of current concern. In that respect, the delegates gave full support to the Secretariat proposals to intensify its activities for providing guidance and support for the practical implementation of the BSS. In addition, several delegates emphasized the important role of the Agency in education, including the need to enlighten decision makers on the real problems involved in illicit trafficking.

3.24 There was full agreement that INFCIRC/225/Rev.3 should not be amended to include radioactive sources since the objectives and considerations for the security of these sources is considerably different than nuclear materials. Rather, it was suggested that additional guidance for implementation of those portions of the BSS dealing with security of sources should be provided. In addition, the delegates expressed considerable interest in the activities of various countries regarding radiation detection instrumentation at border stations. Delegates indicated their interest in having the Agency provide guidance and training for customs officers and border guards in the detection of nuclear materials and other radioactive sources moving through customs stations.

Possible Future Actions

3.25 At the September 1994 meeting of the IAEA Board of Governors, the Secretariat stated its intention to identify details of the BSS that require further elaboration and to begin the process of preparing subsidiary guidance to support their practical application. The IAEA could intensify its ongoing activities to assist Member States to strengthen their radiation safety infrastructure, placing particular emphasis on the control and security of radioactive sources.

3.26 In addition and in conformance with the comments at the meeting of experts, the IAEA should develop a data database on incidents involving radioactive sources. The final decisions on the format of an IAEA database and reports provided from it must consider the technical, historical and organizational difference in monitoring and regulating other radioactive sources as compared to nuclear materials. The Secretariat will aim at a consolidated database and unified reporting specifications (see paragraph 2.52).

3.27 The IAEA's programme could therefore be strengthened *inter alia* by taking the following actions:

Guidance

- To advise on the implementation of the BSS with emphasis on actions to prevent illicit trafficking in radioactive sources, i.e. preparing and issuing specific guidance on the establishment of programmes related to the control and security of radioactive sources. (Part of the regular programme can be extended and brought forward in time to focus more on source control and security.) Examples are:

  - Safety Series guidance dealing with the implementation of regulatory systems for control including notification, registration and licensing; and
  - Safety Series guidance on the security of radioactive sources.

- To provide guidance on particular concerns of Member States, e.g., guidance for national authorities and customs officers on instrumentation and procedures that can be used at border crossings for customs officers.

Information Exchange

- To organize a forum for information exchange related to international and bi-lateral efforts in the area of illicit trafficking of radioactive sources for the primary purpose of co-ordination.

Education and Training

(Consistent with the 1992 General Conference documents GC(XXXVI)/RES/584 and GC(XXXVI)/1016 dealing with education and training in radiation protection and nuclear safety)

- To promote training courses and workshops on administrative control and inspection, and the security of radioactive sources.

- To develop and conduct a seminar for senior regulators on the issues related to illegal trafficking of radioactive sources.

- To develop and conduct training courses for national authorities who could then train their national customs officers and border officials.

Services

- To establish a peer review service for Member States to advise on implementation of the BSS requirements on control and on security of radioactive sources.

Data Base on Illicit Trafficking of Radioactive Sources

- To hold appropriate meetings to identify the needs of the Member States in this respect, the information that would be requested, the methods of informing the Agency and other States and a format for such reporting.

- To develop guidance for Member States and Agency staff on the reporting, follow-up and operation of such a database.

SECTION 4: RESOURCES

4.1 Additional resources would be required by the IAEA and in Member States to carry out the proposed activities in Sections 2 and 3. Further definition of the activities will be needed. Some of the possible actions would involve the intensification of activities through which the IAEA currently supports Member States in areas related to illicit trafficking. As these would lie within the approved programme for 1995-96, it would require additional budgetary resources, e.g., for meetings, missions, experts, etc. Other possible actions go beyond the currently approved programme; they would require both additional budgetary resources and, in several cases, additional staff. Two examples where additional staff requirements are foreseen are the provision of additional assistance in the area of physical protection and the development of an IAEA trafficking data base. Additional resources would have to be provided through extra-budgetary sources in 1995.

4.2 The IAEA has carried out or is carrying out ongoing programme activities that are related to illicit trafficking in nuclear materials. The Department of Safeguards is co-ordinating bilateral activities in the NIS (see para 2.34) and maintaining a trafficking data bases (see para 2.47). The Department of Nuclear Energy and Safety has organized training and assistance in physical protection (see para 2.25). The Department of Research and Isotopes, through its Seibersdorf Laboratories, has assisted States in analysis (see para 2.41). The cost of those activities in 1994 is approximately 0.37m $US in 1994, of which 0.2m $US comes from the regular budget.

4.3 An estimate of IAEA resources needed to carry out the proposed activities related to illicit trafficking in 1995 and 1996 is given in the table. The totals are approximately 1.3m$US and 1.7m$US in 1995 and 1996, respectively.

Estimated Resources Needed for Proposed
IAEA Activities Related to Illicit Trafficking

Area	1995 000 $US)	1996
Nuclear Material		
Physical Protection (2.28-2.30)[1]	600[2]	1,000[2]
State Systems of Accounting and Control (2.37)	300	300
Analysis of Confiscated Material (2.43-2.45)	p.m.[3]	p.m.
Agency Data Base[4] (2.54,3.27)	225[5]	225
Radioactive Sources (3.27)		
Security of radioactive sources	200	200

Notes:
[1] Reference to relevant paragraphs in the report
[2] Includes training courses and assistance paid by Member States (forecasted demand)
[3] "pour memoire" - Analysis would be performed on Member State request
[4] Based on a consolidated data base for nuclear material and other radioactive sources
[5] Staff additions are 1 P4 and 2 GS6.

SUGGESTED ACTION BY THE BOARD

It is suggested that the Board:

(a) request the Director General to intensify the activities through which the Agency is currently supporting Member States in preventing and responding to illicit trafficking in nuclear material in the areas of:
- assistance with physical protection measures;
- assistance in improvement of State systems of accounting and control; and
- assistance with analyzing confiscated nuclear materials as outlined in paragraphs 2.28-30, 2.37 and 2.43-45 of this document;

(b) request the Director General to develop a reliable data base of information on incidents of illicit trafficking in nuclear material and in other radioactive sources to assist governments of Member States and to better inform the public, as outlined in paragraphs 2.54 and 3.27 of this document;

(c) request the Director General to intensify the activities through which the Agency is assisting Member States to strengthen their radiation safety infrastructure, placing emphasis on those areas most directly related to the security of radioactive sources as a measure to prevent illicit trafficking, as outlined in paragraph 3.27; and

(d) request the Director General to continue to examine activities relating to incidents of illicit trafficking in nuclear material and in other radioactive sources, including activities related to better and broader implementation of existing legal instruments as outlined in paragraphs 2.13-2.21, in conformity with the Agency's statute and in consultation with Member States and competent international organizations and to prepare additional proposals as and when appropriate.

International Atomic Energy Agency
BOARD OF GOVERNORS

GOV/2773/Corr.1
21 December 1994

RESTRICTED Distr.
Original: ENGLISH
ARABIC, CHINESE,
ENGLISH and RUSSIAN only

For official use only

MEASURES AGAINST ILLICIT TRAFFICKING IN NUCLEAR MATERIALS AND OTHER RADIOACTIVE SOURCES

Report by the Director General

Corrigenda to the Attachment

1. In Section 2, paragraph 2.22, second sentence, delete the following words, which appear twice: "or for sabotage and provide for rapid and comprehensive measures to locate and recover missing nuclear material". The sentence now reads:

> *"State systems should establish conditions which would minimize the possibilities for unauthorized removal of nuclear material or for sabotage and provide for rapid and comprehensive measures to locate and recover missing nuclear material and to minimize the effects of sabotage."*

2. In Section 2, paragraph 2.24, second sentence, replace "specified" by "mentioned" and "INFCIRC/224" by "INFCIRC/254". The sentence now reads:

> *"Many States use it as a criterion for nuclear trade and cooperation and it is mentioned in INFCIRC/254, Guidelines for Nuclear Transfers."*

ANNEX 2

B

GOV/2773/Add.1
6 March 1995

International Atomic Energy Agency
BOARD OF GOVERNORS

RESTRICTED Distr.
Original: ENGLISH

For official use only
Item 4 of the provisional agenda
(GOV/2782)

MEASURES AGAINST ILLICIT TRAFFICKING IN NUCLEAR MATERIALS AND OTHER RADIOACTIVE SOURCES

Progress Report by the Director General

I. INTRODUCTION

1. General Conference resolution GC(XXXVIII)/RES/15 invited the Director General "to intensify the IAEA's activities through which the Agency is currently supporting Member States" in the area of illicit trafficking prevention, and to submit proposals to the IAEA Board of Governors. A meeting of governmental experts was held on 2-3 November 1994 and subsequently the Director General submitted proposals in document GOV/2773, 24 November 1994 for the intensification of the IAEA activities in support of Member States efforts against illicit trafficking in nuclear materials and other radioactive sources.

2. At its meeting in December 1994, the Board of Governors discussed GOV/2773, asked the Secretariat to continue developing the proposed actions through further discussion and consultation with Member States, and decided to consider the matter further at the March 1995 session. This document should be read as a supplement to GOV/2773 and presents a progress report on the Secretariat's continuing development of a programme in the area of illicit trafficking.

3. The Secretariat has proceeded to identify activities which can be carried out during 1995 and 1996 in support of Member States' efforts to prevent and respond to illicit trafficking. These activities were discussed in GOV/2773, in Section 2 for illicit trafficking in nuclear materials (primarily uranium and plutonium), and in Section 3 for illicit trafficking in other radioactive sources. The activities considered for 1995 and 1996 focus on four main areas:

- physical protection of nuclear material (Section II.1 below);
- State systems of accounting and control for nuclear material (Section II.2);
- radiation safety infrastructure related to control and security of radioactive sources (Section III); and
- data base on illicit trafficking in nuclear materials and other radioactive sources (Section IV).

4. Some other activities which were proposed in GOV/2773 are not dealt with further in this progress report. Regarding the legal instruments related to the area of illicit trafficking in nuclear materials (see paragraphs 2.13-2.21), the IAEA will continue to review the recommendations on "The Physical Protection of Nuclear Material" (INFCIRC/225/Rev.3). Regarding the provision of assistance to States in the analysis of confiscated nuclear materials (see paragraphs 2.43-2.45), such assistance will be provided on request.

5. The Deputy Director General for Safeguards will serve as the co-ordinator of the overall programme. Projects under this programme will be the responsibility of designated Departments/Divisions.

II. ILLICIT TRAFFICKING IN NUCLEAR MATERIALS

1. Physical Protection

6. The objective of this project is to provide States additional technical support, training and guidance on physical protection. Proposed activities are outlined in paragraphs 2.28 - 2.30 of GOV/2773.

7. In preparation for developing an expanded technical support and training programme, the Secretariat will continue to identify the needs of States in the area of physical protection. Account will be taken of the work already being carried out by the Agency and its Member States, as described in Section II.2.

8. The Secretariat will seek to coordinate international efforts (e.g., those of the European Union and those made under bilateral arrangements between donor States and the Newly Independent States of the former Soviet Union) in order to enhance cost effectiveness and to effectively utilize available expertise in achieving improvements in physical protection.

9. The Secretariat has considered a number of specific activities for 1995 and 1996. A listing of those activities is provided below. The 1995 activities can be initiated with available extra-budgetary resources (see paragraph 28). The 1996 activities will be carried out on the basis of the results of progress in 1995 and depend on the availability of sufficient resources. The Office of the DDG-SG will co-ordinate the physical protection activities.

1995 PHYSICAL PROTECTION ACTIVITIES	Action Dates
TRAINING	
• Conduct the International Training Course on Physical Protection of Nuclear Facilities and Materials (see GOV/2773, para. 2.25), under the 1995 Technical Cooperation Programme.	1st Quarter
• Conduct a second session of the above course, primarily for officials from Eastern Europe, NIS and Russia.	2nd Quarter
• Prepare plans for specialized physical protection training courses in response to identified needs.	From 3rd Quarter
TECHNICAL SUPPORT	
• Continue to identify the needs of individual States in the area of physical protection.	Ongoing
• Arrange for fellowships and scientific visits in physical protection for appropriate officials.	From 2nd Quarter
• Initiate technical support to strengthen physical protection programmes, through TC projects where appropriate.	From 3rd Quarter
SERVICES	
• Establish a peer review service available to States on physical protection of nuclear material and facilities (roster of experts, guidelines, etc).	From 2nd Quarter
GUIDANCE	
• Begin development of a basic technical reference manual on physical protection principles and practices.	2nd Quarter

PROJECTED 1996 PHYSICAL PROTECTION ACTIVITIES	Action Dates
TRAINING	
• Conduct a session of the International Training Course on Physical Protection of Nuclear Facilities and Materials.	2nd Quarter
• Conduct one or several specialized training courses or workshops in physical protection.	From 3rd Quarter
TECHNICAL SUPPORT	
• Update and complete the assessment of the needs of individual States in the area of physical protection and of assistance being provided.	Continuing from 1995
• Manage and implement technical support to individual States initiated in 1995. Develop and implement technical support to other States.	Continuing from 1995
SERVICES	
• Conduct physical protection peer review missions.	On request
GUIDANCE	
• Develop Agency guidance for States in carrying out their regulatory responsibilities in physical protection.	From 1st Quarter
INFORMATION EXCHANGE	
• Hold a major meeting to facilitate information exchange on physical protection experience, concepts, equipment, etc.	4th Quarter

2. State Systems of Accounting and Control

10. The objective of this project is to increase the support available to States in improving their State systems of accounting and control (SSAC) of nuclear material. The activities include assistance in the planning and implementation of the technical features of SSACs, and the training of SSAC and facility staff.

11. Since 1993 the support provided to the Newly Independent States (NIS) of the former Soviet Union has been under "Co-ordinated Technical Support Plans". It has taken the form of the co-ordination of bilateral and multilateral programmes including nuclear material accounting and control, import/export control, as well as physical protection. "Co-ordinated Technical Support Plans" are already being implemented in Belarus, Kazakhstan, Latvia, and Ukraine.

12. The Agency will continue to provide the central co-ordination function for development and implementation of such plans for which funding is provided by donor States. The Agency has scheduled meetings early in 1995 between representatives of Armenia, Georgia, Lithuania and Uzbekistan, and representatives of a number of potential donor States including Australia, Finland, South Korea, Sweden, UK and USA. Site visits to individual State offices and facilities by multinational expert teams will be used to assess conditions in detail.

13. Agency experts will participate in these teams, as they did in those previously organized in the NIS, to assist with the preparation of specifications for, and purchase of, the required equipment and associated software, and the establishment of facility/State-IAEA specific procedures.

14. The Secretariat will also increase its activities in the area of training to meet the needs of States. During 1995 the Agency will assist with the administration and presentation of SSAC training courses: an international course in the United States, a regional course in Japan, individual State courses in Chile and Romania, and a specialized course at the IAEA in Vienna. In addition, detailed implementation training will continue as defined in the coordinated "NIS Safeguards Training Programme".

15. Activities considered for 1995 are listed in the table below. The results of activities in 1995 and progress in preparing for implementing safeguards will be taken into account in continuing these activities in 1996.

1995 STATE SYSTEMS OF ACCOUNTING AND CONTROL ACTIVITIES	Action Dates
• Continue the process of identifying SSAC needs in additional countries (e.g. Armenia, Georgia, Lithuania, Uzbekistan), and identify corresponding donor States.	From 2nd Quarter
• Participate in expert site visit teams.	From 3rd Quarter
• Prepare technical specifications for and purchase identified equipment, and establish specific IAEA-related procedures.	From 3rd Quarter
• Continue SSAC training courses	Ongoing
• Provide other assistance in the area of SSACs.	On request

III. ILLICIT TRAFFICKING IN OTHER RADIOACTIVE SOURCES

1. Radiation Safety Infrastructure Related to Security of Other Radioactive Sources

16. The objectives of this project are to assess the needs of Member States in their efforts to prevent illicit trafficking - whether domestic or international - in radioactive sources in general (except those containing nuclear materials) to assist them in establishing and strengthening national infrastructures for the prevention of such trafficking, and to support the operation of those infrastructures.

17. Section 3 of the Attachment to document GOV/2773, presents the issues and describes the primary concerns related to the prevention of illicit trafficking in radioactive sources. Also, it identifies the national systems which must be established and put into operation in order to ensure that radioactive sources do not go astray, such as systems for maintaining adequate administrative control over such sources and systems for ensuring their security. The document refers to the recently adopted Basic Safety Standards, referred to as BSS, (International Atomic Energy Agency, International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of radiation Sources, Interim Edition, Safety Series No. 115-1, IAEA, Vienna, 1994) and their requirements relevant to illicit trafficking - namely: (i) a national notification, registration or licensing system and associated enforcement arrangements, such as the regular inspection of sources; and (ii) security arrangements for preventing theft of, damage to and the unauthorized use of sources, and for ensuring that control over sources is not relinquished without compliance with relevant requirements.

18. The discussion that took place at the meeting of governmental experts referred to in paragraph 3 of document GOV/2773 prompted proposals for possible future actions to strengthen the Agency's radiation safety programme in areas related to illicit trafficking (see paragraph 3.27 of the Attachment to GOV/2733). In the light of the reactions to these proposals at the December 1994 session of the Board and pursuant to the Board's request that the Secretariat "continue developing the proposed actions through further discussions and consultations with Member States", the Secretariat is submitting for approval - in the following table - proposals for a number of activities to be carried out by the Division of Nuclear Safety during 1995 and 1996. Some of the proposed activities - particularly some of those proposed for 1995 - form part of the approved 1995-96 programme of activity, but it is envisaged that they would be brought forward or redirected in order to deal more specifically with illicit trafficking. Most of the activities are new, and they would be carried out as far as the available resources permit.

PROPOSED 1995 ACTIVITIES FOR THE SECURITY OF OTHER RADIOACTIVE SOURCES	ACTION DATES
GUIDANCE	
● Complete a Safety Series document on the implementation of the BSS requirements on the control of radioactive sources, with strengthening of the emphasis on the prevention of illicit trafficking.	4th quarter
● Start work on a Safety Series document on the security of radioactive sources.	3rd quarter
● Start work on a Safety Series document providing guidance for national authorities and customs officers on instrumentation and procedures to be used at border crossings for the detection of radioactive materials.	4th quarter
EDUCATION AND TRAINING	
● Conduct a Workshop on the BSS system of notification and authorization of radioactive sources.	April 1995
● Conduct a Training Course on the notification, registration and licensing of radioactive sources.	August 1995
● During a scheduled Seminar on the BSS training programme, define Training Courses and Workshops on the administrative control, inspection and security of radioactive sources.	3rd quarter
SERVICES	
● Establish a peer review service [multi-national team] to be made available to States on the implementation of BSS requirements regarding the control and security of other radioactive sources and render services upon request.	3rd quarter
RESPONSE	
● Formalize the mechanisms for providing a rapid response to requests for assistance in emergencies caused by illicit trafficking by drawing up a roster of experts who have agreed to be available at short notice and making the necessary internal arrangements.	4th quarter

PROPOSED 1996 ACTIVITIES FOR THE SECURITY OF OTHER RADIOACTIVE SOURCES	ACTION DATES
GUIDANCE	
● Complete the Safety Series document on the security of radioactive sources.	2nd quarter
● Complete the Safety Series document providing guidance for national authorities and customs officer on instrumentation and procedures to be used at border crossings for the detection of radioactive materials.	4th quarter
INFORMATION EXCHANGE	
● Hold a Forum for the exchange of information on o international and bilateral efforts to prevent illicit trafficking.	1st quarter
EDUCATION AND TRAINING	
● Conduct Training Courses for national authorities on measures to counter illicit trafficking in radioactive materials, including nuclear material (for the further training of national customs officers and border officials).	From 2nd quarter
SERVICES	
● Expand the peer review service to States on the implementation of BSS requirements regarding the control and security of other radioactive sources and render services upon request.	From 1st quarter

IV. AGENCY DATA BASE ON ILLICIT TRAFFICKING IN NUCLEAR MATERIALS AND OTHER RADIOACTIVE SOURCES

19. The objective of this project is to establish a data base to provide reliable information for governments and the media on incidents of trafficking in nuclear material and other radioactive sources. It is to be derived from information collected from open sources and provided by Governments, starting from the considerable volume of information already compiled. Work has been initiated on the definition of requirements for the data base and on the procedures to be applied.

20. As a first step in the design of the data base, a set of data elements has been developed which will document a case history for each incident in the data base. These data elements can be grouped according to the following general categories: general information identifying the case history; description of initiating event; individuals and/or organizations affected and/or involved in the event; characteristics and history of the nuclear material or source involved; history of Secretariat follow-up; and follow-up actions at the national level.

21. It is planned to consult with States to determine what data they will provide, and to obtain comments on mechanisms for assessing and reporting on incidents, taking into account confidentiality.

22. In the proposed data base, a clear separation will be maintained between those incidents which relate to proliferation concerns, which are the responsibility of the Department of Safeguards, and those which relate to radiation safety, which are the responsibility of the Department of Nuclear Energy and Safety, with co-ordinated action where necessary in specific cases. The Division of Information Treatment in the Department of Safeguards will be responsible for the maintenance and updating of the data base.

23. The activities to establish the data base in 1995 are shown in the table below. Activities in 1996 would entail continuing operation with the system.

1995 DATA BASE ACTIVITIES	Action Dates
• Establish a prototype trafficking data base to gain operational experience with handling data from multiple sources, providing reports and tracking follow-up actions. Develop a basis for development of standard and ad hoc reports and other operational considerations (e.g., performance, security).	February - March
• Consult with States to obtain comments on the data base.	April - June
• Complete the design of the trafficking data base.	July-September
• Initiate regular use of the data base with governments and the media.	October

V. RESOURCES

24. The Secretariat is carrying out some activities that are related to illicit trafficking under its regular programme and budget. However, the proposed programme of intensified and new activities will require additional resources. In the discussion in December 1994, the Board noted that the additional resources required in 1995 would be provided as extra-budgetary resources, while the resources required in 1996 would be considered by the Administrative and Budgetary Committee.

25. During the discussion at the December Board meeting, the Governor of the United States announced that his authorities were considering making an extra-budgetary contribution to the Agency. Since that time, the United States has pledged a contribution of $1,000,000 to enable the Agency to "assist Member States in strengthening national programs in the area of physical protection of nuclear materials and facilities." The United States has also given the IAEA an extra-budgetary grant of $ 400,000 in support of a multinational programme to curb nuclear smuggling activities. It is planned to use these funds in particular to develop the Agency data base on illicit trafficking, as described in Sections IV above.

26. An estimate of IAEA resources needed to carry out the proposed activities related to illicit trafficking in 1995 and 1996 was given in a table in Section 4 of GOV/2773. The totals are approximately US $ 1.3 million and US $ 1.7 million in 1995 and 1996, respectively. The extra-budgetary resources made available to the IAEA will cover the costs foreseen in 1995. The programme will continue in 1996 to the extent permitted by the regular budget and extra-budgetary resources.

VI. SUGGESTED ACTION BY THE BOARD

27. In addition to the actions suggested in GOV/2773, it is suggested that the Board take note of this progress report.