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STRENGTHENING THE EFFECTIVENESS AND IMPROVING THE EFFICIENCY OF THE SAFEGUARDS SYSTEM

Report by the Director General to the General Conference

FOREWORD

1. Since its inception over 30 years ago, the Agency safeguards system has evolved and been strengthened by the regular introduction of new methods and techniques, improving both its effectiveness and efficiency for detecting diversion of nuclear material placed under safeguards. The increasing importance of assurance regarding the absence of any undeclared nuclear activities and installations in States with comprehensive safeguards agreements made it imperative to update the safeguards system by integrating into it measures that will give the Agency an improved capability of detecting clandestine nuclear activities if such exist.

2. Beginning in 1992, a number of decisions by the Board of Governors reaffirmed the requirements that Agency safeguards provide assurance regarding both the correctness and the completeness of nuclear material declarations by States with comprehensive safeguards agreements, endorsed some individual measures for increasing the Agency's capabilities in respect of verifying the completeness of States' declarations and requested the Director General to submit to it concrete proposals for the assessment, development and testing of measures for strengthening safeguards and improving its cost effectiveness. In response to this request the Secretariat presented in December 1993 a Programme, "Programme 93 + 2," which aimed to evaluate the technical, financial and legal aspects of a comprehensive set of measures, including those recommended by the Standing Advisory Group on Safeguards Implementation (SAGSI), and to present, early in 1995, proposals for a strengthened and more efficient safeguards system.

3. A report was presented to the March 1995 meeting of the Board of Governors (GOV/2784) which gave an overview of measures proposed for strengthening the safeguards system, and discussed each measure in terms of its cost, effort, assurance, legal aspects and its interrelations with other measures. The extensive comments made at this meeting resulted in the submission for the Board's consideration in June 1995 of a further document (GOV/2807) which contained a comprehensive set of strengthening and efficiency measures divided in two parts. Part 1 consisted of measures which could, in the Secretariat's view, be implemented under existing legal authority and which the Secretariat would proceed to implement. Part 2 consisted of measures which were believed to require complementary authority. The Board of Governors noted the Secretariat's intention to proceed with Part 1 measures on the understanding that concerns of Member States would be clarified and implementing arrangements elaborated by consultations between the Secretariat and Member States.

4. "Programme 93 + 2" called for a major effort by the Secretariat. The work done has been accomplished with the extensive support of a large number of Member States. States have availed themselves of numerous opportunities, including the General Conferences, to provide the Secretariat with their views on the programme. Progress on the programme was previously reported to the 1994 and 1995 General Conferences in documents GC(XXXVIII)/17 and GC(39)/17.

5. In resolution GC(39)/RES/17 the General Conference last year requested the Director General to:

- continue to develop the measures proposed under Programme 93 + 2, in order to bring about a more effective and efficient system covering all nuclear material in all peaceful nuclear activities within the territory of a State which has concluded a comprehensive safeguards agreement, and to make arrangements to implement at an early date the measures outlined in Part 1 of document GOV/2807 after consulting individual States;
- put before the Board of Governors as soon as possible clear proposals for the measures proposed in Part 2; having taken into account the views on Part 2 of Programme 93 + 2 expressed in the Board of Governors and at the General Conference's thirty-ninth regular session and the outcome of the consultations with Member States individually or collectively; and
- report on the implementation of this resolution to the General Conference at its fortieth regular session.

6. This report provides information on the Secretariat's activities and the Board of Governors' consideration and decisions since the thirty-ninth regular session of the General Conference and on ongoing work to implement measures under existing legal authority.

ACTIVITIES SINCE THE THIRTY-NINTH GENERAL CONFERENCE

7. As part of the process called for by GC(39)/RES/17, the Director General presented a discussion paper to the Board of Governors at its December 1995 session. The paper described and explained the need for the new measures for which complementary legal authority would be required (Part 2 measures), and presented a draft protocol showing how the authority could be granted. It also expressed the expectation that following a short term increase in costs the implementation of the envisaged new measures would be cost-neutral.

8. Following a discussion of the paper the summing up by the Chairman of the Board of Governors noted, *inter alia*, that the Board of Governors welcomed the Director General's initiative in presenting the paper which was seen as a step in the consultative process undertaken prior to finalizing the proposals for Part 2 of Programme 93 + 2. The Board and the General Conference had asked the Director General to prepare the proposals to create strengthened and cost-effective safeguards system, to give the Agency an improved capability for verifying declared nuclear inventories and to detect any undeclared nuclear material and activities in States with comprehensive safeguards agreements.

9. Based on the discussion by the Board of Governors in December 1995 and on subsequent consultations with Member States the Secretariat produced a new discussion paper, Discussion Draft II. When the Director General introduced this paper informally to Board members in February 1996 so that they might prepare for discussion at the March 1996 meeting of the Board of Governors, he pointed out the need to strike an appropriate balance between measures to credibly strengthen safeguards and the need to avoid excessively difficult or burdensome obligations for Member States.

10. Following discussions during the March 1996 Board of Governors meeting the Chairman's summing up recorded that the Board had welcomed Discussion Draft II and had commended the Secretariat for its positive response to concerns expressed. In addition some Governors were of the view that the proposals in the Discussion Draft II represented a reasonable balance between the needs of a strengthened safeguards system and the obligations to be undertaken by States. At the same time there continued to be divergences of view concerning a number of proposed Part 2 measures. The Secretariat was requested to take into account all comments made and to continue consultations with Member States with a view to submitting a formal text for the Board's consideration in June 96.

11. Basing itself on Discussion Draft II and taking into account further consultations with Member States, discussion at the March 1996 meeting of the Board of Governors, and written comments submitted by some Member States, the Secretariat prepared a formal document for consideration at the June 1996 Board of Governors' meeting (GOV/2863, included as Annex 1).

12. The Director General introduced GOV/2863 by reminding Board members that Part 1 measures and the measures described and proposed in the document were the culmination of several years of work by the Board and the Secretariat. He said that the Secretariat had endeavoured to define in the document a set of measures which, together with actions already taken by the Board, would further improve the safeguards system, while leading neither to discrimination in application nor to unacceptably burdensome or intrusive measures. The Director General recalled that for several years the Board had maintained a steady momentum leading to the current proposals and said that this momentum should not be lost. He also said that a committee established by the Board to refine the protocol, meeting perhaps for two weeks early in July 1996, would help to move the full Programme 93 + 2 towards a timely conclusion. The text of the Director General's introductory statement is included in Annex 2.

13. In summing up the Board's discussion, the Chairman recalled that for three years the Secretariat and Member States had been engaged in an extensive effort to develop and evaluate measures for further strengthening the safeguards system and making it more cost-effective, with a principal objective of enhancing the Agency's ability to detect undeclared nuclear activities.

14. The Chairman further recalled the Board's endorsement of the general direction of Programme 93 + 2 and of their acknowledgement that additional information, environmental sampling and increased physical access would strengthen the Agency's ability to detect any undeclared nuclear material and activities. He said that these new measures, however, should strike a balance between the Agency's need for information and access on the one hand and the State's need to protect its legitimate interests and to respect its constitutional obligations on the other. He also emphasized that implementation of those measures should be subject to strict rules of confidentiality with regard both to information received and to the entire verification process.

15. The Chairman said that the Board had concluded that the examination of a draft model protocol would provide opportunities to find precise language striking a balance between the concerns of individual States and the need to ensure the efficiency and effectiveness of the measures proposed. Therefore, the Board had decided to establish a open-ended committee with the task of drafting a model protocol basing itself on Annex 3 to document GOV/2863 and taking into account, *inter alia*, the explanation of the measures contained in that document and the discussions on the matter in the Board.

16. The full text of the Chairman's summing-up is contained in Annex 3.

17. The committee entitled the "Committee on Strengthening the Effectiveness and Improving the Efficiency of the Safeguards System, established by the Board of Governors on 14 June 1996" held its first series of meetings from 2 to 4 July 1996. Representatives of sixty-one States attended. The committee undertook a first reading of the draft protocol

(Annex 3 of GOV/2863) article by article and Member States' comments were discussed on each article. Member States were asked to submit to the Secretariat comments on the Protocol by 1 August 1996. The Secretariat undertook to publish a compendium of comments by 1 September 1996. The date of the next series of meetings of the committee was set for 1 October 1996. The Chairman undertook to provide a progress report to the Board at its September, 1996 session. This report will be distributed, when available, as an addition to this report.

ON-GOING ACTIVITIES

18. The Secretariat is proceeding with the implementation of Part 1 measures as rapidly as time and resources allow. Following the June 1995 Board of Governors' meeting a detailed implementation plan was developed, and letters were sent to States with comprehensive safeguards agreements describing the actions the Secretariat had identified as necessary in order to proceed. The letter indicated that the Secretariat would implement Part 1 measures in 1996 as broadly and extensively as possible, subject to operational and budgetary constraints.

The following is a summary of the activities undertaken in implementation of the Part 1 measures :

(a) **Broader access to information**

- A questionnaire regarding States' systems of accounting and control was finalized and sent to all States with operative comprehensive safeguards agreements. The questionnaire was sent to 59 States and two regional systems and 25 responses had been received by the end of July 1996. A methodology for the analysis of the information is being tested using the responses received.
- A letter requesting information on certain closed-down or decommissioned nuclear facilities and locations outside facilities (LOFs) and on nuclear facilities which were built but where nuclear material was never introduced, was sent to all States with comprehensive safeguards agreements at the end of March 1996. 25 responses have been received by the end of July 1996. A letter requesting the additional information regarding the nuclear fuel cycle that can be sought under existing legal authority is being prepared.
- Initial implementation of environmental sampling is being focussed on enrichment plants and certain hot-cell facilities. General guidelines for the application of environmental sampling have been developed and

approved, candidate facilities have been identified, sampling objectives, plans and procedures for specific facilities are being developed and consultations with Member States regarding implementation have been initiated. Analytical equipment for the Agency's new clean laboratory at Seibersdorf has been installed. The laboratory is now able to receive and handle samples with full operation scheduled for September 1996. Base-line sample collections have been conducted at enrichment and hot-cell facilities with additional facilities in 10 Member States to be sampled this year.

- A procedure has been planned for improved information analysis.
- The procedures for protecting safeguards confidential information are being reviewed to ensure that protective measures are up-to-date and adequate. Particular attention is being paid to the means of controlling access to safeguards confidential information in computer data files. A Consultants Group of Member State experts met in Vienna in early December 1995 and, *inter alia*, reviewed the Secretariat's procedures for the distribution of environmental samples and for reporting results, intended to protect the anonymity of samples and the confidentiality of results. The Group agreed that implementation of the procedures would meet the objectives of the Agency and of Member States.

(b) Increased physical access

- Work is underway to identify how no-notice inspections (unannounced routine inspections), particularly in combination with additional operational data and advanced technology, could lead to more effective and efficient safeguards for a number of facility types. An approach is currently being tested in a low enriched uranium fuel fabrication facility, and detailed consultations are underway in an attempt to define an approach for a similar facility.

(c) Optimal use of the present system

- A wide variety of advanced technology is being examined and demonstrated. The objective is the development of new safeguards approaches which combine the new technology with no-notice inspections thereby permitting reductions in inspection frequency and effort. Two digital surveillance cameras and an electronic seal using remote transmission through a satellite link to Vienna have been operational from a facility in Switzerland since mid-January 1996. The specific location in the facility is a room with a vault containing a semi-static store of direct-use material. Similar applications of

advanced technology are being demonstrated at a facility in the US and another in South Africa. In all cases the demonstrations include the authentication requirements of the Agency and the encryption requirements of the State.

- A number of training courses necessary for the implementation of Part 1 measures are in various stages of preparation. A training course on environmental sample collection and handling is in place and by the end of September 1996 approximately 100 inspectors will have received this training. Training courses on enhanced observational skills are being evaluated and other courses dealing with the conduct of no-notice inspections and design verification of closed-down and decommissioned facilities are being prepared. Courses for the training of personnel implementing State systems of accounting and control are also being prepared.

ANNEXES

- Annex 1 Document GOV/2863: "Strengthening the effectiveness and improving the efficiency of the safeguards system: Proposals for implementation under complementary legal authority - A report by the Director General"
- Annex 2 Statement regarding "Strengthening the effectiveness and improving the efficiency of the safeguards system: Programme 93 + 2" made by the Director General in his introductory statement at the June 1996 session of the Board of Governors
- Annex 3 Discussion including decision on "Strengthening the effectiveness and improving the efficiency of the safeguards system: Programme 93 + 2" at the June 1996 session of the Board of Governors

**B****Annex 1**GOV/2863
6 May 1996

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**STRENGTHENING THE EFFECTIVENESS AND IMPROVING
THE EFFICIENCY OF THE SAFEGUARDS SYSTEM****PROPOSALS FOR IMPLEMENTATION
UNDER COMPLEMENTARY LEGAL AUTHORITY****A report by the Director General****INTRODUCTION**

1. The Agency safeguards system has, as its cornerstone, nuclear material accountancy. Since its inception over 30 years ago, the system has evolved and been strengthened through the continuing introduction of new methods and techniques. As a result, there have been improvements in both its effectiveness and its efficiency in detecting diversion of nuclear material placed under safeguards. The discoveries of undeclared nuclear material and facilities in Iraq and the problems associated with the Agency's efforts to verify the nuclear inventory in the Democratic People's Republic of Korea highlighted the importance of assurance regarding the absence of any undeclared nuclear material and activities in States with comprehensive safeguards agreements and the need to update the safeguards system by integrating into it measures that will give the Agency an improved capability to detect undeclared nuclear material and activities. Further, the Agency's positive experience in verifying the nuclear inventory in South Africa has demonstrated the benefits that can flow from increased transparency and co-operation.

2. The measures envisaged in this respect, which include those such as no-notice inspection, unrestricted access to sites with nuclear facilities and direct communications between the field and Headquarters, are not only of vital importance to the strengthening of the effectiveness of safeguards, they also relate directly to the public's perception of safeguards. The potential relevance of a strengthened and more efficient safeguards system to universal and regional arms control measures should not be overlooked.

3. Beginning in 1992, a number of decisions (relating to "Special Inspections", to "Design Information" and to a "Reporting Scheme for nuclear material and specified equipment and non-nuclear material") were adopted by the Board of Governors. These reaffirmed the requirement that Agency safeguards provide assurance regarding both the correctness and the completeness of nuclear material declarations by States with comprehensive safeguards agreements, endorsed individual measures for increasing the Agency's capabilities in this respect and requested the Director General to submit to it concrete proposals for the assessment, development and testing of measures for strengthening safeguards and improving their cost effectiveness. In response to this request the Secretariat presented in December 1993 a proposal entitled "Programme 93+2," which aimed, within two years, to evaluate the technical, financial and legal aspects of a comprehensive set of measures, including those recommended by the Standing Advisory Group on Safeguards Implementation (SAGSI), and to present, early in 1995, proposals for a strengthened and more efficient safeguards system.

4. In December 1994, the Board of Governors was presented with a comprehensive review of the work that had been done under each of the seven tasks comprising "Programme 93+2" and a description of the various measures being examined under the programme (GOV/INF/759). While no action on "Programme 93+2" was recommended to that Board, the discussion which took place provided further guidance to the Secretariat for its work under the programme and for its preparation of specific proposals for the March 1995 Board of Governors.

5. The Director General's report to the March 1995 Board, GOV/2784^{1/}, provided an overview of the proposed measures for strengthening the present safeguards system in a systematic, integrated manner. The report discussed how the various measures interrelated and how their synergistic effect would increase the level of assurance that could be attained. Each measure was described in detail in terms of its cost or effort, technical and legal aspects, i.e., whether the Secretariat would implement the measure on the basis of existing legal authority or whether complementary authority would be sought. Although some Governors expressed reservations about some of the measures, the Board endorsed the general direction of "Programme 93+2". It reiterated its support for a safeguards system for implementing comprehensive safeguards agreements designed to provide credible assurance of the non-diversion of nuclear material from declared activities and of the absence of any undeclared nuclear activities. This support was also reflected in the strong endorsement in April 1995 by the NPT Review and Extension Conference of the work of the Agency to strengthen further the effectiveness of safeguards.

^{1/} A history of the evolution of the safeguards system since its inception and of the events which had prompted earlier Board decisions on strengthening measures leading to "Programme 93+2" was presented in the Introduction of GOV/2784.

6. As requested by the Board at its March 1995 meeting, and taking into account the many helpful comments received from Member States on "Programme 93+2" and the advice of SAGSI on the programme, the Secretariat submitted for the Board's consideration in June 1995 document GOV/2807, containing a comprehensive set of strengthening and efficiency measures. The measures were arranged in two parts: Part 1 consisted of those which could, in the Secretariat's view, be implemented under existing legal authority and which would be practical and useful to implement at an early date; Part 2 consisted of those which the Secretariat proposed for implementation on the basis of complementary authority. While it was recommended that the Board take action on those measures falling within the Agency's existing legal authority (Part 1), the Director General recommended that action by the Board on the remaining measures await his next report, allowing the Secretariat the benefit of discussions at the General Conference and of further informal consultations with Member States.

7. Following extensive discussion of GOV/2807, the Board took note of the Director General's plan to implement at an early date the measures described in Part 1 and urged States party to comprehensive safeguards agreements to co-operate with the Secretariat to facilitate such implementation, on the understanding that elaboration of the implementing arrangements and the clarification of State's concerns would be required. The many comments and suggestions made during the discussion have been taken into account in planning the implementation of the Part 1 measures.

8. The Secretariat is proceeding with the implementation of Part 1 measures as rapidly as time and resources allow. Following the June 1995 Board of Governors' meeting a detailed implementation plan was developed, and communications were sent to State parties to comprehensive safeguards agreements describing the actions the Secretariat had identified as necessary to proceed. The letter indicated that the Secretariat would undertake implementation of Part 1 measures in 1996 as broadly and extensively as possible, subject to operational and budgetary constraints.

9. The following provides a summary of the activities undertaken in implementation of the Part I measures through the end of March 1996:

(a) broader access to information

- The SSAC questionnaire was finalized and sent to all States with operative comprehensive safeguards agreements (an information letter was sent to States with comprehensive safeguards agreements where the suspension protocol is in force) during December 1995 with a request that the responses be returned to the Agency by end of February 1996. The questionnaire was sent to 59 States and two

regional systems and 17 responses had been received by the end of March 1996. A methodology for the analysis of the information is being tested using the responses received.

- A letter requesting information on certain closed-down or decommissioned nuclear facilities and LOFs and on nuclear facilities which were built but where nuclear material was never introduced was sent to all States with comprehensive safeguards agreements at the end of March 1996 with responses requested by the end of April 1996. A letter requesting the additional information regarding the nuclear fuel cycle that can be sought under existing legal authority is being prepared.
- Initial implementation of environmental sampling is being focused on enrichment and certain hot-cell facilities. General guidelines for these applications have been developed and approved, candidate facilities have been identified, facility-specific sampling objectives, plans and procedures are being developed and consultations with Member States regarding implementation have been initiated. Analytical equipment for the clean laboratory has been installed. The laboratory will be able to receive and handle samples by mid-May 1996 with full operation scheduled for 1 July 1996. Base-line sample collections were carried out at two facilities in late February and early March.
- An organizational plan for improved information analysis is in place. The plan identifies where the work will be done, how it will be supported and reviewed and the management process for confirming the need for and nature of follow-up actions with States. The general conceptual framework or methodology for improved information analysis described to the Board of Governors in March 1995 has been further developed and a number of software tools to aid its implementation are in place. The work of a group of Member States experts on the development of the physical model of the nuclear fuel cycle is complete. Arrangements to effect a peer review of the model (possibly through Member State Support Programmes) are under consideration.
- The procedures for protecting safeguards confidential information are being reviewed to ensure that protective measures are up-to-date and adequate. Particular attention is being paid to the means of controlling access to safeguards confidential information in computer data files. A Consultants Group of Member State experts met in Vienna in early

December 1995 and, inter alia, reviewed the Secretariat's procedures for the distribution of environmental samples and for reporting results, intended to protect the anonymity of samples and the confidentiality of results. The Group agreed that implementation of the procedures would meet the objectives of the Agency and of Member States.

(b) increased physical access

- Work is underway to identify how no-notice inspections (unannounced routine inspections), particularly in combination with additional operational data and advanced technology, could lead to more effective and efficient safeguards for a number of facility types. An approach is currently being tested in a low enriched uranium fuel fabrication facility in Sweden, and detailed consultations are underway in an attempt to define an approach for a similar facility in Japan. Administrative procedures necessary to support no-notice inspections as part of the routine implementation of safeguards have been developed.

(c) optimal use of the present system

- A wide variety of advanced technology for remote monitoring and transmission, and unattended measurements with remote transmission is being examined and demonstrated. This includes digital surveillance, electronic seals and motion and radiation detectors, with remote transmission by satellite and phone lines. Two digital surveillance cameras and an electronic seal using remote transmission through a satellite uplink to Vienna have been operational from a facility in Switzerland since mid-January 1996. The specific location in the facility is a room with a vault containing a semi-static store of direct-use material. A variety of query and transmission strategies is being evaluated. The plan is to expand this capability to a network involving five facilities in Switzerland by the end of November 1996. The objective is the development of new safeguards approaches for these locations which combine the new technology with no-notice inspections thereby permitting reductions in inspection frequency and effort. Similar applications of advanced technology are being demonstrated at a facility in the US and another in South Africa. In all cases the demonstrations include the authentication requirements of the Agency and the encryption requirements of the State.

- The development of, and States responses to, the SSAC questionnaire provide a mechanism for a systematic exploration of areas of increased co-operation which could benefit both the Agency and the SSAC. At the same time the process of increasing co-operation between the Agency and regional systems and a large single State SSAC are continuing. Implementation of the New Partnership Approach (NPA) continues with EURATOM, areas of increased co-operation will feature in the consultations with ABACC and a modified NPA safeguards approach to LWRs will be tried at ten LWR facilities in Japan in the near future. There is an impression that increased co-operation will result in a transfer of costs from the Agency to the State. However, the experience with the NPA and that gained from the Programme 93+2 field trials is that, after an initial investment in consultations and training, both sides save resources. For example, the Agency saves resources through a reduction in the interim inspections it must carry out, and the SSAC saves by being able to plan the interim inspections it carries out by itself in a cost-effective manner (subject, of course, to timeliness requirements) rather than responding to a schedule developed and communicated by the Agency.
- A number of training courses necessary for the implementation of Part 1 measures are in various stages of development, pilot testing and implementation. A training course on environmental sample collection and handling is in place and by the end of September 1996 approximately 100 inspectors will have received this training. Training courses on the physical model and enhanced observational skills are being pilot-tested and other courses dealing with the conduct of no-notice inspections and design verification of closed-down and decommissioned facilities are under development. Courses for the training of SSAC personnel are also under development.

10. The informal consultations which took place between the June and December 1995 meetings of the Board of Governors enabled the Secretariat to make progress in developing the proposals for strengthened and more cost-effective safeguards to be implemented under complementary legal authority. The proposals were presented to the December Board in the form of a "Discussion Draft" of 21 November 1995. The detailed discussions on this draft with Member States before, during and after the December Board enabled the Secretariat to progress further in developing the proposals. A "Discussion Draft II" was distributed on 27 February 1996 and discussed by the Board during its March 1996 meeting.

11. The Chairman's conclusion drawn from the Board's discussion of "Discussion Draft II" during their March 1996 meeting included a request that the Secretariat take into account all comments made and continue consultations with Member States with a view to submitting a formal text for the Board's consideration in June. The present document has been drafted following additional comments by and extensive consultations with Member States. SAGSI met mid-April 1996 and made a number of recommendations to the Secretariat on how to deal with some of the comments made by Governors during the March Board. The table set out in Annex I to this report has been retained, with corrections, from Discussion Draft II. It provides a compendium of the Part 1 and Part 2 measures of "Programme 93+2" and includes references, as requested by a number of Board members, to the relevant parts of the Secretariat's legal analysis first put forward in GOV/2784 and to the specific paragraphs of INFCIRC/153^{2/}. The Annotated Outline of the Expanded Declaration, provided in Annex II, has also been revised and expanded to serve as a reference and guide for States in submitting their Expanded Declarations. The draft protocol additional to comprehensive safeguards agreements (hereinafter referred to as the "protocol"), first presented to the Board in the November Discussion Draft and proposed by the Secretariat as the mechanism through which States with such agreements could grant the Agency the additional authority to implement the measures discussed in this report, has been revised and is included as Annex III.

^{2/} INFCIRC/153 (Corrected), June 1972, hereinafter referred to as INFCIRC/153.

**PROPOSED MEASURES FOR A STRENGTHENED AND COST-EFFECTIVE
SAFEGUARDS SYSTEM
UNDER COMPLEMENTARY LEGAL AUTHORITY**

12. This document presents those measures which the Secretariat proposes for implementation under complementary legal authority. The structure of the presentation in this document follows closely that of the Discussion Drafts and consists of three sections. The first describes the broader access to information, including that which would be provided by States through an Expanded Declaration and that obtained by the Agency through environmental sampling at locations to which access would be granted under complementary legal authority. The Annotated Outline of the Expanded Declaration (Annex II), revised following Board discussions and comments received, retains as closely as possible the structure and content of the draft presented in GOV/2807. The second section describes the increased physical access which would be sought for Agency inspectors. The third section presents measures for optimizing the use of the present safeguards system which would require complementary authority.

13. The mechanism for granting this authority would be a protocol additional to comprehensive safeguards agreements between the Agency and the State or States concerned. This would provide a uniform and transparent mechanism through which all States with comprehensive safeguards agreements may confer upon the Agency the additional legal authority. A draft protocol is set out in Annex III. When endorsed by the Board, the protocol will be submitted to individual States for their consent. As is the case with safeguards agreements, each protocol would be submitted to the Board for its approval, and would enter into force either upon signature or subsequent notification by the State, following which formal implementation would begin, with the integration of the Part 2 measures into the safeguards system. In the view of the Secretariat, this process would be facilitated considerably, if the proposed measures were to be implemented, to the extent possible, on a voluntary basis, pending entry into force of their respective protocols.

14. Full implementation of the "Programme 93+2" measures, both Part 1 and Part 2, will require consultations, training and experience with the evolving system. It is expected that the measures, taken together, will lead to more effective and efficient safeguards on nuclear material resulting from increased co-operation with SSACs, greater use of no-notice inspections -- particularly in conjunction with advanced technology (e.g., unattended measurements and remote transmission of data) -- and certain administrative arrangements (e.g., improved inspector designation procedures and expanded use of regional offices). These -- in combination with increased access to information through the Expanded Declaration, increased physical access, the implementation of new technical measures (e.g.,

environmental sampling) and the new approach to information analysis -- provide the basis for a greatly strengthened and more efficient safeguards system, the maximum benefit from which is strongly dependent upon implementation of all of the measures.

15. The Secretariat has further considered the points raised during the March meeting of the Board of Governors related to the need for clear identification of the role of EURATOM and ABACC in the implementation of the proposed measures. The importance of early consultations between the Agency, EURATOM and ABACC and the States concerned on how "Programme 93+2" measures will be implemented in the context of the relevant safeguards agreements is recognized. The role and responsibilities of these regional systems in connection with "Programme 93+2" measures are a matter for decision by those systems and the States concerned. Early consultations with EURATOM and ABACC on the implementation of Part 1 measures have been initiated.

16. "Programme 93+2" is intended to strengthen safeguards in States with comprehensive safeguards agreements, but participation of other States can enhance the effectiveness and efficiency of the implementation of the programme in several ways. First, and most importantly, implementation of certain measures in the programme in other States can enhance the implementation of the programme in States with a comprehensive safeguards agreement. The primary example of an effective contribution would be the provision of information on export licenses and, where available, on actual exports and imports. There are other instances, particularly where the nuclear fuel cycle of a State with a comprehensive safeguards agreement is interrelated with that of another State, in which additional information about specific facility operations would be useful. In addition, States without comprehensive safeguards agreements have not provided information to the Agency on nuclear material which may be in peaceful use in activities which are under their jurisdiction or control but which are carried out on the territory of States with comprehensive safeguards agreements. In the view of the Secretariat safeguards would benefit if States without comprehensive safeguards agreements were to provide information to the Agency on any such material, as well as information on any other nuclear material in non-explosive uses. Some measures, if adopted by States without comprehensive safeguards agreements, would also increase the effectiveness and efficiency of the application of safeguards in those States. Examples are simplified arrangements for inspector designation and measures relevant to individual facilities and nuclear material under safeguards in those States. For these reasons the overall safeguards system would be further enhanced if, in addition to acceptance of the protocol by States with comprehensive safeguards agreements, other States would be prepared to undertake legally binding commitments with regard to the application of "Programme 93+2" measures relevant to strengthening safeguards in those States. The Secretariat would, if directed by the Board, develop a draft legal instrument for this purpose.

Implementation Costs

17. Of particular interest to States is the possibility of reducing inspection effort and safeguards costs as "Programme 93+2" comes to fruition. The Secretariat considers that implementation of the programme will necessarily proceed step by step beginning with an expected increase in effort and costs to implement the Part 1 measures (primarily the costs to implement environmental sampling and the capital costs of advanced safeguards technology), followed by the costs of initiation of the Part 2 strengthening measures. It will be only after a period of time, as the measures for optimizing the use of the present system and measures for increasing assurance of the absence of undeclared activities become established in practice and confidence gained in their use, that cost-saving reductions in some safeguards measures can safely be made.

18. Thus, the introductory phase of implementation will, for some years, involve a temporary net increase in cost which will not be immediately offset by reduced effort on inspection activities. However, savings are expected later to lead to cost neutrality. The pace with which the implementation process proceeds will dictate the duration of the cost increase and depends upon actions taken by Member States including the conclusion of protocols and the necessary arrangements for implementation of both Part 1 and Part 2 measures.

19. Initially, reductions in inspection effort at nuclear facilities and the resulting cost savings will come about primarily from the use of advanced safeguards technology (unattended instrumentation and remote transmission of data), no-notice inspections and, it is hoped, from increased cooperation with State and regional systems of accounting and control. In the longer term, it is possible that an improved capability to provide assurance of the absence of certain undeclared nuclear activities (for example, reprocessing) may permit a reduction in the intensity of safeguards on declared nuclear material (for example, the frequency of inspection of spent fuel), but the timing of the consequential impact on costs of reducing safeguards measures on declared nuclear material and of the use of advanced safeguards technology cannot be established at this point. In developing its April 1993 advice on improving the cost-effectiveness of safeguards, SAGSI considered this concept of "tradeoffs" in some detail and concluded that the principle was valid. SAGSI did not, however, advise on what level of assurance could justify such tradeoffs. This relationship cannot be quantified and must remain a matter of judgment as to the degree of confidence being gained from the strengthening measures.

20. For planning purposes, the Secretariat has based its estimates of the initial cost to the Agency of these measures on their initiation during 1997, with the costs to be accommodated within the proposed budget or covered by any extra budgetary funds made available for that purpose. However, it is the Secretariat's strong view that, as the "Programme 93+2" costs relate to the Agency's statutory safeguards function, the necessary funds should be included

in the assessed budget and be subject to the normal budget development, review and approval process. Therefore, beginning with 1997, it is the intention of the Secretariat to include most "Programme 93+2" implementation costs in the regular budget proposal.

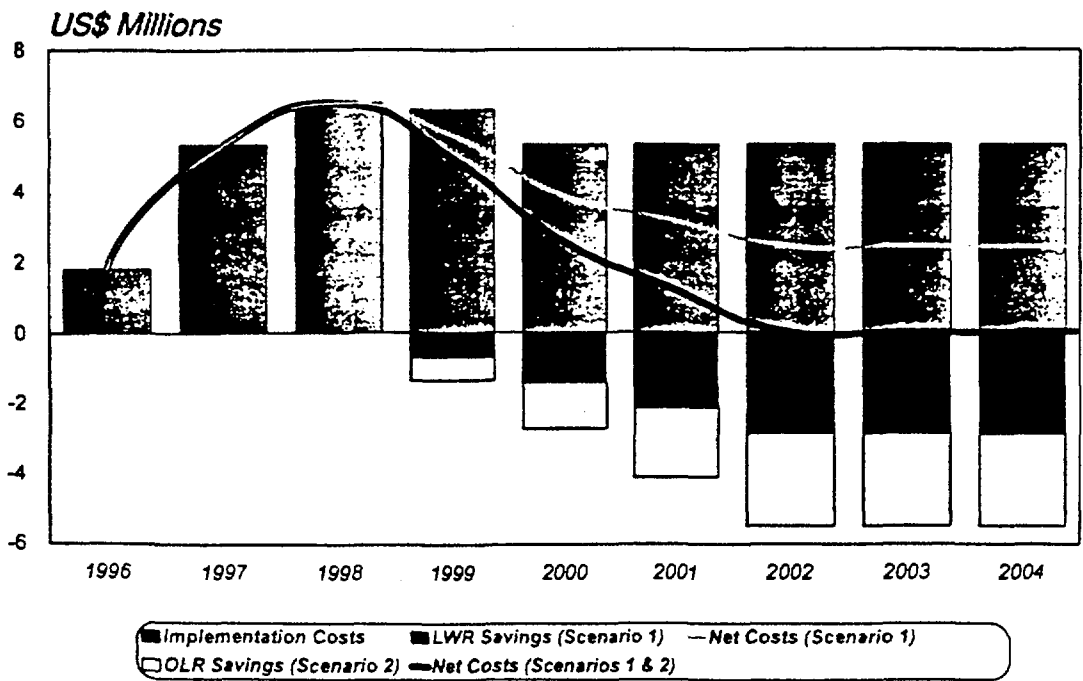
21. The effort anticipated for the complementary activities described in this document during 1997 amounts to approximately 200 person-days. The purposes of these activities would be to refine the procedures developed during the 1994 field trials, begin the process of establishing confidence in the procedures and resolve any non-trivial inconsistencies and questions arising from the analysis and evaluation of information available to the Agency. The 200 person-days to carry out these activities foreseen for 1997 are based on the assumption that implementation would take place in a number of States, either under protocols or under voluntary arrangements as proposed in paragraph 13, and would include some sites on which nuclear facilities and LOFs currently under safeguards are located and some nuclear-related locations identified in the Expanded Declaration or other locations of interest to the Agency.

22. These activities would normally be carried out in conjunction with ad hoc and routine inspections and design information verification visits to nuclear facilities and LOFs, as appropriate. Few additional trips from Vienna would be required. In subsequent years the level of this effort would be adjusted to take into account the initial implementation experiences. The cost to the State would be largely dependent upon its own requirements with respect to SSAC.

23. The effort needed for analysis and evaluation, using the sophisticated methods developed under "Programme 93+2," of the increasing volume and complexity of information expected to become available to the Agency under complementary authority will grow gradually as the information flow increases and the evaluation methodology is established. Initially, the evaluation will rely heavily on existing resources in the Safeguards Department, with additional experts added only as required. For 1997 one additional person year is planned. The 1997 cost of this additional person year, the 200 person-days in connection with the implementation of these measures and the associated local travel and some additional costs for negotiation is estimated to be 650,000 US dollars. It is anticipated that one additional person-year of effort to accommodate information analysis will be needed in each Operations Division by 1997. During the 1997/98 budget cycle, the estimated cost for the implementation of "Programme 93+2" measures (Part 1 and Part 2) is 4.2 million US dollars per year in the regular budget, and 1.1 million US dollars and 2.3 million US dollars from extra-budgetary contributions for 1997 and 1998, respectively, for a total of 5.3 million US dollars in 1997 and 6.5 million US dollars in 1998. This includes costs associated with environmental sample analyses, additional inspection and negotiation efforts, improved information analysis and the implementation of advanced technology.

24. In an attempt to provide a more concrete picture of how the costs associated with the implementation of strengthened and more cost-effective safeguards might develop, two implementation scenarios are presented in Figure 1. The implementation costs shown for 1996 and 1997 are as budgeted and previously communicated. The total costs assumed for 1998 and 1999 (\$6.5 and 6.3 millions, respectively) are somewhat higher than in 1997 due to anticipated equipment requirements, and, from the year 2000 forward, the costs are assumed constant at 1997 levels. The first cost savings scenario (depicted as the solid black areas in Figure 1) assumes that through advanced technology, no-notice inspections and increased co-operation with SSACs, direct inspection effort for interim inspections at light water reactors (LWRs) can be reduced by two-thirds. This, in turn, results in a one-third reduction in total costs attributable to these activities (\$8.7 million in 1994). The rate of introduction of these cost-saving measures is assumed constant with implementation beginning in 1999 and concluding with full implementation in 2002. The net costs for strengthening safeguards with the assumed reduction in inspection effort for interim inspections at LWRs are shown by the dotted line in Figure 1. The second cost savings scenario (depicted as the light shaded areas in Figure 1) is derived through similar assumptions regarding direct inspection effort for interim inspections at on-load reactors (OLRs) (total costs attributable to these activities in 1994 were \$8.9 million). The net costs for strengthening safeguards in combination with both scenarios are depicted as a solid line with cost neutrality achieved in 2002.

Figure 1. Costs of Strengthening of Safeguards



25. Both scenarios are constructed on the basis that current timeliness criteria with respect to spent fuel remain in place. That is, the required interim inspection activities would still be carried out, but they would be accomplished by use of advanced technology and by the SSAC under appropriate arrangements with the Agency. Thus, some portion of the cost savings in the Agency's budget might result in additional costs for the State. This would depend on whether the State requires an inspector from the SSAC to accompany the IAEA inspector. If the Agency, through implementation of the full set of measures, is able to provide a sufficient level of assurance regarding the absence of undeclared reprocessing in a State, then there would be no need to carry out interim inspections of spent fuel for timeliness purposes (i.e., a trade-off). Under these circumstances the cost savings for the Agency would be about the same as shown in Figure 1 and there would be corresponding cost savings for the State and operators.

Safeguards conclusions and the objectives of strengthened safeguards

26. Nuclear material safeguards as currently applied is a complex verification system based on nuclear material accountancy. The system requires the concerted action of nuclear facility operators, State authorities and the IAEA inspectorate. In general terms, assurances that declared material is accounted for derive from a series of time-dependent and technically interrelated verifications. These are verifications that:

- (i) nuclear material flows and inventories are as declared;
- (ii) facility design is in accordance with the declared design and consistent with the corresponding safeguards approach;
- (iii) facility operations are as declared (e.g., through surveillance records review);
- (iv) facility material accountancy systems conform to prescribed standards;
- (v) facility operator's measurement systems perform according to international standards; and
- (vi) verification measurement performance, the performance of individual facility accountancy systems and the accumulated performance of accountancy systems across facilities within States are in good statistical control over time, i.e., the systems are providing the required measurement and other data with the requisite accuracy and precision.

The safeguards conclusions, and their corresponding levels of assurance for a given period of time, derive from an integration of the results obtained through the various verifications and analyses. An analogous but simpler process is involved for locations outside facilities (LOFs) containing nuclear material.

27. The Expanded Declaration and increased physical access provide the basis for a wider range of activities, a range that would include not only nuclear material, but the nuclear fuel cycle, nuclear fuel cycle-related research and development and related activities. The ultimate aim, nevertheless, remains to enable the Agency to fulfill its rights and obligations under the safeguards agreement, namely, to ensure that declared nuclear material is not diverted to non-peaceful purposes and to provide assurance of the absence of undeclared nuclear material and activities. This increased assurance would derive from determinations that:

- (i) the declared present and planned nuclear programme is internally consistent;
- (ii) the nuclear activities and types of nuclear material at declared locations are consistent with those declared (e.g., through the collection and analysis of environmental samples);
- (iii) overall production, imports and inventories of nuclear material are consistent with the utilization inferred from the declared nuclear programme;
- (iv) imports of specified equipment and non-nuclear materials are consistent with the declared programme;
- (v) the status of closed-down or decommissioned facilities and LOFs is in conformity with the State's declaration; and
- (vi) nuclear fuel-cycle related research and development activities are generally consistent with declared plans for future development of the declared nuclear programme.

Clarification would be sought from the State to resolve any questions or apparent inconsistencies in connection with information provided by the State through the Expanded Declaration. Assurances regarding the correctness and completeness of States' declarations under their safeguards agreements as regards nuclear material and nuclear facilities would derive from an integration of results obtained across this broad range of evaluations and associated verifications.

28. For some time Member States have asked about the logical connection between inspection goal attainment and the safeguards conclusion contained in paragraph 1 of the yearly Safeguards Implementation Report (SIR). That conclusion currently reads "on the basis of all information available to the Agency, it is considered reasonable to conclude that the nuclear material and other items which had been placed under Agency safeguards remained in peaceful nuclear activities or were otherwise adequately accounted for". Any specific instances where the Agency is unable to reach a safeguards conclusion are, of course, identified. The questions from Member States have been along the line of: how is it possible for this conclusion to remain unchanged when not all inspection goals are attained or, as has been the case in recent years, there has been a decline in the rate of goal attainment for some types of facilities?

29. The nature of the safeguards conclusion can only be understood through an understanding of what kind of assurances the current system provides. Through safeguards the hypothesis (implicit in the State's commitment to non-proliferation) is tested that "no diversion has taken place". However, the occurrence of "no diversion" cannot be detected. It can only be inferred from the absence of any evidence to the contrary. This absence does not prove that there has been no diversion. It only says that (i) from all information available and examined, none has been observed and (ii) in the absence of such an observation, there is no reason to reject the hypothesis of no diversion.

30. The inspection activities that the implementation criteria specify as constituting inspection goal attainment for a type of facility, in combination with information required from the State, establish a kind of "observational vantage point". These "observational vantage points" are designed such that if diversion activities were to have taken place, there would be a good chance they would have been detected. The failure to attain fully an inspection goal means that the corresponding "observational vantage points" have been weakened in some fashion. Thus, in most cases, the failure to attain inspection goals for all facilities implies a reduction in the chance of detecting diversion activities had they taken place. However, in the absence of evidence to the contrary, the hypothesis of "no diversion" remains un rebutted. As a consequence, the conclusion of "no diversion" is still correct, but the level of confidence or assurance in the conclusion is reduced. It goes without saying that if insufficient activities had been carried out, no safeguards conclusion should be drawn. There has, in fact, been such a case in the Agency's practice.

31. The concept of strengthened safeguards and the idea of transparency or levels of transparency can be addressed in a similar way. The combination of inspection activities and new technical measures, requirements for additional information from States and elements of the current system (appropriately adjusted) proposed by the Secretariat under "Programme 93+2" constitutes, in effect, a new kind of "observational vantage point", a vantage point that aims to provide credible assurance regarding no diversion of declared nuclear material and the absence of undeclared nuclear material and activities. However, the nature of the conclusions are the same as for the current system. The occurrence of "no diversion" and the occurrence of "no undeclared nuclear activities" cannot be detected. As before, they can only be inferred by the absence of any evidence to the contrary.

32. Appropriately implemented, the measures proposed by the Secretariat provide high assurance regarding the non-diversion of safeguarded nuclear material and the absence of undeclared nuclear activities at sites where safeguarded material is present and some lower levels of assurance regarding: (i) the absence of undeclared activities at other locations where the State has indicated nuclear material (exempted and pre-safeguards) is present; (ii) the absence of undeclared activities at locations the State has identified with specified activities, not involving nuclear material, that are directly related to the operation of the current or future fuel cycle; and (iii) the absence of undeclared activities for the State as a whole. Each

of these levels can be thought of as levels of transparency. As with the current system, the emphasis is on those activities (enrichment and reprocessing) that would need to be carried out if weapons useable nuclear material were to be produced. Again, the absence of undeclared activities cannot be proved. It can only reasonably be inferred when the range of activities undertaken has produced no indications or evidence to the contrary.

33. While it is vital that information provided by the State through the Expanded Declaration be subject to confirmation, the Agency has no intention of proceeding with a mechanistic verification of that information. The information will be systematically analyzed for internal consistency and for consistency with other information (e.g., information from open sources or reports on exports of certain equipment). Thus, if a particular process were identified by a State as constituting part of its fuel cycle, then the presence of certain closely associated processes and specialized equipment would be expected. Conversely, if a particular process were not identified by a State as part of its fuel cycle, then the presence of associated processes and equipment would not be expected. Indications (e.g., specialized equipment and environmental signatures) of the existence of certain activities or processes which have not been identified in the State's Expanded Declaration would be one example of an inconsistency in the information available to the Agency in response to which the Agency would seek clarification. Still other examples could include factual inconsistencies between export and import reports and quantitative inconsistencies involving a gross mismatch between a State's production and/or import of nuclear material and the utilization of nuclear material described in the Expanded Declaration.

34. Clearly, considerable attention must, at all times, be given to how the quality of information is to be assessed through a system of consistency checks and independent corroborations. The Agency does not draw conclusions based on information that it cannot independently assess and corroborate. Part of the lexicon of the current safeguards system involves words like defect, discrepancy and anomaly. The definitions of these words have evolved over many years of experience and relate to kinds of inconsistencies (defects and discrepancies) between operator statements and inspector observations or other information available to the Agency and, from them, the unusual observable conditions (anomalies) which might occur in the event of a diversion or misuse of nuclear material, equipment or facilities subject to Agency safeguards. The definitions are part of a management practice that defines the requirement for follow-up activities, reporting requirements and management review. Most defects and discrepancies are resolved with the State and operator when they are discovered. An anomaly is officially established at a Secretariat debriefing meeting on results of inspection and other relevant information. Once an anomaly has been declared and confirmed through management review, follow-up actions to resolve the anomaly are initiated. All anomalies and associated follow-up actions are reviewed by the SIR Task Force (comprised of the Directors of the Department of Safeguards and the Section Head for Safeguards Evaluation). Any recommendation by the SIR Task Force that an anomaly be closed is reviewed and approved by the Deputy Director General for Safeguards. All

recommendations for closure must be accompanied by a description of the actions taken, generally in concert with the State and operator, to prevent a re-occurrence. If an inconsistency involving expanded information were identified, the process of resolution would be similar to that currently employed in resolving inconsistencies in nuclear material declarations. Obviously some inconsistencies or questions that could arise will be more significant than others and the structure for management review and follow-up actions will naturally reflect this. As in the case with nuclear material declarations, the more accurate and comprehensive the State's Expanded Declaration, the less frequently would inconsistencies and questions arise.

35. Taking into account comments from Member States indicating that some proposed measures would create major implementation difficulties for them, the Secretariat has made every effort to limit the requirements for additional information and access to that deemed necessary to provide "credible assurance of the non-diversion of nuclear material from declared activities and of the absence of undeclared nuclear material and activities". However, in the final analysis it is up to Member States to decide what level of assurances they want from the safeguards system -- whether the "observational vantage point" will be on a high hill with strong glasses or on some lower hill with weak glasses.

36. Although the measures described below are categorized as those relating to information, to physical access to locations and to administrative measures for optimizing the present system, it may facilitate the Board's consideration of the various measures if they were to be described from a different perspective, specifically, how they would contribute to the credibility of assurances which Member States seek of the IAEA.

37. Of primary importance to increased assurance of the non-diversion of nuclear material are the proposed information and access measures relevant to the presence and use in the State of nuclear material and of facilities and locations associated with such use. In order to achieve strengthened safeguards as requested by Member States, the Secretariat believes that the Agency must have greater access to information concerning the location and use in the State of all nuclear material and to information concerning the facilities and other locations where such material is present.

38. A powerful tool for gaining greater assurance as to the absence of undeclared nuclear activities and for detecting the presence of undeclared nuclear material is the analysis of environmental samples, a technique which the Agency already has the authority to implement at locations to which it has access. The utility and practicality of environmental sampling in and around nuclear facilities have been validated through the conduct of field trials at the invitation of a number of Member States. As described in paragraph 54 below, some experience with other applications of environmental sampling has also been obtained through the field trials. Further investigation of the practicality and cost-effectiveness of such applications in the context of comprehensive safeguards agreements is underway.

Environmental sampling is just one example of the value to safeguards of new and improved technology. The way must be kept open to employ other such technology. This was recognized as early as 1970 by the Board in INFCIRC/153.

39. Without physical access by the Agency to verify a State's declarations with respect to nuclear material, the value of such information cannot be realized. While the Agency has historically focused on declared material at declared facilities and locations, the possibility of a clandestine nuclear programme in part co-located with a declared nuclear programme points to the need to improve the Agency's ability to detect any undeclared use of nuclear material at declared facilities and locations. Thus, a number of the measures related to increased physical access have been proposed. These measures would not only provide additional assurance with respect to declared material at declared nuclear facilities and locations, but would also permit the Agency to draw, with greater assurance, conclusions as to the absence of undeclared material and activities at or near such locations.

40. Furthermore, the Agency's experience has demonstrated the need not only for activities geared towards providing assurance as to the absence of undeclared nuclear material and activities at declared nuclear facilities and locations, but also for activities directed at providing a degree of assurance as to the absence of undeclared nuclear activities elsewhere in the State. This can be facilitated by access to certain additional information indicative of a State's complete nuclear programme. This would include the measures related to the provision of information by a State on its imports and exports of certain equipment and non-nuclear material, as well as information on specified elements of the infrastructure directly related to the operation of the State's nuclear facilities, LOFs and nuclear research and development activities, additional information on nuclear research and development activities and plans for future development of the nuclear programme. Access to locations which have not been identified as locations where nuclear material is present, but which are identified with specified equipment and non-nuclear material directly related to the operation of the nuclear fuel cycle or to certain research and development work, would greatly facilitate the clarification of inconsistencies and questions arising in the course of analysis of available information without recourse to special inspections.

41. Finally, there are a number of other measures which would greatly facilitate the more efficient deployment of Agency resources. These include the acceptance of simplified inspector designation procedures and agreement to the use and/or installation by the Agency of satellite communication systems.

42. All of these measures must of course be applied in a non-discriminatory manner. This is not to ignore that the nuclear programmes of countries and the numbers and types of nuclear installations differ considerably. The clarity and quality of the information provided by a State will influence the safeguards activities. But in comparable circumstances, comparable measures and criteria should be used.

43. As provided for in NPT Article III.3 and in paragraph 4 of INFCIRC/153, safeguards should not hamper the development and use of nuclear technology, and in practice there have not been problems. The same must, and the Secretariat is convinced will, be the case for strengthened safeguards.

44. From the beginning of "Programme 93+2," the twin pillars of strengthened safeguards have been increased access to information and to locations, and the whole concept is set in a framework that assumes a much higher level of co-operation between the Agency and States than that required by the current system. This high level of co-operation which has been so evident throughout the "Programme 93+2" development and field trials must carry over into implementation. The experience that is accumulating in the implementation of Part 1 clearly demonstrates the high volume of preparatory work that is needed. Both the Secretariat and States must be willing to address problems and find innovative solutions. The need for a high level of co-operation is not limited to States with Comprehensive Safeguards Agreements.

A. MEASURES INVOLVING BROADER ACCESS TO INFORMATION^{2/}

1. Expanded Declaration

45. The Expanded Declaration includes three categories of information: information on the State's System of Accounting and Control (SSAC), on present nuclear activities of the State and on planned nuclear activities of the State. All of the information concerning SSACs and most of the information related to safeguarded facilities and LOFs are Part 1 measures and are being requested under existing legal authority. The remaining information in the Expanded Declaration is addressed below for provision under complementary legal authority and would involve information related to present and planned nuclear activities. It is intended that the Annotated Outline of the Expanded Declaration, provided as Annex II, serve as guidance for Member States on the information to be submitted under the protocol.

46. The requested information would provide the Agency with a fuller and clearer understanding of all nuclear activities in a State and would serve three important purposes. First, because of its scope and comprehensiveness, the information in the Expanded Declaration would contribute to confidence that no undeclared nuclear activities are being concealed within the declared programme or rely on or make use of elements of the declared programme. Second, by committing itself to a more extensive declaration about its nuclear and nuclear-related activities, the State would provide a considerably improved data base on

^{2/} This broader access to information is not intended to address and in no way limits the Agency's rights to information under the provisions of INFCIRC/153.

its nuclear activities against which information obtained from other sources (e.g., procurement activities or environmental sampling) could be compared for consistency and follow-up. The more accurate and comprehensive the information, the less frequently would inconsistencies and questions arise. Third, the requested information would provide a basis for the efficient planning and conduct of Agency activities relevant to providing greater assurance about the absence of undeclared activities at declared locations as well as to safeguarding declared nuclear material.

47. The approach taken in developing the Expanded Declaration was to be comprehensive so that no relevant information is out of bounds while ensuring that States are not burdened by excessive or irrelevant requests. Further, States should not be required to provide information which may not be within their reach. For such situations, the requested information is qualified with an expression such as "where available." While this does not eliminate the legal obligation to provide information, it makes it conditional in order not to create unreasonable obligations.

48. The information provided in Expanded Declarations would be of greater scope than currently provided to the Agency, and some elements of the information could be considered by the State to be commercially or technically sensitive. The obligation of the Agency to protect information obtained in the course of safeguards in accordance with paragraph 5 of INFCIRC/153 would apply to all information acquired under complementary legal authority. The procedures and practices of the Agency for meeting this obligation will continue to be subject to review to ensure their appropriateness and effectiveness.

49. The overall result of an Expanded Declaration, and associated activities, will be the cost-effective strengthening of the safeguards system through greater nuclear transparency. The resulting benefits to States are the political and security enhancements that can accrue from the increased assurance.

50. Unlike nuclear material accountancy, whose quantification is well known, transparency is not quantifiable. Qualitative judgments can, however, be made as to the degree of transparency which derives from various levels of information. The information called for in the Expanded Declaration is far from including all details of a State's nuclear activities, but the range of information requested represents a reasonable balance between the expected benefits of the additional information and the practicalities and costs of regularly providing and using more information. The additional information that will come from the Agency's on-site and evaluation activities and from the clarifications and explanations provided by States in response to specific Agency requests will be an essential contribution to transparency.

51. Information related to present nuclear activities consists of:

- (a) Information (description, status and location) on nuclear fuel cycle-related research and development (referred to herein as nuclear R&D) activities in the State not involving nuclear material which are owned, funded or authorized by the State and which are specifically related to conversion, fuel fabrication, power or research reactors, critical assemblies or accelerators; and, additionally, all nuclear R&D activities in the State not involving nuclear material which are specifically related to enrichment, reprocessing of nuclear fuel and treatment of waste containing nuclear material.

This is element 2.c. (iii) of the Expanded Declaration. It covers nuclear R&D activities of the State, which do not currently involve the presence or use of nuclear material, that are specifically related to any process development aspect of the named components of the nuclear fuel cycle and have the capability to generate nuclear material. For example, applied research related to process development aspects of enrichment (uranium or plutonium) or reprocessing would be reported where it is clear that the intended end-use is a nuclear application (design features related to radiation protection or criticality control and components manufactured from materials resistant to UF_6 are examples of where it is clear that the intended end-use is a nuclear application). Theoretical or basic scientific research and R&D on medical or agricultural applications, health and environmental effects and improved maintenance are not included. The R&D to be reported involving accelerators is limited to accelerators capable of producing a continuous neutron source sufficient for annual production of gram quantities of fissile isotopes.

In addition, the State is asked to provide information on any nuclear R&D specifically related to enrichment, reprocessing of nuclear fuel and treatment of waste containing nuclear material that may exist even though it is not owned, funded or authorized by the State.

This element, in conjunction with element 2.c.(ii) in Part 1 (nuclear R&D at facilities and LOFs involving nuclear material), would cover all relevant nuclear R&D specifically related to enrichment, reprocessing of nuclear fuel and the treatment of waste containing nuclear material. This information, together with information on the State's activities to develop other parts of the nuclear fuel cycle, would increase transparency with respect to the direction of the nuclear programme within the State and provide an enhanced basis for confirming the overall consistency of the State's declared nuclear fuel cycle development programme, nuclear-related activities and nuclear exports and imports.

- (b) Information, additional to that required under INFCIRC/153, as may be identified by the Agency on the basis of an expected gain in effectiveness or efficiency and, following consultations, agreed to by the State, on specific operational activities at nuclear facilities and LOFs.

This is element 2.c.(iv) of the Expanded Declaration and involves information on specific operational activities at nuclear facilities and LOFs other than that referred to in paragraph 2.b.(iv) of the Expanded Declaration (i.e., that which is not already required to be provided under paragraph 64(b) of INFCIRC/153) and not presently routinely provided. The specific information to be provided would be limited to that identified by the Agency as improving the effectiveness or efficiency of safeguards and, depending on the nature of a facility or LOF, may include, by way of example, more frequent and earlier information on nuclear material receipts and inventories, reactor fuel production, crane movement records, isotope production programmes and maintenance activities. Each such additional item of information would be included in the Expanded Declaration following consultations and agreement with the State or States concerned.

Such information, when provided in advance, could be used, through unannounced routine inspections, to increase the inspection coverage and the cost-effectiveness of safeguards on declared nuclear material. These arrangements could be mutually beneficial in reducing overall inspection effort and corresponding effort of operators.

- (c) Information (description, contents and use) on each of the buildings on the sites on which are situated nuclear facilities or LOFs, including maps of sites.

This is element 2.c.(v) of the Expanded Declaration. The Agency's Design Information Questionnaire (DIQ) already provides for the required information on all buildings and locations where nuclear material is or is expected to be. The information requested here pertains to the other buildings on the site.

The terms "site," "site perimeter" and "site layout" are commonly used in the Agency's DIQ. Site perimeter and site layout have the same meanings here as in the DIQ and refer to the spatial location of a structure or set of structures that are part, or support part, of a State's nuclear fuel cycle. The site layout (i.e., a site plan showing in sufficient detail the location, premises and perimeter of the facility, buildings, railways, roads, rivers, etc.) and the geographic location for sites containing nuclear facilities are included in the information presently routinely provided and are defined by the State in its preparation of the relevant DIQ. The term "site" as used in the Expanded Declaration includes all of the area covered by current DIQs and must also include all installations co-located with the facility(ies) or LOF(s) for the provision or use of essential services, including hot cells for processing

irradiated materials not containing nuclear material, radioactive waste treatment, storage and disposal facilities and buildings associated with the equipment and non-nuclear material identified in element 2.c.(vi) of the Expanded Declaration.

In most cases this is straightforward; the site is treated as the area within a perimeter fence. As a rule, it should bear a close relationship to that area, taking into account natural terrain features and man-made boundaries. It should normally be, or run close to, the surrounding security barrier if such a barrier exists. The size and complexity of sites will vary considerably. Some will be quite large and include more than one nuclear facility together with a full complement of support and related services. Others may consist of a single building, or even a single room in a building, and have no co-located services.

A primary objective of strengthened safeguards is to assure that undeclared nuclear material and activities are not co-located with nuclear facilities and LOFs in order to utilize the infrastructure of manpower, technology, equipment and services that is in place to support declared operations. That is the reason for this element of the Expanded Declaration and the associated access provisions described in paragraph 61(a). The Agency would consult with the State should the Agency have information that suggests that installations outside of the site as defined by the State, may be engaged in activities that are functionally related to the nuclear activities or the associated infrastructure on the site. In such cases, the Agency would request the identity and a description of activities outside of the declared site relevant to resolution of the matter. Should the consultation process, including any additional information or access that the State is able to provide using every reasonable effort, fail to resolve the issue, then the Agency could, as a last resort, make use of existing provisions for a special inspection.

During design information verification visits and during inspections, the nature of the buildings identified by the State under this element of the Expanded Declaration may be checked to confirm their declared use and the absence of undeclared nuclear and nuclear-related activities there. In some cases, depending on the configuration of the nuclear facility or LOF, some of this information can be required under existing authority, for example, for the purpose of ad hoc inspections where the presence of nuclear material has been indicated. However, as indicated in paragraph 39 of GOV/2784, for most cases this requirement is proposed under complementary legal authority.

- (d) The identity, location, description, status, present annual production and the approximate annual production capacity for the manufacture, assembly and maintenance of specified items directly related to the operation of nuclear facilities, LOFs or nuclear R&D activities.

This is element 2.c.(vi) of the Expanded Declaration and covers information on the manufacture, assembly and maintenance of certain equipment and non-nuclear material

functionally related to the operation of nuclear facilities, LOFs or nuclear R&D activities. These would include, by way of example, uranium enrichment centrifuge assembly, heavy water production and zircaloy tube production. The reporting would be limited to equipment and non-nuclear material related to fuel fabrication, reactor operations, enrichment and reprocessing which are listed under element 2.c.(vi) in the Expanded Declaration in Annex II. The Board's approval would be sought for any changes to this list resulting from technological developments or experience with the physical model of the nuclear fuel cycle (i.e., the "proliferation critical path" described in previous Board documents) from which the list is derived.

The physical model is a major component of the Agency's improved analysis of information developed under Task 5 of "Programme 93+2" and describes each nuclear activity that would be involved in the nuclear fuel cycle from source material acquisition to the production of weapons useable nuclear material and then beyond the fuel cycle to weaponization. A brief outline of the improved analysis was provided to the Board in GOV/INF/759. The Technical Background Documentation on "Programme 93+2" which was made available to Member States in March 1995 provides a more detailed description, including an example of the physical model for gaseous diffusion enrichment.

The information under element 2.c.(vi) would provide the Agency with an overview of the infrastructure directly supporting the State's nuclear fuel cycle and contribute to the transparency of the State's nuclear and nuclear-related activities. It would provide indications of where an infrastructure exists that could support nuclear activities that are not part of the nuclear programme. This information is necessary if the Agency is to be able to provide assurance that the declared manufacture, assembly and maintenance of these equipment and non-nuclear materials support only the declared programme. In some cases, depending on the configuration of the nuclear facility or LOF, some of this information can be required under existing authority, for example, for the purpose of ad hoc inspections where the presence of nuclear material has been indicated. However, as indicated in paragraph 39 of GOV/2784, for most cases the provision of this category of information is proposed under complementary legal authority.

- (e) The location, operational status, present annual production and the approximate annual production capacity of uranium and thorium mines.

This is element 2.c.(vii) of the Expanded Declaration. The types of information requested are no different from those provided to the OECD Nuclear Energy Agency for the biennial Red Book on uranium resources, production and demand. Information on uranium and thorium mines would complement the State's declaration under element 2.c.(i) of its domestic capability to produce nuclear material. This element does not include requirements for

measurement or any other aspects of nuclear material accountancy and, hence, would not change the “starting point of safeguards” as described in paragraphs 33 and 34 of INFCIRC/153.

- (f) Information on the inventories, imports and exports of material containing uranium or thorium which has not yet reached the stage of the nuclear fuel cycle described in paragraph 34(c) of INFCIRC/153; information on nuclear material exempted from safeguards pursuant to paragraph 37 of INFCIRC/153; information on nuclear material that has been exempted from safeguards pursuant to paragraph 36(b) of INFCIRC/153 but which is not yet in end-use form and, in the event the information is not complete, with indications of the limitations on its completeness; and information on any planned changes in location or further processing of waste containing nuclear material (excepting waste released to the environment) on which safeguards have been terminated pursuant to paragraph 11 of INFCIRC/153.

This is element 2.c.(viii) of the Expanded Declaration. It is included in recognition of the need for the Agency to be cognizant of all nuclear material (quantities, composition and locations) within the State relevant to actual or potential nuclear activities within the State. The required information is to be provided to the Agency yearly. The reporting requirements for pre-safeguards nuclear material (pre-paragraph 34(c)) are limited to locations with inventories, whether in nuclear or non-nuclear use, involving quantities exceeding those identified in paragraph 37(b) and (d) and to individual imports and exports (or intended exports) for specifically non-nuclear purposes and involving quantities exceeding those identified in paragraph 37(b) and (d). For inventories the quantities may be approximate. The reporting of imports or exports of pre-safeguards nuclear material other than those for specifically non-nuclear purposes is as specified in paragraph 34(a) and 34(b) of INFCIRC/153. The reporting of nuclear material exempted for non-nuclear use (paragraph 36(b)) is also limited to locations (inventories) involving quantities of material exceeding those identified in paragraph 37. All nuclear material exempted pursuant to paragraph 37 of INFCIRC/153 and all planned location changes and further processing of nuclear material on which safeguards are terminated pursuant to paragraph 11 thereof should be reported, regardless of the amount involved.

Where measurements of quantities are not made, other estimates could be provided. This element does not include requirements for measurement, batch and source data, the taking of physical inventories, inventory change reporting or the closing of material balances. Moreover, the proposed activities during access to this material (paragraph 66) are far short of the current activities for safeguarding nuclear material. Hence, this element would not change the starting point of safeguards as set forth in INFCIRC/153.

The quantity reporting unit would be tonnes for material which has not yet reached the stage of the nuclear fuel cycle described in paragraph 34(c) of INFCIRC/153 and for nuclear material exempted for non-nuclear uses under paragraph 36(b) of INFCIRC/153. The reporting units for other material included in this element are as specified in paragraph 101 of INFCIRC/153. The exemption of uranium for shielding radioactive sources can be made under the provision of paragraph 36(b) for non-nuclear use, in which case the reporting called for here would be limited to available information. In all cases, when nuclear material exempted for non-nuclear uses is in its end-use form, there is no requirement to continue reporting on it.

The requested information, along with element 2.c.(vii), would provide a more complete picture of all of the State's nuclear material useable for nuclear purposes. It would also provide a basis for confirmation by the Agency of the consistency between the State's declared nuclear programme and its holdings of nuclear material. As indicated in paragraph 36 of GOV/2784, aspects of this element may be required under paragraph 81(c) of INFCIRC/153. However, the Secretariat has concluded that, without prejudice to the requirements of INFCIRC/153, the better approach is to include all of this element under complementary legal authority.

- (g) Information on the export and import of nuclear equipment and non-nuclear material specified in GOV/2629, as amended by the Board of Governors from time to time, and such other equipment and non-nuclear material as may be specified by the Board of Governors.

This is element 2.c.(ix) of the Expanded Declaration. This measure would provide the Agency with information about export license approvals (identity of equipment or material, destination and, if known, expected date) and, where available, about actual exports and imports (identity of equipment or material, destination, origin of import and date of export or import) of specified nuclear equipment and non-nuclear material especially designed or prepared for nuclear uses, and commonly used in the nuclear industry. This is an additional measure for increasing transparency, which would also increase confidence that such items were being used only for peaceful purposes. As indicated in paragraph 40 of GOV/2784, complementary legal authority is needed in order to make its provision obligatory rather than voluntary.

A number of States, including States without comprehensive safeguards agreements, are already providing this information on a voluntary basis. The Secretariat appreciates the benefits of even wider reporting and of legally binding undertakings by all States without comprehensive safeguards agreements, including nuclear-weapon States. The Secretariat would be prepared to develop proposals to that effect.

Experience in the analysis and use of this information may demonstrate the benefit of information on the export and import of other equipment and material that are not included in GOV/2629, as amended. This provision would leave open the possibility, at some later point in time, for the Secretariat to propose to the Board a limited number of such items whose reporting would be beneficial as well as practical and for the Board to include such items as it deems appropriate.

52. Information related to planned nuclear activities owned, funded or authorized by the State consists of:

- (a) Plans for the further development of the nuclear fuel cycle, including their planned locations when known, and
- (b) a description of planned nuclear R&D activities, including their planned locations when known.

These are elements 3.b and 3.c of the Expanded Declaration. The scope of the requested information for paragraph 52(a) is that specified in element 2.c.(i) of the Expanded Declaration; for paragraph 52(b), it is limited to those activities specified in paragraph 51(a) planned by the State (i.e., to be owned, funded or authorized by the State). Reporting details regarding new facilities are covered under the early reporting of design information as detailed in GOV/2554/Attachment 2/Rev.2 (element 3.a of the Expanded Declaration). The information requested here would be more general and relate to long-term plans for further development of the fuel cycle within a State and how that development is supported through current and planned activities. The Secretariat recognizes that this information could be of particular sensitivity to States and that its obligation to protect the information must be scrupulously met.

The information would be useful to the Agency in its own long-term planning and would provide the basis for increased assurance that the declared present nuclear programme and nuclear fuel cycle related R&D are generally consistent with the declared plans for future development of the fuel cycle. Any limitations on the scope of the information reported, including the planning horizon (e.g., 5 years, 10 years, etc.) should also be reported.

2. Environmental Sampling

53. The Secretariat intends to use environmental sampling techniques at locations, identified in Section B of this report ("Measures Involving Increased Physical Access"), to which access is granted under complementary legal authority. This would involve environmental sampling at nuclear-related locations and at other locations to which the Agency is granted access for the purpose of confirming the absence of nuclear activities at

these locations or, where there is such activity, to detect, identify and characterize it. It would also involve the collection of environmental samples at locations, other than nuclear and nuclear-related sites, to which the State is able to provide access, taking into account its constitutional obligations with regard to proprietary rights or searches and seizures, for the purpose of contributing to assurance of the absence of undeclared nuclear activities in these other areas within States. Except for possible wide-area sampling applications described in paragraph 54, the sampling at locations other than nuclear and nuclear-related sites would be for resolving an inconsistency or question.

54. The field trials of environmental sampling conducted over the past two years have involved the collection of high volume water samples, vegetation and soil samples and smears at various distances from targeted nuclear activities (e.g., 8 km from two types of enrichment facilities, 20 km from power reactors and 30 km from a reprocessing facility). Clear evidence of the existence of the power reactors and the reprocessing facility was seen as far away from the corresponding activity as samples were collected. Evidence of enrichment activities at a distance seems to depend upon the type of enrichment technology employed but more experience is needed to be definitive. The experience gained by the Agency in the use of environmental sampling as part of its programme of ongoing monitoring in Iraq has also demonstrated the significant value of such techniques in helping to assure the absence, or detecting the presence, of undeclared nuclear activities in wider areas of a State. Although further investigation of the practicality and cost effectiveness of such environmental sampling is planned, the already demonstrated value of that technique has prompted the Secretariat to provide for such a measure in the draft protocol. This would avoid the need at some later time to modify protocols which had already entered into force. Should, at some point in the future, the Secretariat become convinced that wide area environmental monitoring is a cost-effective safeguards measure, the Secretariat would report its conclusions to the Board of Governors prior to such implementation.

55. Sampling points at nuclear-related locations and at other locations which the Agency considers may be of relevance to safeguards would be selected to minimize intrusiveness, and the experience of the Agency indicates that the collection of such samples is, in fact, not intrusive. Arrangements will be made with the State regarding sampling programmes and locations, and the procedures will be such that the State, if it wishes, can obtain duplicate samples and check the results itself. The State will be informed of the Agency's findings and conclusions from its sampling activities in the State. As is the case for all safeguards results, the Agency would consult with the State regarding results on which the Agency had questions or concerns.

56. The Agency recognizes the potential sensitivity of the results of environmental sampling and will give special attention to meeting its obligation to protect such information. To allay any concerns that the technique might reveal sensitive non-nuclear-related information, the analyses organized by the Agency in its laboratories will be designed to

obtain data of safeguards relevance only. Moreover, sample identity is protected, and the results would be subject to the confidentiality and protection requirements of paragraph 5 of INFCIRC/153. In December 1995, the Agency convened a Consultants Meeting involving experts from Member States to review the sample distribution and results reporting protocols developed during the field trials. The consultants endorsed the protocols as being practical and as adequately protecting the anonymity of distributed samples and the confidentiality of reported results.

57. The environmental sampling programme initiated under existing authority should be well established by the end of 1996. Environmental sampling at sites covered by complementary authority would be integrated into this programme so that altogether, for planning purposes, an estimated 1,000 samples would be collected and analyzed annually by 1998. It is further estimated, for planning purposes, that one-half of these samples (500 per year), would be collected at sites under complementary authority. Efficient and effective analysis of environmental samples requires a sample analysis strategy for each site based on site features and sampling objectives. All samples collected will be subjected to a screening measurement using a low-level radiochemical measurement method, then, based on the screening measurement result and the sampling objective, a sample may be archived without further analysis at that time, submitted for an inexpensive bulk measurement or subjected to a more costly and detailed particle analysis. For efficiency reasons some samples may be composited and further analyzed as a single sample. The sample analysis strategy will continue to evolve as experience is gained with the suite of analytical possibilities available in the extended network of analytical laboratories. Decisions regarding the nature of analysis requested for each sample collected are based on objective criteria.

58. The incremental annual cost for this initial sampling programme under complementary authority is estimated to be approximately 2.6 million US dollars per year. This would include the collection of replicate samples by the Agency for the State should the State so desire. The cost impact on the State and operators for the collection of environmental samples would be negligible. Some additional effort on their part may be required to help resolve any inconsistencies.

B. MEASURES INVOLVING INCREASED PHYSICAL ACCESS^{4/}

59. Under current comprehensive safeguards agreements, the Agency has the right to select as strategic points for routine inspections all locations at nuclear facilities and LOFs where, under normal conditions, and when combined with the information from all strategic points taken together, the information necessary and sufficient for the implementation of

^{4/} This increased physical access is not intended to address, and in no way limits, the access rights of the Agency under the provisions of INFCIRC/153.

safeguards measures is obtained and verified. The IAEA may also conduct inspection activities at locations beyond strategic points at nuclear facilities and LOFs during visits for design information verification and during ad hoc inspections in accordance with the access provisions in comprehensive safeguards agreements for such visits and inspections. The Agency may also require access to information or locations beyond that specified above under conditions for making special inspections as described in paragraphs 73 and 77 of INFCIRC/153.

60. Increased physical access for Agency inspectors under complementary legal authority in States with comprehensive safeguards agreements is a key element of a strengthened, more efficient safeguards system. Increased access is being sought in connection with increased information to be supplied in the Expanded Declaration and with implementation of new technical measures. As has been stated, there is no intention of proceeding with a systematic verification of the additional information to be provided through an Expanded Declaration, however, it is essential that the Agency have access rights so that the information is subject to confirmation. To the extent possible, the need to “manage” access to certain identified areas due to safety, proprietary or other concerns should be identified in the Expanded Declaration, or at any rate as soon as possible. Any need for access to be managed must be identified by the State, and the State’s proposal for how access is to be managed would need to be evaluated by the Agency in light of specific Agency objectives. These arrangements should not preclude the Agency from conducting activities necessary to determine the absence of undeclared nuclear material and activities at the location or otherwise resolve any inconsistency or question. The following paragraphs provide details of and the rationale for the increased access. The complementary access measures described in this chapter provide a mechanism for the early resolution of uncertainties which might otherwise necessitate reliance on special inspections.

61. Increased physical access, together with increased information, is intended to provide the Agency with a fuller understanding of the State’s nuclear programme. It is expected to contribute significantly to the assurance provided by Agency safeguards of the absence of undeclared nuclear activities at locations identified in the Expanded Declaration and at other locations which are accessed by the Agency. It is essential that access be sufficient to assure that undeclared nuclear material and activities are not co-located with declared nuclear facilities and LOFs in order to utilize the infrastructure of manpower, technology, equipment and services that is in place to support declared operations. This access, together with access to other locations which may be sought in connection with the resolution of inconsistencies or questions or to implement a new technical measure, are detailed below:

- (a) access to any location on a site containing a nuclear facility or LOF, including closed-down facilities and LOFs; and access to decommissioned facilities and LOFs (per element 2.a.(i) of the Expanded Declaration) to the extent necessary to verify their decommissioned status;

- (b) access to locations identified under elements 2.c.(vii) and 2.c.(viii) of the Expanded Declaration. This consists of locations of uranium and thorium mines (regardless of their declared operational status), locations identified in the Expanded Declaration as containing nuclear material that is either not covered by paragraph 34(c) of INFCIRC/153 or has been exempted for non-nuclear use in accordance with paragraph 36(b) of INFCIRC/153, nuclear material exempted pursuant to paragraph 37 of INFCIRC/153), and waste containing nuclear material on which safeguards has been terminated pursuant to paragraph 11 of INFCIRC/153;
- (c) upon request by the Agency and taking into account any constitutional obligations the State may have with regard to proprietary rights or searches and seizures, access to locations identified under elements 2.c.(iii) and 2.c.(vi) of the Expanded Declaration. This consists of locations identified where particular types of nuclear R&D that is owned, funded or authorized by, or otherwise coming to the knowledge of, the State are carried out and locations where specified equipment and non-nuclear material directly related to the operation of nuclear facilities, LOFs or nuclear R&D activities are manufactured, assembled or maintained. Should the State not be able to provide the requested access then it would undertake to work with the Agency to satisfy its requirements in some other way;
- (d) upon request by the Agency and taking into account any constitutional obligations the State may have with regard to proprietary rights or searches and seizures, access to locations in the State other than those specified in (a)-(c) above for the purpose of the collection of environmental samples; and, lastly,
- (e) the State may choose to offer access to the Agency in addition to that described in (a)-(d) above, to any location in the State which the Agency considers might be of safeguards relevance.

62. The access identified in paragraph 61(a) to sites of nuclear facilities and LOFs is for the purpose of assuring the absence of undeclared nuclear material and activities on the sites of operating and closed-down nuclear facilities and LOFs. Access to sites with operating or closed-down nuclear facilities or LOFs would entail unrestricted access to any location on those sites, with allowances for managed access to protect sensitive information or for safety reasons. To the extent possible, the Agency should be informed in the Expanded Declaration of the areas on a site where access restrictions may apply. Comparable needs for restrictions could also arise for the access identified in paragraphs 61(b)-(e). Access to decommissioned facilities and LOFs is that necessary to confirm the declared decommissioned status. In many cases this would be a one-time activity depending on the type of facility and how much

of the remaining infrastructure could be used in connection with a nuclear activity. The right to verify that a facility or LOF has been decommissioned exists under current comprehensive safeguards agreements. However, there may be circumstances under which the Agency would need to revisit such a facility or LOF, and complementary authority is being sought to provide for this eventuality.

63. For sites of operating facilities and LOFs such access normally would be sought in conjunction with ad hoc or routine inspections or design information verification visits. In such cases the advance notice for the inspection or visit to the facility or LOF would be in accordance with the provisions of the existing safeguards agreement, including the provision for unannounced inspections. No additional advance notice would be provided with respect to the complementary access to other locations on the site. That is to say, upon arrival at the site for the inspection or visit the Agency inspector would inform the State of the locations for the increased physical access under complementary legal authority and of the associated activities which would be carried out. Complementary access would only be sought during regular working hours unless otherwise agreed to by the State. There are a large number of sites with nuclear facilities (e.g., LWRs) where it is anticipated that most interim inspections will be carried out as unannounced routine inspection which provides the basis for more efficient and effective safeguards on declared nuclear material. The savings gained through this mechanism would be lost if there was a requirement for advance notification when complementary access is to be sought. At least 24 hours prior notice would be provided by the Agency for access to such locations not carried out in conjunction with a design information verification visit or an ad hoc or routine inspection.

64. The activities at sites of closed-down, and at decommissioned nuclear facilities and LOFs would be those defined in the corresponding design information verification procedures. The activities that will be carried out at locations on sites where access is provided under complementary authority would be visual observation, collection of environmental samples and the use of other objective methods which have been demonstrated to be technically feasible. The frequency with which these activities would be carried out depends upon the nature of a particular site, but most of the time this work would be carried out in conjunction with the presence of an inspector in the State for ad hoc or routine inspections or design information verification.

65. As indicated earlier, the Agency expects that the definition of the geographical area constituting the site of a nuclear facility or LOF is straightforward. Similarly, through the field trial experiences, the Agency expects that provisions for complementary access to any location on these sites are also straightforward. However, there could be a few instances where complementary access may be complicated by a variety of factors such as the nature of existing access for the SSAC and the presence of private owners engaged in activities not

involving nuclear material at locations on the site. For these sites, practical difficulties with access arrangements may have to be dealt with on a site-specific basis through Subsidiary Arrangements.

66. Access to locations identified in paragraph 61(b) with mines or certain other nuclear material is necessary for ensuring access to all of the State's nuclear material useable for nuclear purposes and for confirming the consistency between the State's declared nuclear programme and its holdings of and capacity to produce nuclear material. Access would be sought to resolve an inconsistency or question as well as to confirm the general quantities, enrichment levels and utilization of the material as described in the Expanded Declaration and to assure the absence of undeclared nuclear activities in connection with such material. The activities could include item counting, NDA measurements or sampling to confirm enrichment, records examination as regards the material itself when substantial quantities have been consumed or shipped on to other users, and visual observation, collection of environmental samples and possibly other objective technical measures to help assure the absence of undeclared nuclear activities involving such material.

67. Elements 2.c.(vii) and 2.c.(viii) of the Expanded Declaration do not contain any requirement that nuclear material accountancy (e.g., periodic physical inventory takings or closing of a material balance), as set forth in INFCIRC/153, be applied to the material in these categories. Moreover, the activities involving this material in the draft protocol are far short of the measures for safeguarding nuclear material under existing legal authority. Hence, these information elements and the associated access do not constitute a change in the starting point of safeguards. In the absence of the need for access to resolve inconsistencies or questions, use of such access would be infrequent and the likelihood of a location being selected would normally be low during any given year. Access to these locations under complementary authority would normally be sought when an inspector(s) is in the State for an ad hoc or routine inspection or a design information verification visit. In any case, at least 24-hour notification would be provided to the State and access would be sought only during regular working hours unless otherwise agreed to by the State.

68. Access to locations identified in paragraph 61(c) with particular types of nuclear R&D or where specified equipment and non-nuclear material directly related to the operation of the fuel cycle are manufactured, assembled or maintained (elements 2.c.(iii) and 2.c.(vi) of the Expanded Declaration) is to assure that they support the declared programme and only the declared programme and would be sought in connection with a need to resolve an inconsistency or a question which has arisen. In the event of an inconsistency or question, the process would be similar to the well established process for resolving discrepancies and anomalies arising in safeguarding declared nuclear material, including consultations, which in most cases may resolve the matter. As has been said previously, the Agency has no intention to proceed with systematic or mechanistic verification of the additional information supplied under the Expanded Declaration. However, in any cases of inconsistencies or when

questions arise, the Agency must have the opportunity to confirm the explanation or other response from the State. It is in the interest of both the Agency and the State to provide means to deal with plain mistakes and errors (the most common origin of inconsistencies and questions) and to dispel unfounded suspicions.

69. The frequency of such requests is not known, but they should not arise very often. The activities to be carried out would depend upon the circumstances, but they would likely include visual observation, collection of environmental samples, records examination and the use of other objective methods which have been demonstrated to be technically feasible. At least 24 hours notification would be provided to the State and access would be sought only during regular working hours unless otherwise agreed to by the State. Should the State not be able to provide the requested access because of constitutional obligations it may have with regard to proprietary rights or searches and seizures, the State would undertake to satisfy the Agency's concerns in some other way.

70. As described in paragraph 61(d), access to locations other than those described in paragraph 61(a)-(c) would be for the collection of environmental samples. In the absence of routine implementation of environmental sampling for wide-area application (which is not being implemented now), such access would be requested to resolve an inconsistency or question (the arrangements for collection of samples are described in Section A2). As before, at least 24-hour notification would be provided to the State and access would only be sought during regular working hours unless otherwise agreed to by the State.

71. As described in paragraph 61(e), States may wish to offer the Agency access in addition to that described in paragraph 61(a)-(d). Such an offer could be made at the time of signature of the protocol, at any time thereafter or on a case-by-case basis. The State may find it in its interest to offer this access, possibly with arrangements for managed access to protect commercial, proprietary or national security interests, in order to dispel any unfounded allegations and to assist in resolving any inconsistencies or questions regarding locations which the Agency considers may be of safeguards relevance.

**C. MEASURES FOR OPTIMIZING THE USE OF THE PRESENT SYSTEM:
INCREASED CO-OPERATION WITH STATES AND SSACs**

72. Most of the measures for increased co-operation between the Agency and States and SSACs are addressed in Part 1 of GOV/2807 for implementation under existing legal authority. Proposals for additional co-operation under complementary legal authority include the adoption of simplified inspector designation procedures and the use of systems (including satellite systems) that are not available in the State, for independent direct communications between the field and Headquarters.

73. The benefits of simplified inspector designation procedures have been discussed by the Board of Governors on numerous occasions and apply to all kinds of safeguards agreements. Direct communications between Headquarters and inspectors and installations in the field would improve the effectiveness and efficiency of safeguards under all types of safeguards agreements through the more timely exchange of information, data and instructions. Readily available public communications systems will be used when they meet timeliness, authentication and encryption requirements.

D. RECOMMENDED ACTION

74. The measures contained in this document are the culmination of the Secretariat's and the Policy Making Organs' efforts to strengthen the Agency's safeguards system, in particular by increasing the Agency's capability to detect possible undeclared nuclear material through the detection of undeclared nuclear activities both at declared locations and country-wide.

75. The measures already adopted by the Board clarifying the Agency's authority under comprehensive safeguards agreements were important parts of these efforts. Particularly noteworthy were those relevant to the Agency's authority to verify declared, and to detect possible undeclared nuclear material; to receive more information relevant to its safeguards mandate; to make use of new technology; and to resort to special inspections for access to additional information and locations.

76. Together with the measures already adopted, those proposed in this document are important as they will complete the envisaged package. Together, these measures will provide the Agency with a more complete picture of the State's nuclear programme, would secure Agency access to corroborate this information should the need arise, and would enable the Agency to rely on the increased assurances provided by the new measures to manage the system in a more cost-efficient manner by foregoing some of the routine verification activities currently carried out.

77. The measures already adopted, along with these proposed measures, constitute a package the full implementation of which will go a long way towards enhancing the effectiveness of the system and rendering it more efficient. The package seeks to strike a proper balance between the Agency's need for information and access and the State's need to protect its legitimate interests and to respect its constitutional obligations. It has been arrived at through an intensive process of consultation with Member States and the conduct of field trials over the last two years. It is, however, for Member States to translate these measures into new rights and obligations through finalization of the draft protocol.

78. In the light of the above, it is recommended that the Board, through an appropriate mechanism, finalize the required legal instrument taking as a basis the draft protocol proposed by the Secretariat and the explanation of the measures contained in this document.

ANNEX I

A SUMMARY OF THE LEGAL EVALUATION OF MEASURES PROPOSED FOR STRENGTHENED AND MORE COST-EFFECTIVE SAFEGUARDS

(With references to INFCIRC/153 provisions for existing legal authority and to GOV/2784 legal analyses)

Category of Measure		Measure (numbered in accordance with the Expanded Declaration in Annex II)	Measures to be implemented under existing legal authority	Measures proposed for implementation under complementary legal authority (with relevant paragraphs in this document)
BROADER ACCESS TO INFORMATION	Expanded Declaration	1. Information on the SSAC	INFCIRC/153 paras. 7, 31, 32, 81(b); GOV/2784 para. 34	
		2.a. Information on past nuclear activities (decommissioned nuclear facilities and existing historical records on production of nuclear material) relevant to assessing the State's declarations of present nuclear activities, including the completeness and correctness of its initial report	INFCIRC/153 paras. 3, 62; GOV/2784 para. 35	
		2.b. Information presently routinely provided: (i) design information and modifications thereto, including closed-down but not decommissioned facilities; (ii) accounting and operating records; (iii) accounting and special reports; and (iv) operational programmes	INFCIRC/153 paras. 42-50, 51-58, 59-65, 67-69, 64(b); GOV/2784 para. 34	
		2.c.(i). Description of the nuclear fuel cycle and other nuclear activities involving nuclear material	INFCIRC/153 para. 81(c); GOV/2784 para. 36	

Category of Measure	Measure (numbered in accordance with the Expanded Declaration in Annex II)	Measures to be implemented under existing legal authority	Measures proposed for implementation under complementary legal authority (with relevant paragraphs in this document)
	2.c.(ii). Description, status and location of nuclear fuel cycle-related R&D (hereinafter referred to as nuclear R&D) activities involving nuclear material at nuclear facilities and other locations containing nuclear material (LOFs)	INFCIRC/153 paras. 42-46, 49; GOV/2784 para. 37	
	2.c.(iii). Description, status and location of nuclear R&D activities owned, funded or authorized by the State, not involving nuclear material, wherever located, and related to specified parts of the fuel cycle and, additionally, all such activities in the State specifically related to enrichment, reprocessing of nuclear fuel and treatment of waste containing nuclear material		(para. 51(a)) GOV/2784 para. 37
	2.c.(iv). Information, as may be agreed with the State, on specified operational activities additional to that required under INFCIRC/153 (see 2.b.(iv) above)		(para. 51(b)) GOV/2784 para. 38
	2.c.(v). Description, contents and use of each building on sites of nuclear facilities or LOFs; upon specific Agency request and based on every reasonable effort by the State, information on activities at locations identified by the Agency outside such site.	In limited cases, depending on the configuration of the facility or LOF INFCIRC/153 paras. 42-46, 49; GOV/2784 para. 39	(para. 51(c)) GOV/2784 para. 39

Category of Measure	Measure (numbered in accordance with the Expanded Declaration in Annex II)	Measures to be implemented under existing legal authority	Measures proposed for implementation under complementary legal authority (with relevant paragraphs in this document)	
		2.c.(vi). Identity, location, description, status, present annual production and approximate annual production capacity for the manufacture, assembly and maintenance of specified items directly related to the operation of nuclear facilities, LOFs or nuclear R&D activities	(para. 51(d)) GOV/2784 para. 39	
		2.c.(vii). Location, operational status, present annual production and approximate annual production capacity of uranium and thorium mines	(para. 51(e)) GOV/2784 para. 39	
		2.c.(viii). Information on other nuclear material and uranium and thorium containing materials, including pre-INFCIRC/153 para. 34(c) material, some exempted material and some material on which safeguards are terminated	Partially covered by INFCIRC/153 para. 81(c); GOV/2784 para. 36	(para. 51(f)) GOV/2784 para. 39
		2.c.(ix). Import and export information on specified equipment and non-nuclear material specified in GOV/2629 and on such other equipment and non-nuclear material as may be specified by the Board		(para. 51(g)) GOV/2784 para. 40
		3.a. Early provision of design information in accordance with GOV/2554/Attach. 2/ Rev.2	INFCIRC/153 paras. 42, 45, 49; GOV/2784 para. 41	
		3.b. Planned activities owned, funded or authorized by the State for the further development of the nuclear fuel cycle		(para. 52(a)) GOV/2784 para. 41
		3.c. Description of planned nuclear R&D activities owned, funded or authorized by, or otherwise coming to the knowledge of, the State		(para. 52(b)) GOV/2784 para. 41

Category of Measure		Measure (numbered in accordance with the Expanded Declaration in Annex II)	Measures to be implemented under existing legal authority	Measures proposed for implementation under complementary legal authority (with relevant paragraphs in this document)
	Environmental Sampling	For ad hoc inspections at locations where the initial report or inspections carried out in connection with it indicate that nuclear material is present	INFCIRC/153 paras. 6, 74(d), 74(e), 76(a); GOV/2784 paras. 51-54	
		For routine inspections at strategic points	INFCIRC/153 paras. 6, 74(d), 74(e), 76(c); GOV/2784 paras. 51-54	
		For special inspections at the locations where these take place	INFCIRC/153 paras. 6, 74(d), 74(e), 77; GOV/2784 paras. 51-54	
		For design information verification at any location to which the Agency has access for design information verification	INFCIRC/153 paras. 6, 47, 48; GOV/2784 para. 55	
		During access under complementary legal authority to places and locations identified below under Complementary Access		(para. 53-58) GOV/2784 para. 54
	Improved Analysis of Information	Improvements in the Agency's information analysis methods	INFCIRC/153 paras. 90; GOV/2784 para. 63	
INCREASED PHYSICAL ACCESS	Complementary Access ^{1/}	Access to any place (beyond strategic points) on a site containing a nuclear facility or LOF, including sites with closed-down facilities and LOFs; access to decommissioned facilities and LOFs	INFCIRC/153 paras. 48, 76(a); GOV/2784 paras. 75-76	(paras. 61(a), 62-65) GOV/2784 paras. 74-75
		Access to other locations identified in the Expanded Declaration as containing other nuclear material or material containing U or Th (2.c.(vii) and 2.c.(viii))		(paras. 61(b), 66-67)

Category of Measure	Measure (numbered in accordance with the Expanded Declaration in Annex II)	Measures to be implemented under existing legal authority	Measures proposed for implementation under complementary legal authority (with relevant paragraphs in this document)	
		Access, upon Agency request and taking into account any constitutional obligations of the State regarding proprietary rights or searches and seizures, to locations identified in the Expanded Declaration as containing nuclear R&D (2.c.(iii)) and locations involving specified items directly related to the operation of nuclear facilities, LOFs or nuclear R&D (2.c.(vi))		(paras. 61(c), 68-69) GOV/2784 para. 77
		Access, upon Agency request and taking into account any constitutional obligations of the State regarding proprietary rights or searches and seizures, to locations in addition to the above for environmental sampling		(paras. 61(d), 70)
		Access, as the State may choose to offer, in addition to that described above, to any location in the State which the Agency considers may be of safeguards relevance (see paras. 61(e), 71 of this document)		
	No-notice Access	Unannounced (no-notice) routine inspections at strategic points within the sites of nuclear facilities and LOFs	INFCIRC/153 para. 84; GOV/2784 para. 86	
		No-notice access to any other place on the site of a nuclear facility or LOF when carried out during a DIV visit or inspection of the facility or LOF		(para. 63) GOV/2784 para 86

Category of Measure	Measure (numbered in accordance with the Expanded Declaration in Annex II)	Measures to be implemented under existing legal authority	Measures proposed for implementation under complementary legal authority (with relevant paragraphs in this document)	
OPTIMAL USE OF THE PRESENT SYSTEM	Safeguards Technology Advances	Use of unattended equipment	INFCIRC/153 paras. 6, 74(e), 81(e)	
		Remote transmission of inspection data	INFCIRC/153 paras. 6, 74(e), 81(e)	
		Remote monitoring of safeguards equipment	INFCIRC/153 paras. 6, 74(e), 81(e)	
	Increased Co-operation with States and SSACs	The SSAC carries out activities that enable the Agency to conduct inspection activities	INFCIRC/153 paras.3, 7, 31, 81(b)	
		The Agency and the SSAC may carry out selected inspection activities jointly	INFCIRC/153 paras.3, 31	
		The Agency and the SSAC may carry out selected support activities jointly	INFCIRC/153 paras.3, 31	
		Use of simplified procedure for designation of inspectors		(paras. 72-73) GOV/2784 para. 102 GOV/2807 para. 54
		Multiple-entry visa, long-term visa or visaless entry for inspectors on inspection	Necessary for unannounced routine inspections INFCIRC/153 paras.84, 86 GOV/2784 para. 86	
		Use of systems for independent direct communication (including satellite systems) between the field and Headquarters	In States where such systems are available INFCIRC/153 paras. 3, 88	In States where such systems are not available (paras. 72-73) GOV/2784 para. 102 GOV/2807 para. 54
	Safeguards Parameters	Significant quantities of nuclear material	INFCIRC/153 para. 28	
		Conversion/detection times	INFCIRC/153 para. 28	

Category of Measure	Measure (numbered in accordance with the Expanded Declaration in Annex II)	Measures to be implemented under existing legal authority	Measures proposed for implementation under complementary legal authority (with relevant paragraphs in this document)
	Starting point of safeguards	INFCIRC/153 para. 34(c)	

^{1/} These proposals are not intended to affect the Agency's right to implement special inspections.

ANNEX II

Annotated Outline of Proposed Expanded Declaration

(A) The two central components of a strengthened safeguards system are increased access to information and increased physical access. The vehicle whereby States party to comprehensive safeguards agreements will provide increased information on their nuclear activities is the Expanded Declaration.^{1/} This Annotated Outline of the Expanded Declaration serves as guidance for States on the information to be included in their Expanded Declarations.

(B) In order to show the scope of information to be provided by States, the Annotated Outline of the Expanded Declaration includes not only the information to be submitted under the complementary legal authority granted by the additional protocol but also the information to be provided under the existing legal authority of comprehensive safeguards agreements, including the measures in GOV/2807 approved by the Board of Governors on 15 June 1995. The items of information to be submitted under complementary legal authority are indicated in the left margin as "Part 2". The information to be submitted under existing legal authority is indicated as "Part 1". These later entries are included only for the information of States and do not in any way define or alter the information requirements of comprehensive safeguards agreements.

(C) The Expanded Declaration includes three categories of information: information on the State's System of Accounting and Control (SSAC), on present nuclear activities of the State and on planned nuclear activities of the State. All of the information concerning SSACs and most of the information related to safeguarded facilities and other locations containing nuclear material (LOFs) are Part 1 measures and are being requested under existing legal authority. The remaining information in the Expanded Declaration is for provision under complementary legal authority and involves information related to present and planned nuclear activities.

(D) The requested information will provide the Agency with a fuller and clearer understanding of all nuclear activities in a State and will serve three important purposes. First, because of its scope and comprehensiveness, the information in the Expanded Declaration will contribute to confidence that no undeclared nuclear activities are being concealed within the declared programme or rely on or make use of elements of the declared programme. Second, by committing itself to a declaration about its nuclear and nuclear-related activities, the State will provide a considerably improved data base on its nuclear activities against which information obtained from other sources (e.g., procurement activities or environmental sampling) can be compared for consistency and follow-up. The more accurate and comprehensive the information, the less frequent inconsistencies and questions

^{1/} This broader access to information is not intended to address and in no way limits the Agency's rights to information under the provisions of INFCIRC/153.

will arise. Third, the requested information will provide a basis for the efficient planning and conduct of Agency activities relevant to providing assurance about the absence of undeclared nuclear activities at declared locations as well as to safeguarding declared nuclear material.

(E) The approach taken in developing the Expanded Declaration was to be comprehensive so that no relevant information is out of bounds while ensuring that States are not burdened by excessive or irrelevant requests. Further, States are not asked to provide information which may not be within their reach. For such situations, the requested information is limited by an expression such as “where available” and, to enable the Agency to properly assess the information, calls for any limitations known to the State on its completeness to be identified.

(F) The information to be provided in Expanded Declarations is of greater scope than currently provided to the Agency, and some elements of the information could be considered by the State to be commercially or technically sensitive. The Agency will give special attention to the protection of all information contained in Expanded Declarations. The obligation of the Agency to protect information obtained in the course of safeguards in accordance with paragraph 5 of INFCIRC/153 will apply to all information acquired under complementary legal authority. The procedures and practices of the Agency for meeting this obligation will continue to be subject to review to ensure their appropriateness and effectiveness.

(G) The information called for in the Expanded Declaration is intended to provide increased transparency and a data base sufficient for achieving credible assurance of the absence of undeclared nuclear activities. This information is far from including all details of a State’s nuclear activities, but it represents a reasonable balance between the benefits of additional information and the practicalities and costs of regularly providing and using more information. The additional information that will come from the Agency’s safeguards activities, including evaluation, and from the clarifications and explanations provided by States in response to specific Agency requests will be an essential contribution to transparency.

(H) This Annotated Outline states the specific elements of information to be provided to the Agency by States in their Expanded Declarations together with explanations, definitions and benefits to the Agency of the information. The explanations, definitions and benefits are presented in *italics*. Terms defined in comprehensive safeguards agreements, unless otherwise noted, have the same meaning here as in the agreements and are not further defined here.

(I) Many of the information elements are temporal in nature, and almost all are subject to change. Accordingly, the updating of information on an annual basis is foreseen. Some elements, such as 2.c.(iv) on additional operational information, would be updated more often in accordance with agreed arrangements with the State.

(J) The Agency understands that at some locations identified under information elements 2.c.(iii), (v), (vi), and (viii) a State may wish arrangements for managed Agency access due to safety, proprietary or other concerns. Areas at such locations where the State foresees a need for managed access should be identified in the Expanded Declaration to the extent practical. The specific information and areas to be protected through managed access would

be provided by the State when the Agency gives notice of the need to access such a location. The State's proposal for how access is to be managed would be evaluated by the Agency in light of specific Agency objectives. The arrangements should not preclude the Agency from conducting the activities necessary to determine the absence of undeclared nuclear activities at the location and otherwise resolve any inconsistency or question.

(K) The information in Expanded Declarations will be processed and evaluated by the Agency together with all other information available to the Agency. This may result in the identification of inconsistencies in the information and in questions regarding the information. In such an event, the process would be similar to the well established process for resolving discrepancies and anomalies arising in safeguarding declared nuclear material, including consultations. As is often the case for discrepancies and anomalies arising from safeguards on declared nuclear material, the consultative process may resolve the matter. However, when inconsistencies or questions arise, the Agency must have the opportunity to confirm the explanation or other response of the State. Access for this and other purposes is provided for in the protocol, but systematic verification of the information contained in Expanded Declarations is not.

1. Information on the State or regional system of accounting and control (hereinafter referred to as the SSAC):

Part 1

- a. A completed SSAC questionnaire concerning administrative, legal and technical aspects of the SSAC.

The questionnaire seeks broad information regarding the organization, authority and technical capabilities of the SSAC. This information is a necessary basis for increased co-operation with SSAC's, will enable the Agency to make full use of SSAC's and take account of their technical effectiveness and will serve as a basis for consultations with individual States with a view to increasing co-operation.

Increased cooperation with SSACs can lead to more efficient safeguards on declared material for both the SSAC and the Agency. Greater transparency regarding the activities of the SSAC is necessary to understand and take advantage fully of opportunities for increased co-operation.

Part 1

- b. The scope and timing of SSAC inspections and related activities, relevant to Agency safeguards, on a continuing basis.

Information on SSAC inspections and such related activities as preparation of surveillance equipment for joint use and review of surveillance records is needed by the Agency sufficiently in advance for optimal scheduling of Agency inspections and will need to be updated whenever there are changes or additions to the SSAC schedule. The requested information will be used to make full use of SSACs and to avoid unnecessary duplication of the State's accounting and control activities, thereby improving efficiency.

2. Present nuclear activities:

- a. Information on past nuclear activities relevant to assessing the State's declarations of present nuclear activities, including the completeness and correctness of its initial report on nuclear material:

Part 1

- (i) Information on decommissioned nuclear facilities, and on other locations previously containing nuclear material with or which had hot cells or where activities related to conversion, enrichment, reprocessing or fuel fabrication took place, covering a description, the purpose and scope of operations prior to decommissioning and the current status and use.

A decommissioned nuclear facility or previous LOF is one at which residual structures and equipment essential for its operation have been removed or rendered inoperable so that it is not used to store and can no longer be used to handle, process or utilize nuclear material. The request for information on

decommissioned LOFs is limited to locations with (or which had) hot cells or where activities related to conversion, enrichment, reprocessing or fuel fabrication were located. In order to be classified as decommissioned, the site of the facility or previous LOF does not have to be returned to a pristine condition. Facilities and previous LOFs which have had all nuclear material removed and been closed down but not decommissioned are reported under element 2.b.(i).

The requested information will contribute to an understanding of the current nuclear programme of the State and to the planning and interpretation of environmental sampling.

Part 1

- (ii) Access, on request, to existing historical accounting and operating records predating the entry into force of the comprehensive safeguards agreement.

Access to existing historical records will be requested when the Secretariat has concluded that they are needed in connection with verification of the completeness and correctness of a State's declarations concerning its present activities, particularly in the context of an initial report.

Experience from the environmental sampling field trials has demonstrated that access to historical operating records provided the basis for the resolution of inconsistencies between certain environmental signatures and the declaration regarding current activities.

- b. Information presently routinely provided:

Part 1

- (i) Design information on nuclear facilities and modifications thereto and information on other locations containing nuclear material (LOFs) and changes thereto, and information on facilities and LOFs which have been closed-down but not yet decommissioned.

The purpose of this requirement is to ensure that the Agency receives a completed Design Information Questionnaire on every nuclear facility and the required information on every LOF, regardless of its operational status, in a State.

The provision of up-to-date and complete design information on nuclear facilities and required information on LOFs is necessary to ensure that the safeguards applied to them continue to be appropriate. The reporting to the Agency of significant modifications to facilities and LOFs is an integral part of up-to-date and complete reporting of design information. The verification of design information and modifications contributes to assurance that no undeclared activities are taking place at the facilities and LOFs.

Under comprehensive safeguards agreements, the Agency's authority to verify design information is a continuing right which does not expire when a facility goes into operation or with the closing-down of a facility. Visits by Agency inspectors to verify that facilities which have been closed down and from which any nuclear material has been removed, but which have not yet been decommissioned, remain in their closed-down condition are part of design verification and provide assurance that such facilities are not re-activated and used for undeclared activities.

Part 1

- (ii) Access to accounting and operating records at nuclear facilities and LOFs.

This requirement together with element 2.b.(iii) provides a system of records and reports showing, for each material balance area, the inventory of nuclear material and the changes in that inventory including receipts into and transfers out of the material balance area and is the basis on which material accountancy is established. The examination of records for correctness and consistency and the comparison of records and reports are important components of inspectors' activities during inspections.

Part 1

- (iii) Accounting and special reports.

This element applies to all accounting and special reports covered by existing comprehensive safeguards agreements (including those required under paragraph 68 of INFCIRC/153). It includes the reporting of nuclear material in peaceful nuclear activities which is located on the territory of, and known to, the State although the nuclear material in question may not be subject to its jurisdiction or control.

Part 1

- (iv) Operational programmes.

The provision of the anticipated operational programmes for facilities and LOFs is required by paragraph 64(b) of INFCIRC/153. This information is of particular value for the planning of inspections for the present safeguards system and in combination with additional operational information (as foreseen by element 2.c.(iv)) provides an improved basis for performing no-notice inspections.

- c. Information not presently routinely provided:

Part 1

- (i) A description of the nuclear fuel cycle and of other nuclear activities involving nuclear material, with a list of the locations involved.

A nuclear fuel cycle is a system of nuclear installations commonly interconnected by flows of nuclear material. Such a system may include

uranium and thorium mines, ore processing plants, conversion plants, enrichment plants, fuel fabrication plants, reactors, spent fuel storages, reprocessing plants, associated storage, and treatment and storage of wastes containing nuclear material. A nuclear fuel cycle for purposes of the Expanded Declaration consists of any part or parts of such a system, including non-connected parts, and is not limited to facilities involved in nuclear power generation. It includes installations for which a decision to construct has been made, through construction and operation until the completion of decommissioning.

Information relevant to assessing the State's declarations of current nuclear activities, including the completeness and correctness of its initial report, includes a description of the State's nuclear fuel cycle and other nuclear activities involving nuclear material. This information is within the scope of paragraph 81(c) of INFCIRC/153.

A model description of a nuclear fuel cycle and other nuclear activities involving nuclear material has been prepared for distribution to States to assist them in providing the required information.

Part 1

- (ii) Information (description, status and location) on nuclear fuel cycle-related research and development (hereinafter referred to as nuclear R&D) activities involving nuclear material at nuclear facilities and LOFs.

Nuclear fuel cycle-related research and development (nuclear R&D) is taken to be R&D directly related to present, planned or other nuclear fuel cycle-related activities.

Part 2

- (iii) Information (description, status and location) on nuclear fuel cycle-related research and development (referred to herein as nuclear R&D) activities in the State not involving nuclear material which are owned, funded or authorized by the State and which are specifically related to conversion, fuel fabrication, power or research reactors, critical assemblies or accelerators; and, additionally, all nuclear R&D activities in the State not involving nuclear material which are specifically related to enrichment, reprocessing of nuclear fuel and treatment of waste containing nuclear material.

This is element 2.c. (iii) of the Expanded Declaration. It covers nuclear R&D activities of the State, which do not currently involve the presence or use of nuclear material, that are specifically related to any process development aspect of the named components of the nuclear fuel cycle and have the capability to generate nuclear material. For example, applied research related to process development aspects of enrichment (uranium or plutonium) or

reprocessing would be reported where it is clear that the intended end-use is a nuclear application (design features related to radiation protection or criticality control and components manufactured from materials resistant to UF_6 are examples of where it is clear that the intended end-use is a nuclear application). Theoretical or basic scientific research and R&D on medical or agricultural applications, health and environmental effects and improved maintenance are not included. The R&D to be reported involving accelerators is limited to accelerators capable of producing a continuous neutron source sufficient for annual production of gram quantities of fissile isotopes.

In addition, the State is asked to provide information on any nuclear R&D specifically related to enrichment, reprocessing of nuclear fuel and treatment of waste containing nuclear material that may exist even though it is not owned, funded or authorized by the State.

This element, in conjunction with element 2.c.(ii) in Part 1 (nuclear R&D at facilities and LOFs involving nuclear material), would cover all relevant nuclear R&D specifically related to enrichment, reprocessing of nuclear fuel and the treatment of waste containing nuclear material. This information, together with information on the State's activities to develop other parts of the nuclear fuel cycle, would increase transparency with respect to the direction of the nuclear programme within the State and provide an enhanced basis for confirming the overall consistency of the State's declared nuclear fuel cycle development programme, nuclear-related activities and nuclear exports and imports.

Part 2

- (iv) Information, which is additional to that required under current comprehensive safeguards agreements, as may be identified by the Agency on the basis of an expected gain in effectiveness or efficiency and, following consultations, agreed to by the State, on specific operational activities at nuclear facilities and LOFs.

Information, not presently routinely provided under element 2.b.(iv), on specific operational activities at nuclear facilities and LOFs additional to that required under paragraph 64(b) of INFCIRC/153 would be provided, subject to agreement by the State. Depending on the nature of a facility or LOF, it may include, by way of example, more frequent and earlier information on nuclear material transfers and inventories, empty casks transfers, crane movement records, reactor fuel production, isotope production programmes and maintenance activities. Each such additional items of information may be identified by the Agency on the basis of expected gains in effectiveness or efficiency and included in the State's Expanded Declaration for specific circumstances following consultations with and agreement by the concerned State.

Such information, when provided in advance, on planned spent fuel cask loading, nuclear material receipts and reactor fuel production, for example, could be used, in conjunction with unannounced routine inspections to increase the inspection coverage of nuclear material and safeguards-relevant operations.

These arrangements could be mutually beneficial in reducing overall inspection effort and corresponding effort by operators.

Part 2

- (v) Information (description, contents and use) on each of the buildings on the sites on which are located nuclear facilities or LOFs, including maps of sites.

The terms site, site perimeter and site layout are used in the Agency's Design Information Questionnaire (DIQ) and have the same meanings here as in the DIQ. They refer to the spatial location of a structure or structures that are part of, or support part of, the State's nuclear fuel cycle activities. The site layout, i.e., a site plan showing in sufficient detail the location, premises and perimeter of the facility, buildings, railways, roads, rivers, etc., and the geographic location for nuclear facilities are included in the information presently routinely provided and defined by the State when the Agency DIQ is prepared. For a LOF these terms have analogous meanings for its geographic location. The site must include all installations co-located with a nuclear facility(ies) or LOF(s) associated with the provision or use of services, such as hot cells, waste and decontamination facilities, training centers, electrical substations, water treatment, shielded cask storage, marshalling yards, mechanical workshops, general stores and buildings associated with the equipment and non-nuclear material identified in element 2.c.(vi) of the Expanded Declaration.

In most cases this is straightforward, and the site is normally the area defined by an external perimeter fence. As a rule, it should bear a close relationship to that area, taking into account terrain features and man-made boundaries. It should normally be, or run close to, the surrounding security barrier if one exists. The size and complexity of sites will vary considerably. Some will be quite large and include more than one nuclear facility together with a full complement of support and related services. Other sites may consist of only a single building, or even a single room in a building, and have no co-located services.

A primary objective of strengthened safeguards is to assure that undeclared nuclear material and activities are not co-located with nuclear facilities and LOFs in order to utilize the infrastructure of manpower, technology, equipment and services that is in place to support declared operations. That is the reason for this element of the Expanded Declaration and the associated access provisions. The Agency would consult with the State should the Agency have information that suggests that installations outside of the site, as defined by the

State, may be engaged in activities that are functionally related to the nuclear activities or the associated infrastructure on the site. In such cases the Agency would request the identity and a description of activities outside of the declared site relevant to resolution of the matter.

The DIQ provides for the required information on all buildings and locations where nuclear material is or is expected to be. The information requested here pertains to the other buildings on the site. During visits for design information verification and inspections, the Agency may confirm the nature of other buildings shown on the site layout, their declared use and the absence of undeclared nuclear and nuclear-related activities there.

In some cases, depending on the configuration of the nuclear facility or LOF, some information under this element can be required under existing authority, for example, for the purpose of ad hoc inspections where the presence of nuclear material has been indicated. However, without prejudice to existing Agency authority, all of this element is included under complementary legal authority.

Part 2

- (vi) The identity, location, description, status, present annual production and approximate annual production capacity of the manufacture, assembly and maintenance of specified items (equipment and non-nuclear material) directly related to the operation of nuclear facilities, LOFs or nuclear R&D activities.

This information will provide the Agency with an overview of the infrastructure directly supporting the State's nuclear fuel cycle and contribute to the transparency of the State's nuclear and nuclear-related activities. It will provide indications of where an infrastructure exists that could support nuclear activities that are not part of the nuclear programme. It is necessary in order for the Agency to provide assurance that the declared production, assembly and maintenance of these equipment and non-nuclear materials support the declared programme and only the declared programme.

In some cases, depending on the configuration of the nuclear facility or LOF, some information under this element can be required under existing authority, for example, for the purpose of ad hoc inspections where the presence of nuclear material has been indicated. However, without prejudice to existing Agency authority, all of this element is included under complementary legal authority.

The equipment and non-nuclear material to be reported are listed below. Any specific activity, e.g., a tank farm for high level waste liquors, containing nuclear material on which safeguards have not been terminated would be treated as a nuclear facility and not reported here. The Board would be asked

to approve any changes to this list resulting from technological developments or experience with the physical model of the nuclear fuel cycle from which the list is derived.

The physical model is a major component of the Agency's improved analysis of information developed under Task 5 of "Programme 93+2" and describes each nuclear activity that would be involved in the nuclear fuel cycle from source material acquisition to the production of weapons useable nuclear material and then beyond the fuel cycle to weaponization. A brief outline of the improved analysis was provided to the Board in GOV/INF/759. The Technical Background Documentation on "Programme 93+2" which was made available to Member States in March 1995 provides a more detailed description, including an example for the physical model for gaseous diffusion enrichment.

At present the requested information is limited to the manufacture, assembly and maintenance of equipment and non-nuclear material directly related to the operation of reactors, enrichment, fuel fabrication or reprocessing and consists of:

- *uranium enrichment centrifuge rotor tubes (manufacture) and gas centrifuges (assembly)*
- *diffusion membrane for enrichment (manufacture)*
- *copper vapor and other laser systems for enrichment (assembly and maintenance)*
- *electromagnetic separators (manufacture and maintenance)*
- *columns and extraction equipment for chemical or ion exchange enrichment (manufacture and maintenance)*
- *separation nozzles and vortex tubes for aerodynamic separation (manufacture and maintenance)*
- *uranium plasma generation systems (manufacture and maintenance)*
- *zircaloy tube (manufacture)*
- *beryllium (manufacture)*
- *boron-10 isotope (manufacture)*
- *enriched lithium (manufacture)*
- *tritium (manufacture)*
- *heavy water and deuterium (manufacture and upgrading)*
- *flasks for irradiated fuel (manufacture and maintenance)*
- *neutron absorbing control rods (manufacture)*
- *nuclear grade graphite (manufacture and machining)*

Part 2

- (vii) The location, operational status, present annual production and approximate annual production capacity of uranium and thorium mines.

The information on the locations and status of uranium and thorium mines complements the State's declaration under element 2.c.(i) and assists in assessing the State's domestic capability to produce nuclear material. The types of information requested are no different from those provided to the OECD Nuclear Energy Agency for the biennial Red Book on uranium resources, production and demand. This element does not include requirements for measurement or any other aspects of nuclear material accountancy and, hence, would not change the "starting point of safeguards" as described in paragraphs 33 and 34 of INFCIRC/153.

Part 2

- (viii) Information on inventories, imports and exports of material containing uranium or thorium which has not yet reached the stage of the nuclear fuel cycle described in paragraph 34(c) of INFCIRC/153; information on nuclear material exempted from safeguards pursuant to paragraph 37 of INFCIRC/153; information on nuclear material that has been exempted from safeguards pursuant to paragraph 36(b) of INFCIRC/153 but which is not yet in end-use form and, in the event that the information is not complete, with indications of the limitations on its completeness; and information on any planned changes in location or further processing of waste containing nuclear material (excepting waste released to the environment) on which safeguards have been terminated pursuant to paragraph 11 of INFCIRC/153.

This element does not include requirements for measurement, batch and source data, the taking of physical inventories, inventory change reporting or the closing of material balances. Moreover, the activities involving this material under the protocol are far short of the activities for safeguarding nuclear material under existing legal authority. Hence, this element does not constitute a change in the starting point of safeguards. Where quantities are not measured, other estimates would be provided.

The required information for material which has not yet reached the stage of the nuclear fuel cycle described in paragraph 34(c) of INFCIRC/153 is the quantity, chemical composition, location and, if known, intended use for inventories, whether in nuclear or non-nuclear use, and for imports for non-nuclear use. For inventories the quantities may be approximate. For exports (or intended exports) of such material for non-nuclear use the required information is the quantity, chemical composition and destination. The required information for nuclear material exempted for non-nuclear use under paragraph 36(b) is the quantity, use and location with an indication of the

limitations on the completeness of the information. The reporting requirements for these materials are annual and are limited to those locations with inventories and individual imports and exports involving quantities exceeding those identified in paragraph 37 of INFCIRC/153.

The required information for nuclear material exempted from safeguards for nuclear use pursuant to paragraph 37 of INFCIRC/153 is the quantity, use and location. All material so exempted and all planned location changes and further processing of nuclear material on which safeguards were terminated should be reported.

The quantity reporting unit would be tonnes for material which has not yet reached the stage of the nuclear fuel cycle described in paragraph 34(c) of INFCIRC/153 and, for other material included in this element, the units specified in paragraph 101 of INFCIRC/153. The exemption of uranium for shielding radioactive sources can be made under the provision of paragraph 36(b) for non-nuclear use, in which case the reporting called for here would be limited to available information. In all cases, when nuclear material exempted for non-nuclear uses is in its end-use form, there is no requirement to continue reporting on it.

The reporting of the further processing, e.g., for purposes of recovery of nuclear material, of waste (other than waste released to the environment) on which safeguards have been terminated and of other aspects of this element may be required under existing authority but, without prejudice to existing authority, is being requested under complementary legal authority.

The requested information, along with element 2.c.(vii), would provide a more complete picture of all of the State's nuclear material useable for nuclear purposes and a basis for confirmation by the Agency of the consistency between the State's declared nuclear programme and its holdings of nuclear material.

Part 2

- (ix) Information on the export and import of nuclear equipment and non-nuclear material specified in GOV/2629, as amended by the Board of Governors from time to time, and such other equipment and non-nuclear material as may be specified by the Board.

This element calls for information about export license approvals (identity of equipment or material, destination and, if known, expected date) and, where available, about actual exports and imports (identity of equipment or material, destination, origin of import and date of export or import) of specified nuclear equipment and non-nuclear material especially designed or prepared for nuclear uses, and such other equipment and non-nuclear materials as may be

specified by the Board of Governors. Items especially designed and prepared for nuclear use are those identified in GOV/2629, as modified by the Board from time to time.

Experience in the analysis and use of this information may show the benefit of information on the export and import of other selected equipment and non-nuclear material that are not included in GOV/2629, as amended. There is currently no such equipment and material specified in the Expanded Declaration. However, this provision leaves open the possibility at some later time, for the Secretariat to propose to the Board a limited number of such items whose reporting would be beneficial as well as practical and for the Board to include such items as it deems appropriate.

The information requested here will contribute substantially to the transparency of a State's nuclear activities and to the Agency's understanding of these activities. It is an important part of the data base to be used by the Agency in assessing the internal consistency of the available information on the State's nuclear activities and will contribute to increased confidence that these items are being used only for peaceful purposes.

3. Planned nuclear activities:

Part 1

- a. The provision of design information and any changes thereto as early as possible as provided for in paragraph 42 of INFCIRC/153 and as detailed in GOV/2554/Attachment 2/Rev.2.

Part 2

- b. Planned activities owned, funded or authorized by, or otherwise coming to the knowledge of, the State for the further development of the nuclear fuel cycle, including their planned locations when known.

The scope of the requested information is that specified in element 2.c.(i). A declaration of plans for the further development of the fuel cycle within the State would assist the Agency in its long-term planning and contribute to increased transparency and assurance.

Part 2

- c. A description of planned nuclear R&D activities owned, funded or authorized by, or otherwise coming to the knowledge of, the State, including their planned locations when known.

The scope of the requested information is as described under elements 2.c.(ii) and (iii).

Information about planned nuclear R&D to support the future development of the nuclear fuel cycle would contribute to the transparency of the nuclear programme within the State. The information requested here relates to long-term plans for further development of the fuel cycle within the State and to how

that development is supported through current and planned activities. The information will be useful to the Agency in its own long-term planning and will provide the basis for increased assurance that the declared present nuclear programme and nuclear fuel cycle related R&D are generally consistent with the declared plans for future development of the fuel cycle. Any limitations on the scope of the information reported, including the planning horizon (e.g., 5 years, 10 years, etc.) should also be reported.

As is the case of element 2.c.(iii), Agency safeguards would benefit from information on any other planned activities judged by the State to be relevant to elements 3.b and 3.c.

ANNEX III

PROTOCOL ADDITIONAL TO THE AGREEMENT BETWEEN AND
THE INTERNATIONAL ATOMIC ENERGY AGENCY FOR THE APPLICATION OF
SAFEGUARDS IN CONNECTION WITH [THE TREATY ON THE NON-
PROLIFERATION OF NUCLEAR WEAPONS] [AND] [THE TREATY FOR THE
PROHIBITION OF NUCLEAR WEAPONS IN LATIN AMERICA AND THE
CARIBBEAN]

WHEREAS (hereinafter referred to as) is a party to the Agreement between and the International Atomic Energy Agency (hereinafter referred to as the Agency) for the Application of Safeguards in Connection with [the Treaty on the Non-Proliferation of Nuclear Weapons] [and] [the Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean] (hereinafter referred to as the Safeguards Agreement), which entered into force on¹;

WHEREAS and the Agency are agreed to strengthen the effectiveness and improve the efficiency of the safeguards provided for in the Safeguards Agreement with a view to providing additional assurance of the non-diversion of nuclear material subject to the Safeguards Agreement to nuclear weapons or other nuclear explosive devices, including the absence of undeclared nuclear material and activities;

WHEREAS it is necessary to supplement the provisions of the Safeguards Agreement;

WHEREAS and the Agency agree that the measures described in this Protocol are designed to provide the Agency with a fuller understanding of the nuclear programme in ;

BEARING IN MIND the obligations of the Agency to avoid hampering the economic and technological development of the State, to avoid undue interference in the State's peaceful nuclear activities and to protect commercial and industrial secrets and other confidential information coming to its knowledge in the implementation of the Safeguards Agreement;

WHEREAS the frequency and intensity of activities described in this Protocol will be kept to a minimum consistent with the effective implementation of the Protocol and will not necessarily be a function of the scale of that programme;

NOW THEREFORE and the Agency have agreed as follows:

¹ Reproduced in document INFCIRC/.

PROVISION OF INFORMATION

Article 1

- a. To the extent not already provided for under the Safeguards Agreement, undertakes to provide the Agency with the following information:
- (i) A description, the status and location of *nuclear fuel cycle-related research and development activities*² not involving nuclear material carried out anywhere in :
 - (a) that are owned, funded or authorized by and are specifically related to conversion, fuel fabrication, power or research reactors, critical assemblies or accelerators; or
 - (b) that are specifically related to enrichment, reprocessing of nuclear fuel and treatment of waste containing nuclear material.
 - (ii) Information as may be identified by the Agency and agreed to by on operational activities at facilities and locations outside facilities where nuclear material is customarily used.
 - (iii) A description, the contents and use of each building on each *site* on which is situated a facility³ or a location outside facilities where nuclear material is customarily used⁴. The description shall include a map of such *site*.
 - (iv) The identity, location, description, status, present annual production and approximate annual production capacity for the *manufacture, assembly or maintenance of specified items directly related to the operation of facilities, or of locations outside facilities where nuclear material is customarily used, or of nuclear fuel cycle-related research and development activities*.
 - (v) The location, operational status, present annual production and approximate annual production capacity of uranium and thorium mines.

² Terms in italics have specialized meanings, which are defined in Article 156 below.

³ As defined in [paragraph 106 of INFCIRC/153] [the reference to the corresponding provision of the relevant Safeguards Agreement should be inserted where bracketed references to INFCIRC/153 are made].

⁴ As referred to in [paragraph 49 of INFCIRC/153].

- (vi) With respect to material containing uranium or thorium, which has not yet reached the composition and purity described in [paragraph 34(c) of INFCIRC/153],
- (a) for each location in where such material is present in quantities exceeding those set out in [paragraph 37(b) and (d) of INFCIRC/153], whether in nuclear use or in non-nuclear use: an inventory of such material, including use, quantities, chemical composition and, if known, further intended use, of such material;
 - (b) for each import into for specifically non-nuclear purposes of such material in quantities exceeding those set out in [paragraph 37(b) and (d) of INFCIRC/153], the use, quantities, chemical composition and, if known, further intended use, of such material, and its current location;
 - (c) for each export (or intended export) out of for specifically non-nuclear purposes of such material in quantities exceeding those set out in [paragraph 37(b) and (d) of INFCIRC/153], the quantity, chemical composition and destination of such material.
- (vii) Information on the quantities, uses and locations of nuclear material exempted from safeguards pursuant to [paragraph 37 of INFCIRC/153]; and, for each location where nuclear material exempted from safeguards pursuant to [paragraph 36(b) of INFCIRC/153] but not yet in non-nuclear end-use form is present in quantities exceeding those set out in [paragraph 37 of INFCIRC/153], information on the quantities, uses and locations of such material (including indications of limitations on the completeness of such information).
- (viii) Information on any changes in location or further processing of waste containing nuclear material on which safeguards have been terminated pursuant to [paragraph 11 of INFCIRC/153].
- (ix) With respect to *specified equipment and non-nuclear material*:
- (a) Information about export license approvals with respect to such equipment and material, including the identity of the equipment or material, the destination, and, where available, the expected dates of export;
 - (b) Where available, information on actual exports and imports of such equipment and material, including the identity of the equipment or material, the destination, the origin of imports, and the date of export or import.

- (x) With respect to planned nuclear activities owned, funded or authorized by :
 - (a) Plans for the further development of the nuclear fuel cycle, including planned locations when known; and
 - (b) A description of planned *nuclear fuel cycle-related research and development activities*, including planned locations when known.

- b. Upon specific request by, and in consultation with, the Agency, shall make every reasonable effort to provide information on the identity, and a description, of activities at locations identified by the Agency outside a site identified by under Article 1.a.(iii) above which the Agency believes might be functionally related to the nuclear activities or associated infrastructure of that site.

Article 2

- a. shall provide to the Agency the information identified in Article 1.a(i), (iii)-(v), (vi)(a), (vii) and (x) above within 180 days of entry into force of this Protocol.

- b. shall provide to the Agency by 31 March of each year updates of the information identified above in Article 2.a for the period covering the previous calendar year. If there has been no change to the information previously provided, shall so indicate.

- c. shall provide to the Agency the information identified in Article 1.a.(vi)(b) and (c) and Article 1.a.(ix) above on an annual basis, by 31 March of each year, for the period covering the previous calendar year.

- d. shall provide to the Agency the information identified in Article 1.a.(viii) above 180 days before the change in location or further processing is carried out.

- e. and the Agency shall agree on the timing and frequency of the information identified in Article 1.a.(ii).

- f. shall make every reasonable effort to provide promptly to the Agency the information identified in Article 1.b.

COMPLEMENTARY ACCESS

Article 3

- a. shall provide the Agency access to the following locations:
 - (i) To any place on a *site* containing a facility or containing a location outside facilities where nuclear material is customarily used, including closed down facilities and locations outside facilities where nuclear material is customarily used;
 - (ii) To any decommissioned facility or decommissioned location outside facilities where nuclear material was customarily used, to the extent necessary to verify that it remains in its decommissioned status; and
 - (iii) To any location identified by under Article 1.a.(v)-(viii) above.

- b. Upon request by the Agency, shall, taking into account any constitutional obligations it may have with regard to proprietary rights or searches and seizures, provide the greatest degree of access to the Agency to any location identified by under Article 1.a.(i) or Article 1.a.(iv), other than those referred to in Article 3.a.(i) above, provided that if is unable, by reason of such constitutional obligations, to provide such access, shall take such measures as are necessary otherwise to satisfy Agency requirements.

- c. Upon request by the Agency, shall, taking into account any constitutional obligations it may have with regard to proprietary rights or searches and seizures, provide the greatest degree of access to the Agency to any locations, other than in those referred to in Article 3.a. and b., to carry out environmental sampling.

Article 4

. may at any time offer the Agency access in addition to that described in Article 3 above to any location in which the Agency considers may be of safeguards relevance.

SCOPE OF ACTIVITIES

Article 5

- a. Within the scope of Article 3 above, the Agency shall be enabled to carry out the following activities:
- (i) For access in accordance with Article 3.a.(i), visual observation, collection of environmental samples and other objective measures which have been demonstrated to be technically feasible;
 - (ii) For access in accordance with Article 3.a.(ii), activities necessary to confirm the decommissioned status of the facility or location in question;
 - (iii) For access in accordance with Article 3.a.(iii), item counting of nuclear material, non-destructive measurements and sampling to confirm enrichment, records examination when substantial quantities have been consumed or shipped to other users, visual observation, collection of environmental samples and other objective measures which have been demonstrated to be technically feasible;
 - (iv) For access in accordance with Article 3.b., visual observation, collection of environmental samples, records examination and other objective measures which have been demonstrated to be technically feasible;
 - (v) For access in accordance with Article 3.c., collection of environmental samples.

MANAGED ACCESS

Article 6

..... may make arrangements with the Agency for managed access under this Protocol due to safety reasons, or to protect proprietary or commercially sensitive information, provided that such arrangements shall not preclude the Agency from conducting activities necessary to determine the absence of undeclared nuclear material and activities at the location in question or otherwise resolve any inconsistency.

NOTICE AND TIMING

Article 7

- a. (i) The notification requirements for design information verification, ad hoc inspection or routine inspection are as set forth in the Safeguards Agreement. No notice shall be required for access to any location referred to in Article 3.a.(i) which is sought in the course of the conduct of design information verification, ad hoc inspection or routine inspection.
- (ii) For access other than that described in Article 7.a.(i) above to any location identified in Article 3.a.(i), advance notice to shall be given at least twenty-four hours before the arrival of Agency inspectors at the location in question.
- b. For access to any location identified in Article 3.a.(ii), 3.a.(iii), 3.b or 3.c. above, advance notice to shall be given at least twenty-four hours before the arrival of Agency inspectors at the location in question.
- c. Unless otherwise agreed to by , access to any location referred to in Article 3 above shall only take place during regular working hours.

DESIGNATION OF AGENCY INSPECTORS

Article 8

The Director General shall notify of the Board of Governor's approval of any staff member of the Agency as a safeguards inspector. Unless advises the Director General of its rejection of such a designation within two months of receipt of notification of the Board's approval, the inspector so notified to shall be considered designated to The Director General, acting in response to a request by or on his own initiative, shall immediately inform of the withdrawal of the designation of any official as an inspector for

SUBSIDIARY ARRANGEMENTS

Article 9

The Agency shall be entitled to apply the procedures laid down in this Protocol upon its entry into force. Procedures to facilitate the implementation of this Protocol may be included in the Subsidiary Arrangements concluded pursuant to the Safeguards Agreement.

COMMUNICATIONS SYSTEMS

Article 10

- a. shall facilitate the establishment of direct communications (including satellite systems and other forms of telecommunication), and the installation of any equipment therefor, between Agency inspectors in and Agency Headquarters and/or Regional Offices, including attended and unattended transmission of information generated by Agency containment and/or surveillance devices.
- b. The Agency shall have the right to install and use its own systems of direct communications (including satellite systems and other forms of telecommunication) between Agency inspectors in and Agency Headquarters and/or Regional offices, including attended and unattended transmission of information generated by Agency containment and/or surveillance devices.

CONFIDENTIALITY

Article 11

The Agency shall maintain a stringent regime governing the handling of commercial and industrial secrets and other confidential information coming to its knowledge in the implementation of the Protocol.

AMENDMENT OF THE PROTOCOL

Article 12

- a. and the Agency shall, at the request of either, shall consult on amendment to this Protocol.
- b. All amendments shall require the agreement of and the Agency.
- c. Amendments to this Protocol shall enter into force in the same conditions as the entry into force of the Protocol itself.
- d. The Director General shall promptly inform all Member States of the Agency of any amendment to this Protocol.

ENTRY INTO FORCE

Article 13

This Protocol shall enter into force

Alternative A on the date upon which the Agency receives from written notification that’s legal requirements for entry into force have been met. [. , may, upon signature or at any later date before this Protocol enters into force for it, declare that it will apply this Protocol provisionally.]

Alternative B upon signature by the representatives of and the Agency.

The Director General shall promptly inform all Member States of the Agency of the entry into force of this Agreement.

Article 14

This Protocol shall remain in force as long as the Safeguards Agreement remains in force.

APPLICABILITY OF THE PROVISIONS OF THE SAFEGUARDS AGREEMENT

Article 15

The Protocol shall be an integral part of the Safeguards Agreement.

DEFINITIONS

Article 16

- a. Manufacture, assembly or maintenance of specified items directly related to the operation of facilities, or of locations outside facilities where nuclear material is customarily used or of other locations where nuclear fuel cycle-related research and development activities means the following, as well as such other items as are specified by the Board of Governors of the Agency from time to time acting by a two-thirds majority of the Members present and voting. Any such modification by the Board of Governors after entry into force of this Protocol shall have effect upon its adoption by the Board of Governors.
- (i) uranium enrichment centrifuge rotor tubes (manufacture) and gas centrifuges (assembly);
 - (ii) diffusion membrane for enrichment (manufacture);
 - (iii) copper vapor and other laser systems for enrichment (assembly and maintenance);
 - (iv) electromagnetic separators (manufacture and maintenance);
 - (v) columns and extraction equipment for chemical or ion exchange enrichment (manufacture and maintenance);
 - (vi) separation nozzles or vortex tubes for aerodynamic separation (manufacture and maintenance);
 - (vii) uranium plasma generation systems (manufacture and maintenance);
 - (viii) zircaloy tube (manufacture);
 - (ix) beryllium (manufacture);
 - (x) boron-10 isotope (manufacture);
 - (xi) enriched lithium (manufacture);
 - (xii) tritium (manufacture);
 - (xiii) heavy water and deuterium (manufacture and upgrading);
 - (xiv) flasks for irradiated fuel (manufacture and maintenance);
 - (xv) neutron absorbing control rods (manufacture); and
 - (xvi) nuclear grade graphite (manufacture and machining).

- b. Nuclear fuel cycle-related research and development activities means those activities which are specifically related to conversion, enrichment, fuel fabrication, power or research reactors, critical assemblies, accelerators capable of producing a continuous neutron source sufficient for annual production of gram quantities of fissile isotopes, reprocessing of nuclear fuel and treatment of waste containing nuclear material.

- c. Site means that area delineated by in the relevant design information for a facility, and the relevant information on a location outside facilities where nuclear material is customarily used, provided pursuant to the Safeguards Agreement, and as agreed by the Agency. It shall also include all installations co-located with the facility or location for the provision or use of essential services, including: hot cells for processing irradiated materials not containing nuclear material; radioactive waste treatment, storage and disposal facilities; and buildings associated with specified items identified by under Article 1.a.(iv) above.

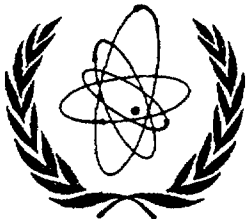
- d. Specified equipment and non-nuclear material means:
 - (i) equipment and non-nuclear material identified in GOV/2629, as modified from time to time by the Board of Governors of the Agency acting by a two-thirds majority of the Members present and voting. Any such modification by the Board of Governors after entry into force of this Protocol shall have effect upon its adoption by the Board of Governors; and

 - (ii) such other equipment and non-nuclear material as may be specified by the Board of Governors acting by a two-thirds majority of the Members present and voting. Any such modification by the Board of Governors after entry into force of this Protocol shall have effect under this Protocol upon its adoption by the Board of Governors.

DONE at on the day of 19. . . ,
in duplicate, in the English language.

For :

For the INTERNATIONAL ATOMIC
ENERGY AGENCY:

**B**GOV/2863/Corr. 1
10 May 1996RESTRICTED Distr.
Original: ENGLISH

International Atomic Energy Agency

BOARD OF GOVERNORS

For official use only

**STRENGTHENING THE EFFECTIVENESS AND IMPROVING
THE EFFICIENCY OF THE SAFEGUARDS SYSTEM****PROPOSALS FOR IMPLEMENTATION
UNDER COMPLEMENTARY LEGAL AUTHORITY****A report by the Director General****Corrigenda**

1. Page 31, paragraph 61 (c), lines 5 and 6: delete phrase "... or otherwise coming to the knowledge of ..." as well as the preceding and following commas.
2. Annex I, Page 3, column "Measure", row 3.c (Description of planned nuclear R&D ...): as above delete the phrase "... or otherwise coming to the knowledge of ...".
3. Annex III, page 2, footnote 2/, correct the reference to the Article to read "16" instead of "156".

**B**

GOV/2863/Corr. 2
17 May 1996

RESTRICTED Distr.
Original: ENGLISH

International Atomic Energy Agency

BOARD OF GOVERNORS

For official use only

STRENGTHENING THE EFFECTIVENESS AND IMPROVING THE EFFICIENCY OF THE SAFEGUARDS SYSTEM

PROPOSALS FOR IMPLEMENTATION UNDER COMPLEMENTARY LEGAL AUTHORITY

A report by the Director General

Corrigenda

1. Annex II, page 14, paragraphs 3(b) and 3(c): delete the phrase "....., or otherwise coming to the knowledge of," in both places.
2. This phrase has already been deleted in paragraph 61(c) and in Annex I (see GOV/2863/Corr.1).

ANNEX 2

**STATEMENT REGARDING "STRENGTHENING THE EFFECTIVENESS
AND IMPROVING THE EFFICIENCY OF THE SAFEGUARDS SYSTEM:
PROGRAMME 93+2" MADE BY THE DIRECTOR GENERAL IN
HIS INTRODUCTORY STATEMENT AT THE
JUNE 1996 SESSION OF THE BOARD OF GOVERNORS**

EXCERPT FROM THE RECORD OF THE BOARD'S 891ST MEETING

46. Safeguards were being strengthened and made more efficient with the implementation of the Part 1 measures of Programme 93+2. The progress in that area was described in paragraph 9 of document GOV/2863. Those and other measures described and proposed in that document were the culmination of several years of work by the Board and the Secretariat to strengthen further the effectiveness and efficiency of safeguards. The Secretariat had endeavoured to define in the document a set of measures which, together with actions already taken by the Board, would further improve the safeguards system, while leading neither to discrimination in application nor to unacceptably burdensome or intrusive measures.

47. Through consultations, briefings, discussion documents and regular Board meetings, the Secretariat had sought to reach the point where Governments' desire for more effective and reliable safeguards was backed up by a willingness on their part to provide the necessary information about, and access to, their nuclear activities. That point was now close. In pursuing the general direction endorsed earlier by the Board and the General Conference, the specific proposals had been refined and an extensive explanation of the purpose and scope of each measure had been provided. The time had now come for point-by-point discussions between Government representatives - safeguards experts, lawyers and diplomats. Consultations with the Secretariat, which had an important responsibility for the operation of the system, would no doubt be necessary during those discussions and the Secretariat would be ready to provide assistance.

48. Since the protocol additional to comprehensive safeguards agreements would define the obligations to be assumed by States, it was recommended that arrangements be made to examine, adjust and finalize the draft protocol so that it met with broad support. The explanatory document would provide a useful rationale for the proposed provisions of the protocol and an insight into how the measures would operate in practice.

49. Some related issues still required further consideration by the Board. Paragraph 16 of document GOV/2863 described some measures that States without comprehensive safeguards agreements with the Agency could take in order to strengthen safeguards in States that did have comprehensive agreements and in their own State as well. The Secretariat would be ready, if instructed, to develop appropriate legal instruments for consideration by the Board.

50. For several years the Board had maintained a steady momentum leading to the current proposals and that momentum should not be lost. A committee established by the Board to refine the protocol, meeting perhaps for two weeks early in July, would help to move the full Programme 93+2 towards a timely conclusion.

51. For a long time the Secretariat and Governments had focused on the difficulties and burdens introduced by new measures and weighed them against the better verification they were designed to bring. The final aim of better verification and greater transparency was a higher degree of confidence between States - locally, regionally and globally - and facilitation of the transfer of peaceful nuclear technology, equipment and material.

ANNEX 3**DISCUSSION INCLUDING DECISION ON "STRENGTHENING
THE EFFECTIVENESS AND IMPROVING THE EFFICIENCY
OF THE SAFEGUARDS SYSTEM: PROGRAMME 93 + 2"
AT THE JUNE 1996 SESSION OF THE BOARD OF GOVERNORS****EXCERPT FROM THE SUMMARY RECORD OF THE BOARD'S 892nd MEETING**

58. Mr. BENMOUSSA (Morocco), speaking on behalf of the African Group, noted that he would be commenting on items 3, 4 and 5 of the agenda together, since those items were inextricably linked to one another in the view of the African Group. Although the position he was about to put forward did represent the consensus opinion of the African Group, it was, of necessity, a compromise between the differing stances of the Group's members, who would no doubt take the opportunity of putting forward their individual views in their own statements.

59. To begin with item 4(b) of the agenda, dealing with the strengthening of safeguards and Programme 93+2, the African Group commended the Secretariat's continuous efforts in conducting consultations with Member States and in preparing high-quality documentation which promoted more constructive discussion on the subject. In that connection, the African continent had recently witnessed a historic event: the signing of the African Nuclear-Weapon-Free Zone Treaty, the so-called Pelindaba Treaty, on 11 April 1996 in Cairo, in the presence of the Agency's Director General. Africa was now the only nuclear-weapon-free continent where all IAEA members were parties to the NPT, which had recently been indefinitely extended. The African Group thus continued to be firmly committed to the non-proliferation regime and was happy to reiterate its general support for a reinforcement of the Agency's safeguards that would ensure the absence of undeclared nuclear material and activities.

60. That being understood, the African Group wished, first of all, to express the strong belief that safeguards measures had to be judged from the point of view of their acceptability as well as from that of their effectiveness. Comprehensive safeguards measures should therefore be applied without discrimination to all, including Member States with voluntary and item-specific safeguards agreements based on the INFCIRC/66/Rev.2 model. Universality of the nuclear non-proliferation regime was the key to enhanced compliance and to the strengthening of its political and legal foundation. The African Group would like to

see comprehensive safeguards being applied equally to all States in the Middle East in order to reinforce the credibility of the safeguards system and its sustainability within a nuclear-weapon-free zone in the region. The establishment of a nuclear-weapon-free zone in the Middle East would undoubtedly enhance the security of Africa and reinforce the viability of the African nuclear-weapon free zone.

61. Secondly, paragraphs 4 and 5 of document INFCIRC/153 must apply integrally and effectively to any Part 2 measures introduced under Programme 93+2. That meant that the Agency must do its utmost to avoid hampering the economic and technological development of the State concerned. It must also avoid discouraging international co-operation in peaceful nuclear and nuclear-related activities, including in particular the international exchange of nuclear materials. It must further avoid hindering peaceful nuclear and nuclear-related R&D activities, and the operation of facilities in the inspected State. In addition, everything possible must be done to protect commercial and industrial secrecy and any other confidential information. Finally, the Agency must take due account of national security interests and limit itself to its field of competence. If those specific concerns were met, the African Group would be able to adopt a positive attitude to the proposed measures for the strengthening of safeguards and its verification regime.

62. The African Group appreciated the work of the Department of Technical Co-Operation and, in particular, the Africa Section. It was also strongly committed to the principle of equal treatment of the Agency's main activities and therefore urged the Secretariat to take all necessary measures to promote the peaceful uses of nuclear technology for sustainable development in Africa, bearing in mind the special need for increased assistance to LDCs. He stressed the importance of technical co-operation activities in such areas as water resources and seawater desalination, measures against desertification, rehabilitation of arid and semi-arid zones, the sterile insect technique, food irradiation and radiation safety.

63. All of those concerns were in full conformity with the provisions of Articles IV and VI of the NPT. Article IV provided that the Treaty should not affect the inalienable right of all Parties to it to develop research, production and use of nuclear energy for peaceful purposes. It also provided that all Parties to the Treaty should facilitate, and had the right to participate in, the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy. Thus, the strengthening of safeguards and the enhancement of promotional activities were closely linked.

64. The African Group was also fully committed to the provisions of Article VI of the Treaty, which enjoined the Parties to pursue negotiations on effective measures relating to the cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control. He urged all States to comply with that injunction.

65. It was still difficult for most States to reconcile the concept of strict national sovereignty with the idea of international monitoring. Therefore, with a view to enhancing the acceptability of the new safeguards system, the Director General should be authorized to convene, two years after the adoption of the protocol additional to comprehensive safeguards agreements and regularly thereafter, a special meeting, with the participation of national experts and SAGSI, to assess actual implementation and investigate possible abuses of the Programme 93+2 measures.

66. The African Group was ready to take an active and constructive part in adapting and amending the draft protocol contained in Annex III to document GOV/2863. It was willing to contribute to the establishment of a new world security order which would ban both horizontal and vertical nuclear proliferation and enhance the prospects of a systematic and progressive programme of general and comprehensive nuclear disarmament, while maintaining progress in the peaceful uses of nuclear energy for socio-economic growth and sustainable development.

67. With regard to the draft programme and budget for 1997 and 1998, the African Group was prepared to accept that, for planning reasons, it was necessary to include appropriations for the implementation of the Part 2 measures of Programme 93+2, on the understanding that there would be no impact on assessed contributions. However, the Agency should strive to maintain a balance between its main activities. Moreover, any decision which the Board took on the budgets for 1997 and 1998 should not be allowed to prejudice its decision on Programme 93+2. Finally, the African Group would also adopt a flexible position with regard to the proposed increase in the Working Capital Fund.

EXCERPT FROM THE SUMMARY RECORD OF THE BOARD'S 894th MEETING

27. The CHAIRMAN recalled that the subject had last been discussed at the Board's series of meetings in March, when it had had before it a discussion draft dated 27 February 1996 containing revised proposals for the implementation of measures under complementary legal authority. At that series of meetings, the Board, while welcoming the revised draft and commending the Secretariat for responding positively to several concerns expressed by Member States, had noted that some concerns still persisted and had requested the Secretariat to take account of all comments, and to continue consultations with Member States with a view to submitting a formal text to the current series of meetings.

28. Since then, further extensive consultations had been held, as well as two briefing meetings in April and May, at which the Secretariat had informed Governors and representatives of Member States about the proposed measures contained in document GOV/2863. The Director General had also made additional remarks on the item during his introductory statement.

29. Over the past two to three years, the Secretariat and Member States had been engaged in an extensive effort to develop measures to strengthen the safeguards system and to make it more cost-effective. While broad consultations and debate were legitimate when a radical revision to a system which had been in place for over 20 years was being envisaged, it was equally true that the search for perfection could be both elusive and time-consuming. As the Director General had pointed out at a recent briefing meeting, the Secretariat, acting on behalf of the Board, had probably gone as far as it could and, in view of the frequent occasions on which the urgency of the matter had been stressed - the most recent being at the Moscow Nuclear Safety and Security Summit in April - the time had come for Member States to move from a general discussion and focus on the protocol additional to comprehensive safeguards agreements which would ultimately be the legally binding instrument. He hoped that, at the conclusion of its discussions, the Board would be able to take a step in that direction.

30. Mr. SIEVERING (United States of America) said that the action taken - or not taken - by the Board on the sub-item under discussion would have a lasting impact on all States. The real issue before the Board was not so much the strengthening of safeguards as the strengthening of international security.

31. Ironically, it was a war which had generated the events leading to the present discussion. Shortly after the adoption of Security Council resolution 687 setting out the terms of the cease-fire for the Persian Gulf war, the Agency's Action Team had found evidence that Iraq had been

making consistent efforts to produce nuclear weapons, and subsequently it had emerged that Iraq was engaged in a major clandestine nuclear weapons programme. In August 1995, it had been confirmed that Iraq was at an advanced stage in its programmes for the development and deployment of chemical and biological weapons.

32. Iraq had thus developed an almost unimaginable destructive capability. In the years prior to the detection of its nuclear weapons programme, Iraqi officials had led Agency safeguards inspectors - who had been acting in accordance with the provisions and restrictions of the safeguards system - past the Tuwaitha complex where elements of an aggressive nuclear weapons programme had been in the process of being actively developed. In that same period the Agency had issued assurances each year that all nuclear material under safeguards had been adequately accounted for.

33. Strictly speaking, that annual assessment had been correct. At the time, the safeguards system had not been concerned with the possible existence of clandestine nuclear weapons programmes. The question now was whether the Board would take steps to reduce the prospect of another clandestine nuclear weapons programme catching the world unawares. Iraq had proved that it was possible to create an enormously destructive arsenal and a similar situation could happen again in some country at any time.

34. The adoption and implementation of the safeguards measures proposed in document GOV/2863 could play a central role in minimizing the possibility of a clandestine nuclear weapons programme being pursued successfully in the future. There were no perfect solutions, but the proposals in question would make an important contribution to future global security.

35. At the recent Moscow Nuclear Safety and Security Summit, the assembled leaders had clearly recognized the importance of the decision before the Board by underlining the urgent need to strengthen the Agency's capabilities to detect undeclared nuclear activities and by agreeing to work vigorously to that end. They had also reaffirmed their support for a strengthened and cost-effective safeguards system along the lines proposed in Programme 93+2. In particular, they had recognized the need to implement comprehensive safeguards agreements designed to provide credible assurance of the non-diversion of nuclear materials from declared activities and of the absence of undeclared activities, in accordance with obligations assumed under the NPT.

36. The Board had been discussing the task of strengthening the Agency's safeguards system in response to the challenge posed by Iraq's clandestine programme for five years. It was over three years since SAGSI had recommended measures that it deemed appropriate and already over a year since the Board had first approved the general direction of Programme 93+2. The measures proposed under Part 2 of the Programme had already been discussed by the Board three times and had been the subject of intensive consultations with Member States both in Vienna and in capitals. His delegation agreed with the Secretariat that it was now time for Member States to discuss the matter with each other and agree on a protocol.

37. In producing document GOV/2863, the Secretariat had clearly sought to respond as far as possible to the comments and changes put forward by Member States, without seriously weakening the proposed measures. His delegation considered it an excellent document and commended the Secretariat on the quality and breadth of the informal briefings it had recently given the Board, at which the high quality of the background work involved in producing document GOV/2863 had been very evident. His delegation believed that the current package of measures was the right one for the task at hand, and that any efforts to pare them back would only undermine the level of assurance the package would provide.

38. The United States believed that the protocol contained in Annex III of document GOV/2863 could be approved by the Board as a basis for negotiation. It reflected the measures contained in the main text and Annex II, which, together with the Chairman's summing-up, would provide a basis for an authoritative interpretation and additional clarification of the measures outlined in the protocol.

39. Turning to the concern of some States that the Agency should maintain a balance in its programmes, particularly between technical co-operation and safeguards, he said that without a broadly acceptable, effective, and adequately funded safeguards system, the basis for all nuclear co-operation would be lost and the Agency's technical co-operation activities would not be able to proceed with their current ease, predictability and assurance.

40. In 1967, when the conclusion of the NPT was still in question over the issue of universality, President Johnson had stated that the United States would not ask any other country to accept safeguards that the United States would not accept. That pledge had been implemented in 1980 when the safeguards agreement concluded between the United States and the Agency made all nuclear facilities in the United States eligible for safeguards except those of direct national security significance. The Agency was currently entitled to apply safeguards to nearly 240 facilities in the United States, and the United States was obliged to accept the same

safeguards procedures at its facilities as those that the Agency applied to similar material in similar facilities in non-nuclear-weapon States under safeguards agreements in connection with the NPT.

41. During the current discussions, the Board should focus its attention on strengthening comprehensive safeguards agreements, rather than addressing the issue of whether the Programme 93+2 measures should be applied to nuclear-weapon States party to the NPT. However, within the framework of the non-proliferation commitment reaffirmed at the NPT Review and Extension Conference by 175 countries, the United States was ready to contribute actively to the strengthening of the Agency's capacity to detect clandestine nuclear activities and willing to apply the measures needed to improve the effectiveness and efficiency of the safeguards applied by the Agency under the 1977 voluntary-offer safeguards agreement between the United States and the Agency set out in document INFCIRC/288. In that regard, paragraph 16 of document GOV/2863 constituted a good basis for agreement.

42. In the light of consultations it had held and would continue to hold with the other four nuclear-weapon States on ways and means of strengthening Agency safeguards, the United States was ready to:

- (a) Provide the Agency with information on imports and exports of nuclear material for peaceful purposes; on export licences for equipment and non-nuclear material as specified in document GOV/2863; and on such additional selected items of nuclear-related equipment and non-nuclear material as might be determined by the Board;
- (b) Accept the application, consistent with the obligations and objectives of the safeguards agreement contained in document INFCIRC/288, at nuclear facilities in the United States selected by the Agency, of measures contained in document GOV/2863 that would enhance the effectiveness or efficiency with which the Agency discharged its obligations under that agreement; and
- (c) Discuss with the Agency the provision of additional information that would enhance the effectiveness and efficiency of the implementation of Programme 93+2, as approved by the Board, in States with comprehensive safeguards agreements.

43. The United States was prepared to introduce new legislation to achieve those ends as required and hoped that the non-nuclear-weapon States without comprehensive safeguards agreements would also be prepared to contribute to the efficient and effective implementation of Programme 93+2.

44. Furthermore, his country pledged its support for the efforts to ensure that all separated plutonium and highly-enriched uranium designated as not intended for use in meeting defence requirements was safely stored, protected and placed under Agency safeguards as soon as it was practical to do so. The application of safeguards to that and other material under the terms of the United States voluntary-offer safeguards agreement would, in some instances, need to take account of the United States obligation under Article I of the NPT not in any way to assist, encourage, or induce any non-nuclear-weapon State to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices.

45. Furthermore, the United States would continue its practice of providing the Agency with additional information it felt to be of safeguards significance, and urged other States to do likewise.

46. Mr. BENATTALLAH (Algeria) said his delegation endorsed the position taken by the Group of 77 with regard to Programme 93+2, but completely disassociated itself from the statement made on behalf of the African Group concerning Programme 93+2 at the previous afternoon's meeting. He had informed the President of the African Group in writing the previous week of his delegation's opposition to the very principle of a joint statement as there was no consensus within the Group on Programme 93+2. He had expected that consultations would have continued pending the Board's discussion of the relevant agenda item and had been astonished to hear a statement on Programme 93+2 made on behalf of the African Group during the discussion of the agenda item on technical co-operation - a point of procedure on which his delegation had also not been consulted.

47. Commending the Secretariat on the high quality of document GOV/2863, he said that he was pleased to note that the comments of Member States had been taken into account in producing it and was grateful to the Secretariat for the efforts it had made to promote agreement among Member States. Further open-ended discussions were still necessary since, despite the many assurances which had been given, it seemed that the developing countries in particular were being asked to hand over certain exclusive national attributes to the Agency.

48. His delegation still had difficulty in accepting Part 2 of Programme 93+2 and the new legal instrument. It had always believed that the Part 1 measures should be implemented first, and their efficiency evaluated, before discussions on Part 2 were undertaken. The very fact that it had been suggested that Member States depart from the sacrosanct principle of zero real growth at a later stage of the discussions of Programme 93+2 gave a clear indication of the inherent weaknesses of any new undertaking.

49. Some of the technical aspects of the Programme still did not seem to allow the developing countries enough leeway to ensure that their technological development proceeded without undue constraints. His delegation still had the impression that the Secretariat wished to convert measures appropriate to exceptional situations into regular obligations. Furthermore, such measures would clearly not be applied uniformly, since the nuclear-weapon States would be exempt from them. The principles of universality and non-discrimination would thus be called into question - contrary to the objectives of the NPT.

50. His delegation continued to consider that the provision of information on specific operational activities at nuclear facilities and LOFs was unjustified. As to the measures covering R&D activities in the industrial and technological field that did not involve any nuclear material, they constituted an excessive expansion of the Agency's powers and the measures covering isotope production and maintenance activities were tantamount to interference in programmes being carried out for purely peaceful purposes. As for the measures dealing with information on the import and export of specified equipment and material, the reasons for their introduction needed to be explained further. Algeria would also have difficulty in accepting the planned measures dealing with the locations of disused mines or natural deposits. It had similar problems with unlimited no-notice access for Agency inspectors and was still not convinced of the justification for the taking of samples at locations which had not been designated under the protocol.

51. It was important to look at the 93+2 process in the wider context of the international political environment in which the Agency found itself. Firstly, Programme 93+2 had been linked to the indefinite extension of the NPT. That extension was associated with a commitment to the cessation of nuclear testing within the context of general and total disarmament negotiated in Geneva. The prospects of achieving that seemed limited, despite the fact that the work of the Conference on Disarmament had recently been intensified. It was thus difficult to avoid contrasting the ever stricter obligations undertaken or to be undertaken by the developing countries with the unfulfilled obligations on the part of the nuclear-weapon States party to the NPT.

52. Secondly, there was a parallel between the intrinsic imbalances in the NPT and in Programme 93+2 with regard to nuclear-weapon and non-nuclear-weapon States. Algeria had the feeling that Programme 93+2 would reproduce at Agency level the well-known discriminatory character of the NPT - in other words, the developing countries would once again bear the brunt of the new constraints, without receiving any return in terms of technological development, whereas the nuclear-weapon States party to the NPT would not be assuming any new commitments. The difficulties in funding technical co-operation and the wish to remove the ceiling on resources allocated to safeguards were clear indications of the continuing existence of discrimination. The nuclear-weapon States which supported Programme 93+2 should therefore set an example by announcing voluntary measures on their part in order to improve the Programme's credibility. Appropriate commitments by them would constitute important confidence-building measures. In that regard, his delegation welcomed the offer of co-operation with the Agency that had just been made by the Governor from the United States.

53. Thirdly, the refusal of one country in the region of the Middle East to accede to the NPT and to associate itself with the international community's efforts to establish a nuclear-weapon-free zone in that region, could not be dissociated from its eloquent silence with respect to Programme 93+2. There was clearly a source of nuclear proliferation in that region which needed to be dealt with in the context of the strengthening of the non-proliferation regime. All the evidence suggested that the country in question had a clandestine nuclear programme that threatened regional and international security. Algeria would have liked to see the same energy devoted to uncovering that clandestine programme as had been applied in the case of Iraq.

54. Lastly, with regard to the role played by international public opinion when it came to matters as important as Programme 93+2, he said that whatever the views of the public might be in other countries, public opinion in Arab States was certainly not in favour of a regime which promoted double standards.

55. In conclusion, his delegation reiterated its willingness to take part in a responsible effort to achieve a consensus and endorsed the mechanism recommended in paragraph 78 of document GOV/2863. He pointed out however that that acceptance was without prejudice to his delegation's subsequent position and that it would be necessary to ensure the mechanism's universality and to define its objectives. As to the committee established to review the protocol, its mandate should be to agree on the broad outline of the protocol and its composition should be based on the principle of universality.

56. Mr. WALKER (Canada) said that the proposals contained in document GOV/2863 represented the culmination of an intensive, time-consuming and difficult process. The Board had undertaken such a process because it had recognized that, after the events in Iraq and the DPRK, the Agency's safeguards system was not sufficient to enable the detection of clandestine nuclear weapons programmes in States with comprehensive safeguards agreements.

57. Equally important, the Board had recognized that there was the possibility of achieving very significant reductions in the number of nuclear weapons for the first time since the beginning of the nuclear age. Further development of the Agency's safeguards system was essential to achieving significant nuclear disarmament. The current system, which focused on States with comprehensive agreements, was designed to coexist with a regime in which the nuclear-weapon States counted upon very large numbers of nuclear weapons in order to maintain their security. However, in order to bring about significant reductions in the nuclear arsenal, it was necessary to develop not only the scope - in other words ultimately to include the nuclear-weapon States - but also the very nature of safeguards. They would have to be able to provide much more assurance about the non-existence of clandestine nuclear weapons programmes than they did at present.

58. That larger picture needed to be kept in mind in taking decisions on the proposals outlined in document GOV/2863, particularly when the discussion shifted from the political to the industrial arena.

59. Canada, like other States with large nuclear sectors, needed to keep its nuclear industry fully apprised of the significance of Programme 93+2 and to allay any concerns that might arise. The Government and the nuclear industry needed to work together in those countries in order to determine how Programme 93+2 could, through its reduced emphasis on material accounting as the sole touchstone of Agency safeguards, help lighten the load on the nuclear industry.

60. The broader picture should not be incompatible with the interests of the nuclear industry, which could only benefit from a programme that enhanced both the efficiency and the effectiveness of safeguards. Furthermore, particularly in the long term, it could only benefit if, on the basis of expanded information and increased access appropriately designed to maintain commercial confidentiality, the Agency was able to offer much more categorical assurance regarding the non-existence of a clandestine nuclear weapons programme and if an approach were adopted that placed less emphasis on simple material accountancy and was less tied to the size of a country's peaceful nuclear programme.

61. The measures outlined in document GOV/2863 represented a solid basis for consensus and it was time to move to the negotiation of the protocol. The draft protocol proposed by the Secretariat and the proposed measures for implementation under complementary legal authority contained in document GOV/2863 should be taken as the basis for those negotiations.

62. In recent months, Canada had largely resolved the problems it had been experiencing with certain measures. However, it still had difficulties with the Agency's request for access to information on research related to the nuclear fuel cycle that did not involve nuclear material, on which Canada did not currently collect information. It also had difficulty with the Agency's requirement for data on imports of nuclear equipment or material, since Canada considered that it already provided sufficient export data. It should be possible to resolve those issues without a loss of the information required to give credible assurances of the absence of relevant undeclared activities. A number of other features of the proposals relating to broader access to information and to increased physical access would require fine tuning during discussions on the protocol.

63. His delegation was convinced of the need to address such concerns within the framework of document GOV/2863 and within the spirit of the decision taken by the Board in 1992 when it reaffirmed the requirement that Agency safeguards should provide assurance as to the correctness and completeness of nuclear material declarations made by States with comprehensive safeguards agreements. The negotiations on the protocol should be used to fine tune the proposals and find an appropriate legal formulation for them.

64. Mr. INDELICATO (Italy)*, speaking on behalf of the European Union, Cyprus, Malta, and the associated countries of Central and Eastern Europe, noted that in the year that had elapsed since the Agency had submitted to the Board the first draft of a comprehensive programme for strengthening the effectiveness and improving the efficiency of the safeguards system, both the Agency and Member States had continued to work actively on Part 2 of the Programme and the European Union had begun implementing the measures contained in Part 1.

65. The European Union and associated countries acknowledged that in order to strengthen the Agency's ability to detect undeclared nuclear activities it was necessary to provide it with broader access to information and increased physical access to sites of concern, when that was necessary to resolve questions and inconsistencies, and also to provide for environmental monitoring outside declared sites. They therefore reaffirmed their strong support for the

* Member States not members of the Board of Governors are indicated by an asterisk.

Agency's general approach and considered that the adoption of the Part 2 measures would grant the Agency the necessary powers to perform the role envisaged for it in the conclusions of the 1995 NPT Review and Extension Conference and its decision on the Principles and Objectives for Nuclear Non-proliferation and Disarmament. They also believed that the Agency was the only institution which could fulfil the task in a non-discriminatory manner and in the interests of all concerned.

66. In that regard, it was important to strike the right balance between the necessary strengthening of the effectiveness of the safeguards system and the domestic impact of the new measures in the Agency's Member States, taking full account of all the constitutional and legal implications of those measures.

67. The process of preparing Programme 93+2 had shown that it was impossible for the safeguards system to treat each State as a self-contained entity. The time had therefore come for all Member States to provide active support for the safeguards system in accordance with their various international commitments. Countries not having comprehensive safeguards agreements with the Agency should play their part in the Programme 93+2 exercise and the current consultations among the nuclear-weapon States were therefore very welcome. Other States without comprehensive safeguards agreements should also consider how they too might contribute to the effective implementation of Programme 93+2.

68. As a general principle, the Agency should be allowed appropriate access in order to follow up questions and inconsistencies in connection with the information provided in a State's Expanded Declaration. In cases where national security, safety and commercial sensitivity were involved, there should be provision for the State to offer alternative means of resolving such questions and inconsistencies. In that regard, it was to be hoped that the Agency would make a thorough evaluation of the situation in the State concerned and only resort to complementary access if a question or inconsistency identified and then confirmed by the Agency's internal assessment procedures could not be resolved through direct contacts with the authorities of that State. Such internal consideration by the Agency, which should not delay the activities in question, would help to ensure that complementary access was not granted on the basis of mistaken information or a false alarm. Moreover, it would avoid unnecessary extra work for the Agency and the risk of the inappropriate use of increased access. Such internal consideration should never lead to mechanical and systematic verification of information provided in the Expanded Declaration. The occurrence of false alarms should be acknowledged by the Agency and reported to all the parties to the safeguards agreement, so as to avoid uncontrolled consequences.

69. He noted the Secretariat's proposal not to include dual-use items in the protocol as a category on which information relating to transfers was required, and also the comments in paragraph 51(g) of document GOV/2863. The addition of the words "where available" in connection with information on imports and exports provided States with the necessary flexibility by not requiring them to provide information that they were unable to obtain.

70. It was understandable that the Agency would need to update the lists of items contained in the proposals. Those lists should be selective, the criteria for the inclusion of new items in the lists should be clearly stated, and, after the approval of such additions, a legal instrument should be concluded between the Agency and each Member State in order to amend the additional protocol as far as the lists were concerned.

71. Once it had decided that complementary access was necessary, the Agency should inform the State concerned and provide the reasons why access was being sought. Twenty-four hours' notice of the intention to proceed to complementary access was a reasonable time. As to the definition of sites, the perimeter of any site should be determined through collaboration between the State and the Agency, following a proposal made by the State.

72. Reference to paragraphs 87-89 of document INFCIRC/153 should be included in the protocol in order to ensure the harmonization of the modalities for conducting inspections, in particular the provisions that inspections must not interfere with the operation of facilities and that a State should have the right to have the inspectors accompanied by its representatives, provided that the work of the Agency was not delayed or impeded.

73. It should be clearly stated that the activities that the Agency was entitled to carry out during complementary access should be directly connected with the content of the Expanded Declaration - in other words, limited to visual observation, the interviewing of personnel, access to records, environmental sampling, and any other mutually agreed objective measures for resolving the uncertainties that prompted the need for complementary access. The distinction between inspections carried out under INFCIRC/153-type agreements and visits carried out under the additional protocol should be emphasized.

74. The State concerned had the right to expect confidentiality with regard to information and sensitive facilities. The same confidentiality should apply to the Agency's findings after complementary access inspections and those findings should be reported to the State concerned in the interests of transparency. The protection of confidentiality should be considered together

with the general concept of managed access (Article 6 of the draft additional protocol) and paragraph 8 of document INFCIRC/153.

75. The exact role of EURATOM in the implementation of the new measures would have to be defined by the European Union once it became clear which Part 2 measures of Programme 93+2 had been accepted.

76. The provision in the additional protocol for subsidiary arrangements to be concluded pursuant to paragraph 40 of document INFCIRC/153 was a valid one. The State should retain the right to require the Agency to negotiate subsidiary arrangements and to specify in detail how the procedure for complementary access set out in the protocol was to be applied, in particular so as to ensure the protection of sensitive information.

77. The European Union and associated countries took note of the fact that an enlarged safeguards system would result, at least initially, in increased costs. However, it trusted that, as the measures became established, the savings that were expected to accrue would lead to the envisaged cost neutrality as soon as possible.

78. In the light of those comments, the European Union and associated countries would welcome the establishment by the Board of an open-ended committee with the mandate of drafting a model additional protocol which reflected the common responsibility of all States for universal non-proliferation and for strengthening the effectiveness and improving the efficiency of the safeguards system. The basis for its work should be the proposals contained in document GOV/2863 and the draft additional protocol contained in Annex III of that document, with due account being taken of the Board's discussions. States without comprehensive safeguards agreements should accept those measures of Programme 93+2 which were relevant to them in the light of their respective non-proliferation commitments. The open-ended committee should report on its work to the Board's December meetings and, if possible, submit a draft model protocol.

79. In conclusion, he said that the comments on behalf of the European Union and associated countries had been made in a spirit of co-operation, with a view to facilitating the finalization of a high-profile document, which they hoped would enable the Agency to overcome the danger of nuclear proliferation.

80. Mr. de OURO-PRETO (Brazil) said that while his delegation welcomed some of the changes made in document GOV/2863, it still had serious difficulties with the text.

81. Firstly, he wondered how the Secretariat had arrived at the figure of approximately 200 person-days given in paragraph 21 of document GOV/2863 as the cost of implementing the complementary activities in 1997. How could assumptions be made regarding the number of States bound by the additional protocol in 1997, or in any other year for that matter? The additional protocol was a legally binding instrument which had to pass through the national legislative processes of many countries prior to entry into force. Any predictions regarding the date of implementation were thus mere speculation.

82. With regard to the entry into force of the protocol, his delegation was also concerned to avoid a situation where the protocol was implemented with respect to a few countries, while for the majority of States with full-scope safeguards agreements it had not yet entered into force. That would add - over and above the existing discrimination between nuclear-weapon and non-nuclear-weapon States - a further discrimination among non-nuclear-weapon States that were parties to full-scope safeguards agreements. One solution might be to require that additional protocols entered into force only after a certain number of States, perhaps 50 or 60, had become parties to the protocol. That was a widely used clause in international treaties and, while not a perfect solution, it would greatly alleviate the additional discrimination factor. In view of the above, his delegation could not agree to the procedure outlined in paragraph 13 of document GOV/2863.

83. While document INFCIRC/153, the basis for present full-scope safeguards agreements, did not follow any such implementation procedure, there were treaties, notably the NPT, which enjoined States Party to conclude safeguards agreements with the Agency. Any party to the NPT which did not enter into such an agreement was in violation of the Treaty.

84. There was at present no international legal instrument requiring States to conclude a protocol additional to comprehensive safeguards agreements with the Agency in order to provide the Agency with the means to detect undeclared activities. Indeed, from a strictly legal point of view, it was questionable whether Programme 93+2 could be incorporated as a protocol to a safeguards agreement in connection with the NPT, Article III of which stated, *inter alia*, "The safeguards required by this Article shall be applied on all source or special fissionable material in all peaceful nuclear activities within the territory of such State, under its jurisdiction, or carried out under its control anywhere." No reference was made to any of the items or activities listed in Article 16 of the proposed draft additional protocol. Legal experts would have to find a way out of that apparent legal inconsistency.

85. While welcoming the useful information provided by the Secretariat in paragraph 34 of document GOV/2863 on the Agency's procedure for dealing internally with inconsistencies and anomalies, his delegation objected to the use of the word "questions" in addition to "inconsistencies". His delegation was not opposed, in principle, to the idea of requesting expanded access in order to resolve significant inconsistencies, provided that was clearly stated in the final legal instrument. "Inconsistency" was a meaningful concept - perhaps in need of some further definition - but "question" was too vague and would create rather than solve problems.

86. It was clear that implementation of Programme 93+2 would increase the discrimination inherent in the NPT between nuclear-weapon and non-nuclear-weapon States. It was extremely difficult for many of the latter to accept such a state of affairs and significant steps would have to be taken to compensate for that discrimination. His delegation therefore welcomed the last paragraph on page 26 of document GOV/2863, in which the Secretariat stated that it was prepared to develop proposals imposing legal obligations on nuclear-weapon States and on States with INFCIRC/66/Rev.2-type agreements. The Secretariat should not confine its proposals to information on the export and import of nuclear equipment and non-nuclear material specified in document GOV/2629 and should seek innovative solutions in other areas to reduce the imbalance. His delegation would like the Secretariat to present those proposals to the next series of Board meetings.

87. Paragraph 48 of document GOV/2863 touched on the question of confidentiality. As a result of the implementation of Part 2 of Programme 93+2, the Agency would have access to extremely sensitive technological and commercial information. In that regard, his delegation welcomed the Secretariat's commitment to continue reviewing the Agency's procedures and practices for meeting the obligation contained in paragraph 5 of document INFCIRC/153. The Secretariat should put forward proposals arising from that review. Any such proposals should contemplate measures for new and more rigid criteria for the selection of inspectors, as well as ways and means of imposing administrative and penal sanctions against an inspector, or other member of staff, in the event of a leak of sensitive information. It was therefore extremely difficult for his delegation to agree to at least some of the procedures outlined in paragraph 72, although it had no objection to independent direct communications between the field and Headquarters, provided the relevant laws and regulations were respected.

88. His delegation still felt that the wording of the proposed additional protocol was extremely vague compared with the rest of the document. He hoped that, in preparing the

protocol, account would be taken of the need to ensure a proper balance between the rights and obligations of the Agency and those of States.

89. Brazil also still harboured serious misgivings with respect to certain technical issues. With regard to the Expanded Declaration, the level and degree of information to be provided as defined in paragraph 51(a) of document GOV/2863 were not sufficiently precise. It should not be forgotten that information was being requested on such commercially sensitive items as Zircaloy, carbon fibres, material resistant to uranium hexafluoride and power lasers.

90. With regard to paragraph 51(c) the term "site" should be defined more clearly. It had to be recognized that a site to be reported to the Agency might not conform to the perimeter of the entire installation. For example, a laboratory with nuclear material might be surrounded by a vast industrial complex not engaged - even remotely - in nuclear-related activities.

91. In connection with paragraph 51(d) on the provision of data on specified equipment, the question arose as to the degree of detail and order of magnitude. Given the sensitivity of the data, information which was too precise would cause great difficulties. General information of a high order of magnitude might provide a possible solution. The provision of extremely sensitive commercial and technological information was one of the most important issues for many countries, including his own.

92. As to paragraph 51(f), he reiterated his delegation's view that the measures proposed represented a change in the starting point of safeguards. The fact that the existing accounting and control measures would presumably not be applied in full did not alter the basic question, which should be appropriately addressed.

93. Paragraph 52 also posed questions as to the degree of information required. Sometimes plans were shelved on account of budgetary constraints. The provision assumed that States had well-defined plans for the development of their nuclear activities, which was not always the case. He wondered whether it was more useful for safeguards purposes to have information which changed periodically - sometimes radically - or a very general description of a country's intentions, without any degree of certainty.

94. Environmental sampling, if applied judiciously, could be a very effective and non-intrusive technique in helping to detect non-declared nuclear activities. However, further elaboration on how such samples were to be collected and utilized was required. Criteria should be established for the application of environmental sampling in the safeguards strategy for each

type of installation and for the country as a whole. Criteria should also be defined for the selection of points where sampling was to take place. Another important point was that the country inspected should have within its territory a laboratory for analysing samples under similar conditions to those of the Agency's laboratory. If that proved impossible, experts from the country concerned should be able to follow the analysis. While the results of environmental sampling could give a good indication of the existence of undeclared activities, they did not provide absolute proof.

95. With regard to increased access, it was clear that not all, if any, of the information provided in the Expanded Declaration would be subject to verification. The activities listed in Article 16 of the draft additional protocol were extremely sensitive from all - including the proliferation - points of view. If granted, broader access should be made conditional upon the need to resolve significant inconsistencies which could not otherwise be resolved. In view of the sensitivity of the information involved, his country was totally opposed to the examination of records and the use of other objective methods that had been demonstrated to be technically feasible as they provided no guarantee with respect to the legitimate rights of States regarding the protection of commercial and industrial secrets.

96. Paragraph 61(d), which provided the Agency with access anywhere for the purpose of environmental sampling, was unacceptable. What was being proposed was the trivialization of special inspections which should, as the name indicated, remain special.

97. His delegation considered that the appropriate mechanism for finalizing the required legal instrument would be a working group or committee with a broad mandate enabling it to take into account all the views expressed at the present and at previous meetings of the Board. It should be capable of discussing in depth all the relevant issues with no time restraint. For its part, Brazil was prepared to contribute constructively to the work of such a body.

98. Mr. EL-FEKI (Egypt) said his country continued to attach great importance to non-proliferation issues and to the Agency's role in that regard. Document GOV/2863 demonstrated the need to develop proposals which struck the desired balance between strengthening of safeguards, on the one hand, and meeting the political and technical requirements of Member States, on the other. Egyptian experts had taken part in the informal briefings held on 20 and 21 May 1996, at which they had commented on the proposals contained in document GOV/2863. Those comments and the ones that he was about to make stemmed from the desire to attain a common objective and he trusted that they would be taken into consideration.

99. Strengthening of the safeguards system should be non-discriminatory. One of the most important aims was expansion of the scope of application in order to achieve universality. The Agency's proposals should not focus solely on comprehensive safeguards agreements, as that would lead to an imbalance between the obligations of Member States that were party to the NPT and those that were not. Furthermore, increasing the commitments of States with comprehensive safeguards agreements might discourage other States from concluding such agreements.

100. The proposals contained in document GOV/2863 involved important legal and technical aspects. The Board of Governors should therefore adopt a cautious approach and not rush into making a final decision - sufficient time should be allowed to attain maximum support from Member States for the proposals. Once Board approval had been given to Part 2 of Programme 93+2, implementation could begin on an experimental and voluntary basis so that the practical difficulties encountered could be evaluated.

101. Equal support should be given to all components of the non-proliferation regime. The NPT Review and Extension Conference had highlighted four other avenues for enhancing nuclear non-proliferation: conclusion of a comprehensive test ban treaty, initiatives to stop the production of fissile material, progress in nuclear disarmament and the establishment of a nuclear-weapon-free zone in the Middle East. It was incumbent upon the parties to the NPT to make progress along those lines. His delegation trusted that appropriate international support would be given.

102. Egypt intended to make a positive contribution to the further study of the details of the Part 2 proposals. There was a need to minimize, or prevent, the strengthened system from intruding into non-nuclear-related fields. Some materials in the nuclear fuel cycle were commonly used in non-nuclear industries, such as the energy, petroleum and chemical industries. In addition, dual-use equipment had important applications in non-nuclear industries and research. Expanding the scope of safeguards to encompass R&D activities in nuclear and related fields would mean extending State and Agency control to the programmes of universities and research centres, thereby placing onerous financial, administrative and legislative burdens on those institutions to the extent of possibly hampering R&D activities.

103. In conclusion, he said that the final text of Part 2 of Programme 93+2 should include innovative solutions and additional assurances with regard to preserving industrial, defence, commercial and technological confidentiality and certain ambiguous terms should be clarified.

104. Mr. LEE Seung Kon (Republic of Korea), having acknowledged the efforts made by the Secretariat in finalizing the proposals contained in document GOV/2863, said that the inclusion in that document of a summary in paragraph 9 of the activities undertaken in implementation of the Part 1 measures had been useful. His country had always supported the strengthening of the safeguards system in order to achieve a safer and more peaceful security environment. Thus, it had actively participated in the preparation of the Part 1 measures of Programme 93+2 by making facilities available in Korea for environmental monitoring field trials and had also participated in baseline environmental sampling in 1996. The Republic of Korea would be one of the few countries affected to an appreciable extent by implementation of the Part 2 measures. It was, however, willing to accommodate that extra burden in the interests of global non-proliferation.

105. Part 2 measures would take effect only after each individual Member State had signed or ratified the additional protocol. It was important to take into consideration the concerns of individual Member States, provided they did not affect the main thrust of the strengthening measures. It was also essential to maintain a spirit of co-operation and to avoid confrontation under all circumstances.

106. Since the Part 2 measures aimed both to improve the efficiency of the safeguards system and to strengthen its effectiveness, a balance between efficiency and effectiveness was required. The Secretariat should explore the concept of a "trade-off" between intrusiveness and the frequency of inspections. States which bore an extra burden from Part 2 measures should be allowed to benefit from a readjustment of inspection frequency at low proliferation risk facilities.

107. While he welcomed the fact that the information to be provided by Member States under the Expanded Declaration had become more specific in its contents and scope and that vagueness in the definition of site had also been clarified, he noted that there was still room for further clarification in the draft proposals contained in document GOV/2863.

108. With regard to paragraphs 68 and 70, his delegation was in favour of granting complementary access only when there was an inconsistency or a question in order to avoid wasting the Secretariat's limited resources and causing unnecessary obstruction to the normal functioning of the facilities concerned. Similarly, environmental sampling at locations other than nuclear and nuclear-related sites, as described in paragraph 53, should be sought only when an inconsistency or a question arose.

109. Information on the export and import of nuclear equipment, non-nuclear material, and nuclear-related dual-use items would increase transparency and confidence that those items were being used only for peaceful purposes. Such measures would, however, only be effective if States which did not have comprehensive safeguards agreements - including nuclear-weapon States - participated. That would be a step towards a more universal non-proliferation system and a move away from the present partial non-proliferation system. The Secretariat should develop a legally binding agreement to make that a formal obligation.

110. His delegation fully supported the idea, proposed in paragraph 78, of establishing an appropriate mechanism to finalize the legal instrument and looked forward to participating actively in that work. It would, however, be important to define carefully the work of that mechanism in order to avoid renewed discussion on aspects on which agreement had already been reached. A reasonable time frame should also be allowed so as to avoid any unexpected prolongation.

111. Mr. WALKER (Australia) said that much progress had been made to strengthen the safeguards regime under Programme 93+2, and the extent of agreement already reached should not be underestimated. If international confidence in the safeguards system was to be maintained, it needed to be continuously adapted to meet contemporary proliferation concerns and updated to give it the capacity to detect undeclared activities and to improve its efficiency. There were at least four reasons why that was essential: firstly, Agency safeguards provided both a warning of and a disincentive to the spread of nuclear weapons and were therefore nothing short of vital to global security; secondly, strengthened safeguards were a prerequisite for the climate of confidence needed for accelerated progress in reducing nuclear arsenals and moving towards complete nuclear disarmament; thirdly, the safeguards system, strengthened by measures to enhance the transparency to the Agency of States' nuclear activities along the lines envisioned in Programme 93+2, could make a major contribution to regional security and peace and it was no accident that regions of endemic tension and insecurity were also those where full-scope Agency safeguards were not applied in all countries; and fourthly, full-scope safeguards which were up to date and as effective as possible were a necessary basis for international co-operation and trade in nuclear materials and technology for the benefit of all countries.

112. Australia was not alone in considering that strengthened safeguards were absolutely essential to fundamental national, regional and international security requirements - the strengthening of safeguards had almost universal support, as expressed unambiguously at the 1995 NPT Review and Extension Conference.

113. Discussions of Programme 93+2 and related field trials had been in progress for almost three years, and it was time for the Board to adopt the very reasonable package of measures proposed. Document GOV/2863 was a good basis for moving towards implementation of strengthened safeguards. Member States had had ample opportunity to contribute to the substance of the measures and there was now consensus on the vast majority of them. Any remaining concerns could be addressed by a drafting group of technical and legal experts mandated to finalize the protocol giving effect to the measures. Such a group could refine the measures further in response to the legitimate concerns of States, but his country would have serious difficulties with any significant weakening of the essential provisions related to reporting and access contained in document GOV/2863, which in many instances represented compromise positions reached after extensive consultations.

114. During the negotiations to draft the model safeguards agreement contained in document INFCIRC/153, many States had expressed concern about the intrusive and burdensome nature of its obligations, but most of those concerns had proved to be greatly exaggerated. He was confident that the Part 2 measures would not impose excessive or unreasonable burdens on States, nor would they impede economic and other development. They represented an effective balance of the various elements needed to enhance the safeguards regime, and the initial cost and inconvenience of implementing the Part 2 measures would be small compared to the benefits in terms of reliable assurances about undeclared activities.

115. Australia was conscious of the concern that the Part 2 measures should, as far as possible, be universal in application and not impose a disproportionate burden on non-nuclear-weapon States with significant nuclear industries. That was an understandable preoccupation and he agreed with the Governor from the United States that States should accept for themselves the controls that they wished others to accept. The nuclear-weapon States should therefore accept as many of the measures in Programme 93+2 as could be justified in their circumstances. Their acceptance of legal obligations in that regard would be a very helpful response to the concerns raised. States Party to the NPT all had a duty to ensure that their obligations under the Treaty were given effect internationally and domestically.

116. Australia did not accept that the proposed measures for additional access were appropriate only to resolve inconsistencies, since such an approach might make them less effective in detecting undeclared nuclear materials or activities.

117. The issue of what standard to apply to the requirement to declare nuclear-related research and development activities that were not owned, funded or authorized by the State had also been raised as a concern. His delegation believed that, in line with the obligation in Article III.(2) of the NPT to exercise control over the export of equipment especially designed or prepared for the processing, use or production of special fissionable material, States should accept an obligation to use all reasonable efforts to declare all research and development activities related to the most sensitive parts of the fuel cycle, even where nuclear material was not present. In order to exercise effective control, States should also control the possession of especially designed or prepared items and the associated technology. Furthermore, such control was plainly essential in order to ensure compliance with the obligation in Article II of the NPT not to acquire nuclear weapons.

118. Failure to include an activity of which the State was unaware in the Expanded Declaration should not be considered as a breach of the State's commitments if the State had acted in good faith. However, taking all reasonable measures to identify and declare the activities concerned could not be limited to taking only measures that were permitted by existing laws and regulations. Such an approach would be unacceptable as it could lead to an uneven and discriminatory implementation of Programme 93 +2, and could ultimately provide an avenue for abuse if a State were to pass very restrictive legislation.

119. He was confident that those and other concerns could be accommodated, particularly if States bore in mind their overriding interests in achieving a strengthened safeguards system. Document GOV/2863 set out the general objectives which the Board should now move to adopt as the basis for the new safeguards system. The technical and legal drafting group would provide an opportunity to find precise wording to achieve the balance between the legitimate commercial and constitutional interests of individual States and the interest of the international community in securing a strengthened safeguards system.

120. Mr. MINTY (South Africa), having noted that a great deal of time and energy had been invested in the present issue, said that the whole question should be viewed in the context of global disarmament and non-proliferation. There had been substantial progress in that area - the most significant event since the March Board being the signing of the Pelindaba Treaty establishing an African Nuclear-Weapon-Free Zone. Four of the nuclear-weapon States had already signed the Protocol to the Treaty, and the fifth would be signing shortly. On behalf of the South African Government, he thanked the Director General for his initiative in arranging a special briefing for African Governments in Cairo on 12 April 1996, which all had found very useful.

121. Turning to the measures proposed under Programme 93+2, he reminded Member States that South Africa had already gone through a more intensive exercise in terms of safeguards inspections than the measures currently proposed and that paragraph 11 of the Principles and Objectives for Nuclear Non-Proliferation and Disarmament that had been agreed at the NPT Review and Extension Conference expressed support for strengthening the effectiveness of Agency safeguards and increasing its capability to detect undeclared nuclear activities. The Agency was in a sense the trustee of the safeguards system and all Member States had an obligation to help it discharge its responsibilities on behalf of the international community. There was no doubt about the commitment to strengthen safeguards and Member States should now identify and address the remaining areas of disagreement so that implementation of the Part 2 measures could begin. The goal was to ensure that all States concluded comprehensive safeguards agreements, and every effort should be made to build the necessary confidence which would enable them to do so.

122. Document GOV/2863, which was a much-improved version of the previous Discussion Draft II, showed the rationale behind the proposed measures much more clearly and many of the concerns of Member States, including specific suggestions for improvements, had been addressed, including the concerns of his own country. The remaining problems of some States included the degree of intrusion entailed, the increased cost of implementation and the potential for leaks of commercially sensitive information. The briefing meeting organized by the Secretariat in May had also been helpful in clarifying some outstanding issues. However, his delegation still had some comments for further refinements to the document, which could perhaps be considered during the process of finalizing the protocol.

123. South Africa continued to recommend a system of site-specific arrangements at sites with nuclear material where it was anticipated that complementary access would often be requested. Those arrangements could be on the basis of a standing agreement introduced in the subsidiary arrangements or on a case-by-case basis.

124. It was not clear how the results and conclusions of complementary access would be reported to the States concerned and whether that needed to be specified in the protocol. No provision was explicitly made in either the Expanded Declaration or the protocol for the Agency to provide an explanation of the reasons for or purpose of the request for complementary access. As different types of complementary access were foreseen, such provision would ensure a non-confrontational situation which would facilitate the application of the new measures.

125. His delegation supported the recommendations in paragraphs 74-78 of document GOV/2863 and the Director General's proposal that the appropriate mechanism referred to should be a meeting of suitably qualified legal and technical experts, as well as diplomats, to examine in detail how the draft protocol could be shaped and adjusted so as to accommodate the remaining concerns as far as possible. His delegation hoped that the meeting of experts would be very specific in identifying problematic wording and that it would make specific proposals for improvements where there was disagreement. A perfect document was not possible and the group of experts should concentrate on building on what had been achieved so far.

126. Finally, he noted that his country's Foreign Minister had issued a statement expressing regret at the recent nuclear test conducted by the People's Republic of China.

127. Mr. MAZILU (Romania), having endorsed the statement made by the representative of Italy on behalf of the European Union and associated countries, said that his country had constantly supported the Director General's efforts to make the safeguards system more effective and more efficient. In particular, it had encouraged the preparation and the implementation of the Part 1 measures of Programme 93+2 and was prepared to start implementation of the Part 2 measures.

128. The disclosure of clandestine nuclear programmes, the increasing number of facilities and the growing amount of nuclear material placed under safeguards had shown that it was necessary to take action to ensure accurate detection of any undeclared nuclear material, facilities and activities. An effective safeguards system could also help to avoid inaccurate official or unofficial views and statements on very sensitive issues such as violations of the NPT, on the basis of which unfounded accusations might be spread.

129. His delegation believed that Programme 93+2 provided the basis for a significantly strengthened and more efficient safeguards system. Integrated implementation of all the proposed measures was necessary in order to ensure maximum effectiveness. However, he noted that the additional costs required for environmental sample analysis, implementation of advanced technology and the application of safeguards to nuclear material removed from military programmes in nuclear-weapon States might hamper efforts to introduce the proposed new safeguards measures under Programme 93+2. Some other issues were still causing concern to various Member States. As the ultimate success of the Programme was largely dependent on the number of Member States participating in the system, increased attention should be paid to the issues of universality, confidentiality, and broader access to R&D facilities under private ownership.

130. To resolve those issues, it would be appropriate to set up an open-ended committee under the efficient chairmanship of the Board's Chairman to identify mutually acceptable solutions upon which consensus could be reached.

131. For its part, his Government had already embarked on new measures under the Programme, including the modification of the general part of its subsidiary arrangements for the early provision of design information; participation in the reporting scheme; and the application of the simplified designation procedures for safeguards inspectors. Romania's commitment to the implementation of both parts of Programme 93+2 as an integrated package demonstrated its full transparency and determination to develop only the peaceful applications of nuclear science and technology.

132. Mr. KASEMSARN (Thailand) having welcomed the Declaration of the Nuclear Safety and Security Summit, which, inter alia, supported the strengthening of the Agency's safeguards system, reiterated his country's support for Programme 93+2, but noted that the Programme's success depended upon it being equitably applied to all Member States.

133. With regard to the proposal for increased access at nuclear facilities and LOFs, he said that requests for such access should provide clear justifications and the mechanism and procedures for such access should be agreed upon by all Member States.

134. Lastly, he endorsed the establishment of a drafting group of experts in order to finalize the draft protocol.

135. Mr. AL-GHAIS (Kuwait) praised the Agency's efforts to strengthen the effectiveness and improve the efficiency of the safeguards system and noted that the Board now had a unique opportunity to fill in the gaps in the present system which had allowed countries such as Iraq and the DPRK to build their clandestine nuclear programmes. In conformity with the recommendations of the 1995 NPT Review and Extension Conference, which had called for the strengthening of the Agency's efforts to improve safeguards and an increase in its capability to detect undeclared nuclear activities, he hoped that the Board would be able to agree on the Part 2 measures.

136. While appreciating the reference in paragraph 16 of document GOV/2863 to the areas in which States without comprehensive safeguards agreements could make a contribution, he pointed out that it was essential to ensure the comprehensive and international nature of the system. In that connection, he urged all those States which had not yet acceded to the NPT to

do so as soon as possible. Such a move would also promote the creation of nuclear-weapon-free zones.

137. With regard to the confidentiality of commercially or technically sensitive information, he noted that paragraph 48 provided assurances in that respect and that the Agency's procedures and practices for meeting that obligation would continue to be subject to review in order to ensure their appropriateness and effectiveness.

138. With reference to the expected increase in the costs of implementing the Programme, although the Secretariat had indicated that the cost increases would even out after some years, he urged it to reduce expenditure as soon and as much as possible and to seek other ways of covering the increases without reducing the Programme's impact.

139. With those comments, his delegation supported the measures proposed in the document.

140. Mr. AKAO (Japan), noting that the measures contained in document GOV/2863 had been much improved, said that the document would serve as a good basis for future discussions to finalize a legal instrument and that the informal briefing in May had provided a very useful clarification of the concepts proposed.

141. It was important to establish a strengthened safeguards system to provide the Agency with increased capabilities to detect undeclared nuclear activities, and also to improve the efficiency of safeguards implementation in the light of the severe financial constraints facing both the Agency and many Member States. He therefore greatly appreciated the progress made on Programme 93+2.

142. With respect to the implementation of Part 1 measures, his delegation was pleased with the progress of consultations between the Secretariat and the countries concerned, as well as the progress in the implementation of certain new measures. For its part, Japan had made every effort to facilitate their early implementation - the Agency had already collected environmental samples at certain facilities in Japan and the demonstration test for remote monitoring of safeguards data would take place in the very near future. His Government would continue to co-operate fully with the Agency in the implementation of those Part 1 measures.

143. With regard to the question of the universal application of the Part 2 measures, he noted that the more complete the information available for that purpose was, the greater the Agency's ability would be to detect undeclared activities. The application of some of the new measures

could improve not only the implementation of comprehensive safeguards agreements, but also the implementation of item-specific and voluntary-offer safeguards agreements. All States, including those without comprehensive safeguards agreements, should therefore accept the new measures to improve the efficiency of safeguards implementation and to strengthen the Agency's capability to detect undeclared activities. All the countries concerned should consider seriously how they could share that responsibility with the countries that had comprehensive safeguards agreements. The Board should request the Secretariat to develop a draft of a legal instrument for that purpose as soon as possible, as suggested in paragraph 16 of document GOV/2863, and the negotiations on the two legal instruments should be linked if possible.

144. The quantity of confidential information provided to the Agency would significantly increase under the proposed new measures. While appreciating the Secretariat's efforts to provide protection, he said that it was necessary to establish a viable mechanism and specific procedures and requested that the results of efforts in that area be reported as soon as possible.

145. Turning to the issue of access to information, he said that the measures for broader access to information on nuclear R&D did not clearly identify the scope of activities which were owned, funded or authorized by the State. States were not usually in a position to obtain the relevant information from the private sector on nuclear R&D not involving nuclear material, nor could they guarantee the credibility or correctness of information acquired. It would therefore be better if the scope and level of information on nuclear R&D to be provided to the Agency were more clearly defined. A State's obligation in that area could be that a State should commit itself to make all reasonable endeavours to supply all relevant information on nuclear R&D which it could assemble and provide to the Agency within existing laws and regulations. Japan also believed that R&D on nuclear safety was not closely related to a State's capability to produce nuclear material of concern and such R&D should therefore be excluded from the activities to be reported to the Agency.

146. His Government recognized the usefulness and effectiveness of increased physical access to improve the Agency's capability to detect undeclared nuclear activities. However, such access should be granted only to follow up questions and inconsistencies relating to information provided in a State's Expanded Declaration. Furthermore, a statement of its purpose should be provided. In order to reduce the practical difficulties for a State while maintaining the effectiveness of complementary access, the Agency should, in principle, provide the State with 24-hours' notice of its intention to exercise its right to complementary access. The nature of questions and inconsistencies intended to be resolved through complementary access should also be explained at the time of the notification and reasonable limits should be set upon the

frequency of such complementary access to the same site or, in the case of a complex site, to the same installation within a site. When the Agency made use of increased access to nuclear R&D locations, a State should only be obliged to make all reasonable endeavours to facilitate such access within existing laws and regulations for the purpose of resolving questions or inconsistencies. His delegation also believed that subsidiary arrangements should be negotiated between States and the Agency with a view to specifying the details of procedures for the application of increased physical access.

147. With respect to the adoption of simplified inspector designation procedures and direct communication between inspectors in the field and Headquarters, a common understanding among the countries concerned should be formulated during discussions on a legal instrument.

148. At the present stage, Member States still held different views on certain very important issues. Nevertheless, he welcomed the early establishment of a committee to discuss the required legal instrument as suggested in the recommended action contained in paragraph 78 of document GOV/2863 and in the introductory statement by the Director General. His delegation supported that suggestion on the understanding that the views of Member States expressed at the present series of Board meetings would be officially recorded and that the views of the Secretariat outlined in document GOV/2863 and the officially recorded views of Member States would be taken into consideration on an equal footing in future deliberations on the legal instrument.

149. In conclusion, he said that once agreement had been reached on the introduction of Part 2 measures, Japan was determined to take all the necessary steps, including legislative steps if necessary, to ensure the smooth and effective implementation of those measures. Furthermore, he hoped that the discussions on the finalization of the legal instrument would result in a common understanding on issues such as the scope and procedures of the new measures in order to ensure their smooth implementation in all the countries concerned.

The meeting rose at 6.5 p.m.

EXCERPT FROM THE SUMMARY RECORD OF THE BOARD'S 895th MEETING

1. Ms. LAJOUS VARGAS (Mexico) commended the Secretariat on the clarity of document GOV/2863, on the explanation of the implications of the proposed Part 2 measures and on the explanation also of how and when those measures would be applied.
2. She also commended the Secretariat on its efforts to take into account many of the concerns expressed at the Board's previous session. Nevertheless, a number of points still required clarification.
3. One such point related to the question of the universality of application of the proposed measures; there might well be non-uniformity in the application of those measures if it was accepted that different States had different capacities for or possibilities of complying with the rules. In that context, her delegation hoped that the nuclear-weapon States and the States with item-specific safeguards agreements would allow the Programme 93+2 measures to be applied within their territories as evidence of their commitment to non-proliferation and universal disarmament.
4. The importance of the confidentiality of information obtained by the Secretariat either through the Expanded Declaration or through application of the measures and of new safeguards techniques could not be overemphasized.
5. With regard to the costs of applying the Programme 93+2 measures, she recalled the agreement - reached in the September 1995 negotiations on safeguards financing thanks to the skillful guidance of Ambassador Akao of Japan and Ambassador Doshi of India - whereby each "shielded" Member State of the Agency would increase its contribution towards the safeguards component of the Regular Budget gradually over a five-year period to a level corresponding to half of its base rate of assessment, it being understood that during that period the contributions of the "shielded" Member States would not be used in meeting cost increases resulting from the application of the Programme 93+2 measures. Obviously, that did not prejudice the need to negotiate a new agreement once the five-year period had elapsed.
6. Her delegation shared the concern of some other delegations that certain important points mentioned in document GOV/2863 were not covered in the draft protocol contained in Annex III to that document. For example, whereas paragraph 56 of the document stated that "sample identity is protected", Article 11 of the draft protocol made no explicit reference to environmental samples. Similarly, whereas paragraph 53 stated that "the [environmental]

sampling at locations other than nuclear and nuclear-related sites would be for resolving an inconsistency or question", Article 5 of the draft protocol did not mention that limitation.

7. With regard to increased access and its scope, it had been stated on several occasions (and was stated in paragraph 61 of document GOV/2863) that increased access would be sought only "in connection with the resolution of inconsistencies or questions or to implement a new technical measure". That clarification did not appear in the draft protocol.

8. The Mexican delegation shared the Director General's view, expressed at the informal briefing given on 20 and 21 May 1996, that the final version of the draft protocol must be completely consistent with the measures submitted for approval in document GOV/2863. That meant that there would have to be complete consistency with the Expanded Declaration - a matter which Member States and the Secretariat would have to study in detail.

9. The Mexican delegation supported the idea of establishing a committee of legal experts to draft a safeguards protocol provided that the resulting text was based on the measures actually approved by the Board. It could therefore agree to the draft protocol proposed by the Secretariat being used as a basis for the committee's work only to the extent that the draft was consistent with the approved measures.

10. The committee of legal experts should perhaps be composed on more or less the same lines as the committee which had produced document INFCIRC/153. At all events, it would have to be open-ended in order to permit the participation of all States on an equal footing.

11. Referring to element 2.c.(iii) of the Expanded Declaration, she suggested that the beginning of the last phrase be amended to read: "and, additionally, when available, information on nuclear R&D activities in the State ..."; the State should be aware of all activities of the kind in question, but it might be unaware of some.

12. With regard to the explanation of element 2.c.(viii) of the Expanded Declaration given in subparagraph 51(f) of document GOV/2863, where it was stated that "All nuclear material exempted pursuant to paragraph 37 of INFCIRC/153 ... should be reported, regardless of the amount involved", she proposed that an exception be made in cases where only gram quantities were involved.

13. Ms. OK (Turkey), having commended the efforts of the Secretariat in connection with Programme 93+2, said that, as a country which had been seriously affected - both economically and socially - by the Gulf War, Turkey had from the outset called for a more

efficient safeguards system and for the use of new techniques (such as environmental monitoring), improved access to information on possible undeclared nuclear activities, and more comprehensive information on the export and import of nuclear equipment. In that context, her delegation welcomed document GOV/2863 as it had developed out of Discussion Draft II considered at the Board's March session.

14. With the NPT Review and Extension Conference behind them and the prospect of a comprehensive nuclear test ban treaty being concluded in the near future, Member States needed to maintain the momentum towards nuclear non-proliferation and disarmament. That momentum must not be lost as a result of obstacles due to the reservations of some Member States about Programme 93+2. Her delegation sympathized with the concerns of some Member States regarding the balance between - on one hand - the promotion of the peaceful uses of nuclear energy and - on the other - verification, but believed that the two could be complementary rather than conflicting.

15. With regard to the question of the universality of the envisaged strengthened safeguards, her delegation had noted that in paragraph 16 of document GOV/2863 it was stated that "Programme 93+2 is intended to strengthen safeguards in States with comprehensive safeguards agreements, but participation of other States can enhance the effectiveness and efficiency of the implementation of the programme in several ways." That applied equally to the provision of information regarding exports of nuclear equipment and non-nuclear material. Nuclear-weapon States had a responsibility to ensure full implementation of the measures envisaged in Programme 93+2. In that connection, Turkey welcomed the commitment of the United States to accept the import/export reporting requirements that would ultimately be approved by the Board and its readiness to consider how many more parts of the programme it could implement with a view to increasing the effectiveness of the safeguards system. It hoped that other nuclear-weapon States and the States with item-specific agreements would join in that commitment. It also hoped that the adoption of Programme 93+2 by the Board would pave the way for the preparation and acceptance of legally binding commitments to that programme by all Agency Member States.

16. Her delegation would like to see Programme 93+2 agreed upon in principle at the present session of the Board; the additional protocol and the Expanded Declaration could be finalized soon afterwards by a working group, with a view to their adoption at the Board's meetings in December.

17. Mr. UMAR (Nigeria) said that his delegation's support for measures that would include broader access to relevant information, greater physical access and optimization of the present safeguards system remained firm. The Board should bear in mind, however, that the Agency's safeguards system - whether the current or a future one - would be judged by its effectiveness, efficiency and acceptability. The onus was therefore on all Member States to put in place measures that could be applied with the utmost transparency and without any trace of discrimination. The ultimate objective should be to apply such measures in all States, including States with voluntary-offer safeguards agreements and safeguards agreements based on document INFCIRC/66. In that connection, his delegation endorsed the view that globalization of the nuclear non-proliferation regime was a sine qua non for enhancing compliance and strengthening its political and legal basis.

18. His delegation fully supported the view that paragraphs 4 and 5 of document INFCIRC/153 should be brought into line with the Part 2 measures of Programme 93+2. Member States which were still apprehensive about the Part 2 measures needed to be reassured that the Secretariat would be able to prevent the economic and technological advancement of developing countries from being obstructed. The measures should enhance international co-operation in the peaceful uses of nuclear and related activities, especially the international exchange of nuclear materials and related equipment. Also, it was important that peaceful R&D activities in Member States not be threatened in any way.

19. Recalling the signing of the African Nuclear-Weapon-Free Zone Treaty (the Pelindaba Treaty) in Cairo on 11 April, he commended the efforts of the Director General and the Secretariat in helping to make the conclusion of the Treaty a reality and expressed the hope that all non-African Member States, and particularly the nuclear-weapon States, would sign the protocol at an early date as a demonstration of their support for the Treaty and the goal of global non-proliferation.

20. His delegation supported the idea of setting up an expert group of legal and technical experts to resolve the problems associated with the Part 2 measures and refine the text of the draft protocol. It hoped that the Board would be in a position to adopt the Part 2 measures once the comments and well-founded apprehensions of some Member States had been taken into account.

21. Mr. PETROV (Bulgaria) said that the proposed measures would significantly increase the Agency's ability to detect possible undeclared nuclear material and activities in States with comprehensive safeguards agreements. His delegation was in favour of their adoption and trusted that the expenditure involved in their application would be kept as low as

possible. The Secretariat would undoubtedly make every effort to use the resources available in a balanced and effective manner.

22. Application of the Part 2 measures would require an additional protocol based on a model protocol. The proposal made by the Ambassador of Italy on behalf of the European Union and its associated States for the establishment of an open-ended committee to finalize the text of a model protocol was a useful one and should be adopted by the Board.

23. Mr. LI Changhe (China) said his delegation had noted that document GOV/2863 was based on Discussion Draft II of 27 February 1996 and reflected concerns expressed by various Governors at the March session of the Board. Some important concerns remained unresolved, however, and his delegation therefore hoped that the Secretariat would pay close attention to the views expressed and suggestions made at the Board's present session and intensify its consultations with Member States regarding those concerns.

24. Referring to paragraph 9 of document GOV/2863, he said that his delegation appreciated the Secretariat's efforts relating to the application of Part 1 measures. However, the application of Part 1 measures was still at a very early stage, some aspects still being only under consideration. There was still much to be done, and his delegation would like the Secretariat to report periodically to the Board on progress made and problems encountered; such information would be extremely useful to the Board in its consideration of Part 2 measures.

25. In paragraph 16 of document GOV/2863, reference was made to the applicability of Programme 93+2 measures to States which did not have comprehensive safeguards agreements with the Agency. Those measures concerned only States which had concluded such agreements, however, a point which had been made repeatedly since 1993. If the Board deviated from its original intention and tried to extend the scope of Programme 93+2, the difficult issues already confronting it would only be exacerbated. The Chinese delegation consequently had reservations about parts of paragraph 16 and other passages in document GOV/2863. However, it was not opposed to the idea that States without comprehensive safeguards agreements had a contribution to make in the interests of preventing nuclear proliferation. For example, in 1991 China had undertaken to report to the Agency on a continuing basis any exports to or imports from non-nuclear-weapon States of nuclear material over one effective kilogram, and in 1993 it had undertaken to participate in the Agency's universal reporting scheme and report to the Agency its imports and exports of nuclear material and its exports of special equipment and non-nuclear material. It had faithfully fulfilled and would continue to fulfil its obligations in that connection.

26. With regard to costs, the strengthening of safeguards must not impose an excessive financial burden on Member States or affect the distribution of resources among the main activities of the Agency. In the Administrative and Budgetary Committee, the Chinese delegation had expressed its concern about the imbalance between the Agency's safeguards and promotional activities. Also, it shared the view of the Group of 77 that the increasing tendency in the Agency to rely on extrabudgetary resources was unhealthy. It hoped that the Secretariat would submit proposals for more effective utilization of the existing safeguards system and for increasing the cost-effectiveness of the new measures.

27. Referring to the Expanded Declaration, he said his delegation welcomed the clarifications in document GOV/2863 concerning nuclear fuel cycle-related R&D activities and hoped that the Secretariat would continue its consultations on that subject with Member States, so that a consensus might be reached on the content of the Expanded Declaration.

28. With regard to wide-area sampling, its feasibility and effectiveness had not yet been established and it involved questions of security, confidentiality and cost for the Member States concerned. The issue needed further study by the Secretariat, which should produce a special report for the Board. In the meantime, perhaps it should not be provided for in the draft protocol, particularly since - as indicated in paragraph 54 of document GOV/2863 - further investigation of the practicality and cost-effectiveness of such environmental sampling was planned.

29. In the process of strengthening safeguards it was essential to prevent discrimination and abuses of safeguards information and of the right of verification. The Chinese delegation had in the past expressed its disapproval of the Agency's reliance on information obtained through national technical means, which might give rise to political differences and confrontation. In view of the sensitivity of the issue of "inconsistencies", the Chinese delegation had proposed the establishment of criteria and procedures for dealing with them. It had noted some of the explanations given regarding that issue in paragraphs 34, 51 and 60 of document GOV/2863, but still believed that some matters connected with the Expanded Declaration, the determination of inconsistencies, and the relationship between complementary access and special inspection (particularly the question of how to initiate the verification of inconsistencies) needed further clarification.

30. The Chinese delegation would welcome the establishment of a governmental expert group to examine the technical, financial and legal aspects of the Secretariat's proposals regarding Programme 93+2 and hoped that arrangements would be made to enable the group to start its work soon.

31. Reiterating his country's basic position, he said that China attached great importance to Agency safeguards and looked forward to the adoption of appropriate measures to strengthen the effectiveness and improve the efficiency of the safeguards system. However, the strengthening of safeguards should not hamper the development of nuclear science and technology or of the nuclear energy industry in Member States, nor should it affect international co-operation in the peaceful uses of nuclear energy. Also, an appropriate balance should be maintained between the Agency's safeguards and promotional activities. Those basic principles were in conformity with the general direction of Programme 93+2 set at the March 1995 session of the Board. China was ready to co-operate fully with other Board members in an effort to establish a just, rational, effective and efficient safeguards system.

32. Mr. AL-TAIFI (Saudi Arabia), reaffirming his country's support for the Agency's safeguards system as a means of verifying non-diversion and compliance by States with their international undertakings, said that Saudi Arabia would maintain its support so long as it remained convinced that the Agency's safeguards policies were sound and helping to promote international and regional peace and stability.

33. At the same time, his country would like the introduction of the proposed Part 2 measures to be deferred until their political, financial, technical and legal implications had been fully assessed.

34. Mr. MEADWAY (United Kingdom), having endorsed the statement made by the representative of Italy on behalf of the European Union, said that the United Kingdom had consistently supported the broad thrust of the measures set out in document GOV/2863, which should provide a good basis for strengthening the effectiveness and improving the efficiency of the safeguards system. If the Agency's ability to detect undeclared nuclear activities in States with comprehensive safeguards agreements was to be substantially strengthened, it was crucial that the Agency be able to obtain and analyse a wide range of information on the nuclear activities of States and, where necessary, to supplement its analyses through physical access.

35. His delegation supported the introduction of environmental monitoring measures, but would like to point out that formal rules would be required to govern the taking of samples, the procedures for their transfer and analysis, and the transmission of results.

36. There was still room for discussion aimed at accommodating the concerns expressed by a number of non-nuclear-weapon States with extensive nuclear industries, and the United Kingdom would continue to work towards a balanced consensus with a firm legal basis which respected the rights and duties both of States and of the Agency. Any working group set up to

create such a legal basis would need to take into account the draft protocol and the supporting material in document GOV/2863, and also the points made in the Board's discussions on that document and its predecessors.

37. The United Kingdom, which believed that all Member States should contribute actively towards strengthening the Agency's ability to detect clandestine activities worldwide, was ready to contribute through the application of measures which would improve the effectiveness and efficiency of the safeguards being applied within the framework of its safeguards agreement with the Agency (contained in document INFCIRC/263). Paragraph 16 of document GOV/2863 provided a good basis for agreement in that connection.

38. Following consultations with other nuclear-weapon States, his country was prepared to provide the Agency with information on: imports and exports of nuclear material for peaceful purposes; export licences for nuclear material and for non-nuclear equipment, as envisaged in document GOV/2863; and export licences for other selected items of nuclear-related equipment and non-nuclear material as might be agreed upon by the Board of Governors. Also, it was prepared to accept, at facilities designated by the Agency within the framework of the safeguards agreement contained in document INFCIRC/263, the application of measures specified in document GOV/2863 which it was mutually agreed would improve the efficiency and effectiveness with which the Agency fulfilled its obligations under that agreement. In addition, it was prepared to discuss with the Agency the possibility of providing additional information which would increase the efficiency and effectiveness of the Agency in implementing Programme 93+2 worldwide. The question whether new national legislation was necessary in that connection would be considered by his authorities.

39. The United Kingdom hoped that the non-nuclear-weapon States which did not have a comprehensive safeguards agreement with the Agency would be willing to contribute to the efficient and effective implementation of Programme 93+2 in a similar fashion.

40. In his delegation's view, the next stage should be the preparation - and submission to the Board for approval - of a single model protocol on the basis of which States could accept the measures relevant to them in the light of their respective non-proliferation commitments. That would be the most straightforward way of achieving the early acceptance and application of the proposed measures.

41. Mr. SOKOLOV (Russian Federation) said his country had consistently supported the development of measures to strengthen the Agency's safeguards system under Programme 93+2. In fact, the President of the Russian Federation had recently emphasized his country's support for Agency safeguards at the Moscow Nuclear Safety and Security Summit.

42. In his delegation's opinion, document GOV/2863 took into account many of the views expressed and suggestions made at the previous two sessions of the Board, at the briefings organized by the Secretariat and during the consultations which had taken place. It also took into account the experience being acquired in the practical application of Part 1 measures, giving an insight into what the practical implications of the proposed Part 2 measures were likely to be. That experience should continue to be taken into account as far as possible in the further development of the Part 2 proposals and in the development of internal Secretariat documents designed to provide guidance regarding the application of Part 2 measures.

43. Rather than simply being added on to the existing "classical" safeguards system, the new measures should be made an integral part of it. The resulting integrated system would, in his delegation's view, not only help to enhance the effectiveness of the Agency's verification activities, but also improve cost-effectiveness.

44. The Russian Federation, which had been a consistent supporter of the principle of zero real budgetary growth, believed that introduction of the new measures should be paralleled by the abandonment of some measures currently being applied pursuant to INFCIRC/153-type agreements. In that connection, it would like the financial implications of the application of the new measures to be computed more carefully. Widespread routine application of the new measures would involve unwarranted expense, so his delegation would like them to be introduced progressively, with the main focus on key facilities in countries regarding which the Agency might be justifiably concerned about inconsistencies between the information provided by them and other information available to it.

45. After the adoption of Part 2 of Programme 93+2, the Russian Federation would, as a nuclear-weapon State, be ready, in the light of the experience with the application of Part 1 measures and the arrangements arrived at on the basis of the protocol, to consider steps such as the provision of information on nuclear exports. Also, it might examine the question of the application, within the framework of its voluntary-offer safeguards agreement, of Part 2 measures such as environmental monitoring. However, such safeguards activities in nuclear-weapon States should be seen as a way of gaining experience and the measures in question should be applied selectively, the aim being to improve the effectiveness of the Agency's safeguards system; otherwise, they might lead to an undue drain on budgetary resources.

46. As to the extent of the nuclear-weapon States' participation in Programme 93+2, his country would be prepared to continue consultations with the other nuclear-weapon States on the basis of the joint commitments of the nuclear-weapon States under the NPT.

47. His delegation supported the Director General's proposal that an open-ended committee of the Board be convened for further consideration of the draft protocol and the proposed Part 2 measures. Such a committee might well, on the basis of the excellent draft material produced by the Secretariat, succeed in developing a generally acceptable document which could serve as a legal basis for the interaction between the Agency and States with comprehensive safeguards agreements.

48. Mr. ALLOTEY (Ghana) said that the proposed measures would no doubt lead to greater trust among States, regionally and globally, and thus facilitate the transfer of peaceful nuclear technology, equipment and material.

49. Agency safeguards had been in existence for some 30 years, during which they had been refined and strengthened through the introduction of new methods and technologies as they became available, and his delegation agreed that they should be further strengthened in such a way as to ensure the absence of any undeclared nuclear material and activities.

50. Recalling that a number of African States had recently signed the African Nuclear-Weapon-Free Zone Treaty (the Pelindaba Treaty), he said that in applying safeguards the Agency should do its utmost to avoid hampering the economic and technological development of Member States and should not discourage international co-operation in peaceful nuclear-related activities - in particular the exchange of nuclear material for R&D purposes.

51. His delegation supported the idea of the Board's establishing a committee of experts to refine the text of the draft protocol before the Board's meetings in September. That should help to bring Programme 93+2 nearer to completion.

52. Mr. DOSHI (India) said India did not believe that Programme 93+2 would resolve the nuclear dilemma. That could be resolved only if a nuclear order was established which was as universal as that established in the fields of chemical weapons and biological weapons. When the Board had begun its consideration of Programme 93+2, there had been a feeling - or at least a hope - that the world was moving towards some kind of universal nuclear order, but today not even the most optimistic could view such an order as imminent or even likely. In fact, recent national, regional and international developments appeared to have

deepened the division between the nuclear "haves" and the nuclear "have nots", and strengthened safeguards could well accentuate the trend.

53. A number of delegations had suggested that the scope of Programme 93+2 be extended to cover countries which had not concluded comprehensive safeguards agreements with the Agency. That idea was not acceptable to India, as such an extension of scope had no basis in law and would clearly be impracticable. India could therefore not agree that a legal document should be prepared in furtherance of that idea.

54. Although his country was not a member of the Nuclear Suppliers Group, which it considered to be a discriminatory body, it had never exported any sensitive technology or equipment which could be used in a clandestine nuclear programme.

55. He feared that an extensive and intrusive safeguards system, particularly one involving measures which were seen by some of the countries concerned as serving no useful purpose, would severely inhibit the growth of technology for purposes such as nuclear electricity production. That would be particularly ironical in view of the fact that the Agency was mandated to promote such technology.

56. If the countries which had concluded comprehensive safeguards agreements with the Agency reached a consensus on accepting Programme 93+2 in its entirety, India would be prepared to go along with that consensus, but it believed that further action should be deferred until the Part 1 measures had been digested and the Secretariat had made more precise estimates of the costs of strengthened safeguards and reformulated its proposals accordingly. He saw no need for hasty decisions, and his delegation liked the idea of the establishment of an open-ended committee with the task of examining the concerns which had been expressed and reporting to the Board at its December meetings.

57. As ever, India was prepared to support any measures which would genuinely make the world safe from the abuse of nuclear energy.

58. Mr. PRETTRE (France), having associated himself with the statement made by the representative of Italy on behalf of the European Union, said that Programme 93+2 would make a major contribution to the strengthening of the non-proliferation regime and thus to international security. The Iraqi affair had shown that a country subject to Agency safeguards was capable of clandestinely conducting a very extensive military nuclear programme. The proposals for strengthening safeguards set out in document GOV/2863 would enhance the

Agency's ability to detect clandestine nuclear activities, an objective endorsed by all countries which had participated in the NPT Review and Extension Conference.

59. Non-proliferation was a matter of concern to all. France, in compliance with the obligations it had assumed under the NPT, was prepared to contribute actively to the enhancement of the Agency's ability to detect clandestine nuclear activities elsewhere in the world. It was also prepared to apply those measures which were capable of improving the effectiveness and efficiency of the safeguards implemented by the Agency under the voluntary-offer safeguards agreement contained in document INFCIRC/290. In that connection, it considered paragraph 16 of document GOV/2863 to be a good basis for agreement.

60. France was holding consultations with the other nuclear-weapon States on ways of helping to strengthen Agency safeguards. In the light of those consultations, it was prepared to provide information to the Agency on: imports and exports of nuclear material for peaceful purposes; export licences for nuclear equipment and for non-nuclear material, as envisaged in document GOV/2863; and export licences for other items of non-nuclear equipment and material as might be agreed upon by the Board. Also, France was prepared to accept, at facilities designated by the Agency within the framework of the safeguards agreement contained in document INFCIRC/290, the application of measures specified in document GOV/2863 which it was mutually agreed would improve the effectiveness and efficiency with which the Agency fulfilled its obligations under that agreement. In addition, it was prepared to discuss with the Agency, in the light of its obligations under Article I of the NPT, the possibility of providing additional information which would increase the effectiveness and efficiency of the measures to be applied by the Agency pursuant to Programme 93+2 in States which had concluded comprehensive safeguards agreements.

61. France hoped that the non-nuclear-weapon States which had not concluded a comprehensive safeguards agreement with the Agency would agree to contribute to the effective and efficient implementation of Programme 93+2 in a similar manner.

62. Mr. PESCI BOUREL (Argentina), emphasizing his delegation's strong support for the process of strengthening the safeguards system, said that a major feature of that process was the search for an acceptable balance between, on one hand, the envisaged strengthening measures and, on the other, the need to respect the legitimate interests and constitutional systems of States.

63. In the current final stage of the Board's consideration of Part 2 of Programme 93+2, his delegation would co-operate to the fullest extent possible in seeking a consensus satisfactory to all delegations. As stated in paragraph 74 of document GOV/2863, the measures proposed represented "the culmination of the Secretariat's and the Policy Making Organs' efforts to strengthen the Agency's safeguards system", and in his delegation's view it was now up to Member States to take the necessary political, legal and technical decisions.

64. Referring to paragraph 78 of document GOV/2863, he said that the most appropriate mechanism for finalizing the required legal instrument would be an open-ended intergovernmental committee of experts, which might well be able to start meeting in the near future in view of the extensive preparatory work already carried out. Such a committee should be given all the time it needed in order to complete its task, which should be to prepare a draft protocol additional to existing comprehensive safeguards agreements on the basis of: the draft text contained in Annex III to document GOV/2863; the main part of document GOV/2863 with its description of the envisaged Part 2 measures; and the views of Member States as conveyed to the Secretariat in the course of consultations.

65. In that connection, the Director General's recent response to comments made by his Government, while clarifying certain matters, had not allayed all of its concerns. Accordingly, his Government would like to continue the fruitful dialogue with the Secretariat initiated during the recent visit to Buenos Aires of the Director for External Relations, with the focus on four points: adequate protection by the Agency of the confidentiality of the information provided by States; the protection of legitimate intellectual property and commercial interests; the relationship between inconsistencies that might be found and requests for increased access; and increased physical access to facilities with no nuclear material.

66. Should the Board decide to set up a committee of experts, Argentina would be prepared to participate constructively in its work. His delegation was sure that Member States would make good use of the committee in completing the Programme 93+2 process and thereby adapting the Agency's safeguards to the changing needs of international security in the post-Cold War era.

67. His delegation continued to attach great importance to the desired universal nature of some of the measures which would constitute the envisaged new safeguards system. Those measures related to the provision of additional information through the Expanded Declaration and of information on nuclear imports and exports, and his delegation would like to see them applied not only by States with comprehensive safeguards agreements, but also by States with INFCIRC/66-type and voluntary-offer safeguards agreements. That would not only help to

consolidate the international non-proliferation regime, but also satisfy basic principles regarding the equitable sharing of obligations and responsibilities by all members of the international community. The legal instrument applicable to States with comprehensive safeguards agreements and those applicable to States with INFCIRC/66-type and voluntary-offer safeguards agreements should, in his delegation's view, be adopted at the same time.

68. Mr. AHMAD (Pakistan) said his delegation was in favour of strengthening the effectiveness and improving the cost-efficiency of the Agency's safeguards system. Accordingly, it had in March 1995 gone along with the Board's endorsement of the general direction of Programme 93+2 as regards the Part 1 measures. The implementation of those measures had hardly begun, however, and his delegation would like to join some other delegations in cautioning against the way in which Part 2 of Programme 93+2 was being pushed. His delegation felt it would have been advisable to allow a couple of years for the monitoring and evaluation of Part 1 implementation before embarking on Part 2 measures.

69. Many countries with substantial nuclear programmes had reservations with regard to matters such as confidentiality, financial implications, complementary access, the peaceful development of nuclear energy, and sovereignty. That being so, it might have been better to set up an intergovernmental working group to discuss the technical, legal and financial implications of the Part 2 measures presented in document GOV/2863. However, the convening of a committee - presided over by the Chairman of the Board - would be a positive step, and his delegation hoped that the committee would thoroughly analyse all aspects of the issue.

70. In conclusion, he said his delegation took strong exception to the suggestion - made in paragraph 16 of document GOV/2863 - that the scope of Programme 93+2 be extended to include countries having voluntary-offer and item-specific safeguards agreements with the Agency. Since its inception, Programme 93+2 had been geared solely to the strengthening of safeguards based on document INFCIRC/153, and it had been emphasized in all quarters that the focus was on the detection of undeclared nuclear facilities and nuclear activities. Programme 93+2 did not make sense in the case of countries with such agreements. The application of any Part 1 or Part 2 measures to countries with INFCIRC/66-type agreements would be unacceptable to his delegation.

71. Mr. BENMOUSSA (Morocco) said that the statement which he had made regarding Programme 93+2 in the Board on 19 March² was still valid. Also, his country's position had been spelled out further in the statement which he had made on behalf of the Africa Group on 10 June.³

72. His delegation, while appreciating that the envisaged new measures arising out of Programme 93+2 would create problems for the proponents of absolute sovereignty, had been encouraged by the serious nature and high quality of the discussion, with - for example - the overall philosophy expounded by the Governor from the United States of America, the very useful recommendations constituting the position of the European Union, the legitimate concerns expressed by the Governors from Japan and the Republic of Korea, and the pertinent legal and technical points raised by the Governor from Brazil.

73. The Secretariat had done all it could, and it was now time for the governments of Member States to take over the torch and, starting in July, negotiate the envisaged protocol within the framework of a suitable body with a clear mandate and presided over by the Chairman of the Board. He was confident that Member States' collective wisdom would overcome the obstacles ahead.

74. Morocco, which was prepared to accept some constraints in the interests of greater collective security, believed that the exercise about to be embarked upon would be a difficult one - but very worthwhile. The broad application of Programme 93+2 measures, together with progress towards general and complete disarmament and with the increasing utilization of nuclear energy for purposes of development, should lead to a safer and more peaceful world, as envisaged when President Eisenhower made the "Atoms for Peace" speech which ultimately led to the creation of the Agency. That was why, on 19 March, he had expressed the hope that Morocco would be among the first countries to accede to the protocol - a hope conveyed at the highest level to the Director General when he had visited Morocco in April.

75. Mr. CIBILS (Uruguay), having commended the Secretariat on document GOV/2863, said that Programme 93+2 constituted a laudable endeavour and that a final position on it should be taken only after thorough analysis of all the implications. In that connection,

² See paras 44-53 of GOV/OR.889.

³ See paras 58-67 of GOV/OR.892, reproduced on pages 1-3 above.

his delegation believed there was a need to fine-tune many of the proposals made in document GOV/2863 and the way in which they were reflected in the draft protocol contained in Annex III to that document.

76. His delegation continued to be concerned about the cost of implementing the Part 2 measures and hoped that their implementation would not affect the availability of funds for the Agency's promotional activities. Also, it hoped that the agreement - arrived at in September 1995 - to the effect that "shielded" countries would, for five years, not have to bear any part of the cost increases arising out of the implementation of Programme 93+2 would be respected.

77. Programme 93+2 deserved very close attention, but before final approval was given there should be a period of mature reflection.

78. Mr. OWN (Libyan Arab Jamahiriya)* thanked the Director General, the Deputy Director General for Safeguards and their colleagues for the efforts reflected in document GOV/2863.

79. There was a need for a global system to prevent the proliferation of nuclear weapons and other weapons of mass destruction, and in that context his country had in 1992 submitted to the United Nations General Assembly a proposal regarding the holding of a special session on the non-proliferation of such weapons. In fact, his country believed it was essential not only to prevent the proliferation of such weapons but also to ensure the destruction of those already in existence.

80. Commenting on document GOV/2863, he stated that:

- the safeguards system envisaged in that document should be based on trust and co-operation;
- implementation of the system must not have a negative effect on the Agency's technical co-operation activities and must not hamper the economic and technological progress of developing countries;
- implementation of the system must not involve infringements of national sovereignty;

* Member States not members of the Board of Governors are indicated by an asterisk.

- legislation to permit implementation of the system in individual countries should be passed only after the populations in question had been consulted;
- random inspections should not be carried out without prior notification of the countries in question, and the sites to be inspected should be agreed upon in advance bilaterally by the countries in question and the Agency;
- the proposed measures should be applied also in nuclear-weapon States which (like Israel) were not parties to any multilateral non-proliferation instrument;
- the envisaged safeguards should be implemented in a non-discriminatory manner;
- intelligence information acquired through implementation of the system must not be misused;
- implementation of the system must not increase the financial burden on the countries concerned, especially if - like his country - they were being subjected to an unfair economic blockade with freezing of their foreign assets; and
- countries not accepting the proposed measures within their territories must not be involved in the implementation of those measures elsewhere.

81. There were gaps and uncertainties in the proposed system, and they should be examined carefully before the implementation of Part 2 measures began, sufficient time being taken to resolve all outstanding doubts.

82. Mr. HODEL (Switzerland)* commended the Director General, the Deputy Director General for Safeguards and their colleagues on document GOV/2863, which took into account most of the comments made and wishes expressed by Member States at the Board's March session, so that there would probably be need only for some "fine tuning".

83. Since the Board's March session, the competent authorities in his country had submitted the complete list of Part 1 and Part 2 measures to representatives of Switzerland's nuclear power plant operators and of the National Nuclear Research Centre in order to elicit their reactions. Those representatives had, after careful study, stated that the measures were acceptable as long as their application did not impair plant and staff safety or plant operating conditions. Similarly, Switzerland's SSAC had expressed its willingness to co-operate in the application of relevant measures.

84. Referring to section (c) on page 5 of document GOV/2863, he said that Switzerland had acquired useful experience with a remote monitoring system installed, with Agency co-operation, at the Paul Scherrer Institute in Würenlingen. The feasibility had been demonstrated of monitoring safeguards equipment direct from Vienna, thereby saving on inspector travel costs and related expenses. It would not be possible to install such systems in all five of his country's nuclear power reactors by the end of November, but he hoped that such systems would be in place in all five reactors in the coming year.

85. His delegation was in a position to state that Switzerland was ready to accept the safeguards strengthening measures described in document GOV/2863 with the exception of measure 2.c.(ix),¹ the aim being to provide the Agency with the possibility of increased physical access to nuclear and non-nuclear facilities, and to achieve optimum utilization of the present safeguards system.

86. With regard to measure 2.c.(ix), Switzerland was basically ready to support broader Agency access to information on transfers of nuclear equipment and material and dual-use equipment, but that measure would be acceptable only in respect of exports and only if:

- all States with comprehensive safeguards agreements, all the nuclear-weapon States and all States with INFCIRC/66-type agreements undertook to provide the Agency with the information in question, otherwise the envisaged notifications would result in trade distortion and commercial discrimination (the information would in any case be of very limited use as most of the relevant trade was conducted by nuclear-weapon States); and
- notifications of exports of dual-use equipment and material were limited to equipment and material on the Nuclear Suppliers Group's list of dual-use items and to exports to countries which were of proliferation concern.

87. Under present Swiss law, the provision to the Agency of information on imports of dual-use equipment and material was not feasible. Consequently, if measure 2.c.(ix) ultimately came to be applied without modification, Switzerland would have to enter a reservation.

88. On the question of universality in the application of the proposed new measures, he said that - like many other Member States - Switzerland felt there would be no real incentive to help strengthen the safeguards system unless all Member States participated - not just those already

¹ See page 3 of Annex I to GOV/2863.

subject to the most comprehensive safeguards. Accordingly, his delegation believed that the nuclear-weapon States and the States with INFCIRC/66-type agreements should not only commit themselves to providing information on imports/exports of nuclear equipment and material and "listed" dual-use equipment but also assume commitments (relating to - for example - the extensive use of remote monitoring systems and of remote data transmission, simplified conditions for Agency inspector access to their territories, nuclear programmes being conducted by them in co-operation with third countries, and the extension of their current safeguards programmes) which would help to make safeguards within their territories and the territories of States linked to them by bilateral agreements on the peaceful utilization of nuclear energy more effective and more efficient.

89. Mr. COOK (New Zealand)* said that Programme 93+2 was something in which all Member States had a major stake, for the threat of nuclear proliferation was ultimately a question of the national security of all countries. The Agency was expected to provide credible assurances that safeguards obligations were being fulfilled. As everyone knew, however, the safeguards system developed in the 1970s was inadequate for detecting clandestine nuclear activities of the sort involved in Iraq's nuclear weapons programme. Implementation of the full Programme 93+2 package was therefore a matter of urgency.

90. His delegation was grateful to the Secretariat, which had done everything demanded of it by the international community in developing Programme 93+2. Member States had been given every opportunity to contribute to the process, and document GOV/2863 took account of many concerns expressed during consultations. The Director General had presented a mature and balanced set of proposals, and it was now up to Member States to bring the process to an expeditious conclusion.

91. The Board's discussion on Programme 93+2 was not taking place in isolation; the NPT Review and Extension Conference had recognized the importance of an increase in the Agency's ability to detect undeclared nuclear activities. When the enhanced NPT review process got under way, in 1997, the Agency would have to demonstrate that it had responded effectively to the Conference's call. In fact, a strong safeguards system was an essential foundation for nuclear disarmament, and Programme 93+2 should be seen as a key part of wider multilateral efforts to halt both horizontal and vertical proliferation.

92. What the Board was talking about was ultimately the collective and individual responsibility of States for the effectiveness of the non-proliferation system. States with nuclear facilities had a special responsibility. The expanded declaration, environmental sampling and increased physical access were all essential components of a package which would enable

countries with nuclear programmes to demonstrate transparency and generate international confidence with regard to those programmes.

93. Concerns had been expressed on behalf of the nuclear industry about the intrusiveness of the proposed new measures, although similar concerns expressed during the negotiations leading to document INFCIRC/153 had proved to be unfounded. His delegation believed that the Part 2 measures would not constitute an excessive burden. Moreover, a fully effective safeguards system was essential to international trade in nuclear materials and technology, and the nuclear industry would benefit from the increased confidence provided by Programme 93+2.

94. His delegation was in favour of seeking ways to make the application of Part 2 measures as universal as possible. Surely all States had an interest in reducing the costs and improving the efficiency of safeguards. Also, there should be scope for applying measures within the framework of voluntary-offer arrangements, in preparation for an expansion of the role of safeguards with the conclusion of a cut-off convention, and he had been pleased to hear the positive comments made in that connection by the representatives of some nuclear-weapon States. However, while supporting the idea of the development of appropriate legal instruments, as suggested by the Director General, his delegation would not like that exercise to delay the acceptance of Part 2 measures by States which had already concluded comprehensive safeguards agreements.

95. The detailed package contained in document GOV/2863 (with Annexes II and III) would provide a sound basis for the work of an open-ended expert committee on the technical and legal aspects of the envisaged protocol. At the same time, his delegation would not like to see the text contained in Annex III changed in ways which could undermine the effectiveness of Programme 93+2.

96. Mr. ALTER (Israel)*, having expressed appreciation of the package contained in document GOV/2863, said that in principle his country supported the strengthening of safeguards and that Programme 93+2 constituted a potential improvement in that respect. Aware that in principle no form of verification could guarantee compliance with agreements, his Government wished to place emphasis on political content and political culture, which were as essential as - or even more essential than - safeguards measures in bringing about such compliance.

97. Programme 93+2 represented a commendable effort, but it could not offer any lasting guarantees unless the political will - with stable internal checks and balances - was there. The experience of the United Nations Special Commission (UNSCOM) and the Agency's Action Team should serve as a warning to all.

98. Programme 93+2 might, under certain conditions, improve the safeguards regime, but care should be taken to avoid complacency. The main goal of Programme 93+2 was "to provide credible assurance of the non-diversion of nuclear material from declared activities and of the absence of any undeclared nuclear activities". The need to ensure the absence of undeclared nuclear activities could arise only in comprehensive safeguards situations, however, so that that goal was legally extraneous to safeguards implemented pursuant to INFCIRC/66-type agreements.

99. As to the other goal, "to ensure that declared nuclear material is not diverted to non-peaceful purposes", it should be recalled that, unlike INFCIRC/153-type agreements, INFCIRC/66-type agreements did not provide that only nuclear material should be subject to safeguards. Thus, there was no need to seek complementary legal authority in the case of such agreements.

100. The possibility - mentioned in document GOV/2863 - of States providing information about export licences was worth looking into. In that connection, the Board might be interested to know that Israel was in the final stages of introducing export controls in the chemical, biological and nuclear fields, the export controls in the nuclear field to be introduced through adoption of the Nuclear Suppliers Group guidelines and lists contained in document INFCIRC/254/Rev.2/Part 2/Mod.1.

101. In conclusion, he said that, if rapid implementation of Programme 93+2 was sought, the effort should be concentrated - not diluted by politically motivated digressions without a legal basis.

102. Mr. de YTURRIAGA (Spain) associated himself with the statement made by the representative of Italy on behalf of the European Union, and especially with the appeal made in that statement to all Member States to provide active support for the safeguards system and the appeal to countries not having comprehensive safeguards agreements with the Agency to play their part in the Programme 93+2 exercise.

103. His country, which supported the principles of universality and non-discrimination, welcomed the willingness of nuclear-weapon States to provide information to the Agency. It believed, however, that the participation of the nuclear-weapon States in Part 2 of Programme 93+2 should be legally institutionalized and not simply be a unilateral concession.

104. Mr. WALKER (Australia), noting that during the discussion there had been many references to the question of universality, said that that question had not previously been discussed at great length. Arguments had been put forward for the application of Part 2 measures not only in States with INFCIRC/153-type agreements, but also in States with INFCIRC/66-type agreements. That implied the drafting of a legal instrument over and above the envisaged protocol additional to INFCIRC/153-type agreements.

105. In his delegation's view, it would be better to concentrate for the time being on the protocol drafting exercise, since one would need to know what Part 2 measures were to be applied in States with INFCIRC/153-type agreements in order to assess the extent to which Part 2 measures might successfully be applied in other States.

106. The CHAIRMAN proposed that, in view of the importance of the subject, the Board postpone further consideration of agenda sub-item 4(b) in order that he might reflect on the points made in the discussion and hold consultations regarding a conclusion which would command acceptance.

107. It was so agreed.

EXCERPT FROM THE SUMMARY RECORD OF THE BOARD'S 898th MEETING

84. The CHAIRMAN, summing up the Board's discussion under agenda sub-item 4(b), said that the Board had recalled that over the previous three years the Secretariat and Member States had been engaged in an extensive effort to develop and evaluate measures for further strengthening the safeguards system and making it more cost-effective (Programme 93+2), with the principal objective of enhancing the Agency's ability to detect undeclared nuclear activities.

85. The Board had also recalled its endorsement, in March 1995, of the general direction of Programme 93+2 and that, in June 1995, it had taken note of the Director General's plan to implement at an early date - after consultations with Member States - those measures which fell within the Agency's existing legal authority ("Part 1 measures") and of the implementation activities undertaken so far.

86. The Board had examined document GOV/2863, containing proposals for the implementation of measures under complementary legal authority. In that context, it had acknowledged that additional information, environmental sampling and increased physical access would strengthen the Agency's ability to detect undeclared nuclear material and activities. It had emphasized that the new measures should strike a proper balance between the Agency's need for information and access on the one hand and the State's need to protect its legitimate interests and to respect its constitutional obligations on the other. It had further emphasized that implementation of those measures should be subject to strict rules of confidentiality, to be observed by the Agency with regard both to information received and to the entire process of verification. It had welcomed the Secretariat's assurance that the Agency would draw conclusions only on the basis of information that it had assessed and corroborated independently.

87. The Board had considered that, in order to strengthen the Agency's capability to detect, in the States concerned, undeclared nuclear material and activities in an effective manner and increase the efficiency of the safeguards programme, co-operation was needed from all States. In that connection, it had welcomed the willingness expressed by the nuclear-weapon States to consider how best to contribute to the implementation of Programme 93+2. Many members had expected States without comprehensive safeguards agreements to accept relevant Programme 93+2 measures in the light of their respective non-proliferation commitments. At the same time, some had stressed that the definition of those measures in the form of a legal instrument would be an important element to be taken into account before the finalization of a model protocol. Members with INFCIRC/66-type agreements had been of the view that any extension

of the proposed measures to States with such agreements would go beyond the original purpose of Programme 93+2 and would be unacceptable.

88. The need for progress towards the establishment of a nuclear-weapon-free zone in the Middle East had been highlighted as a step that would contribute to the strengthening of the safeguards system, enhance the security of the Middle East and Africa, and reinforce the sustainability of the African Nuclear-Weapon-Free Zone.

89. With regard to implementation costs, the Board had noted the Secretariat's expectation that, although the initial implementation phase would for some years involve a net cost increase, savings would lead to cost neutrality as soon as possible. The shielded countries had recalled the decision taken by the Board in September 1995 that they would not be obliged to contribute towards any increase in the safeguards budget beyond zero real growth.

90. Developing Member States had regretted that there was a continuing imbalance in the funds allocated for the Agency's promotional activities and its safeguards activities.

91. With regard to document INFCIRC/153, it had been emphasized that its provisions, in particular paragraphs 4 and 5, must apply integrally and effectively to the Part 2 measures of Programme 93+2.

92. Many members had welcomed document GOV/2863, and some of them had been ready to accept the proposed measures as described in that document. On the other hand, other members had had reservations about certain provisions in the document and had been of the opinion that a solution would have to be found before the proposed enhancement of the safeguards system could be accepted.

93. The Board had concluded that the examination of a draft model protocol would provide opportunities to find precise language striking a balance between the concerns of individual States and the need to ensure the efficiency and effectiveness of the measures proposed.

94. Therefore, the Board had decided to establish a committee with the task of drafting the model protocol basing itself on Annex III to document GOV/2863 and taking into account, inter alia, the explanation of the measures contained in that document and the discussions on the matter in the Board.

95. All Member States, and all other States that had concluded or had a legal obligation to conclude a comprehensive safeguards agreement with the Agency, could participate in the work of the committee; any intergovernmental organization which was party to such an agreement could participate therein as an observer.

96. The committee would be presided over by the Chairman of the Board.

97. The Committee would commence its work early in July 1996. An oral progress report by the Chairman would be made to the Board at its forthcoming September session. The committee would report to the Board on the outcome of its work at the Board's December 1996 session. It should meet as frequently as was necessary in order to ensure progress while allowing adequate time for consultations with capitals and affected parties.

98. The Board requested the Director General to make the necessary arrangements, including interpretation services, for the committee's meetings and to provide the committee with other support as required.

99. He took it that the summing-up was acceptable to the Board.

100. It was so decided.

101. Mr. JIANG (China), having congratulated the Chairman on the Board's acceptance of his summing-up and commended the co-operative spirit displayed by many delegations during the consideration of Programme 93+2, said that his delegation had been a consistent supporter of strengthening the Agency's safeguards system and had been playing an active and constructive role in the Programme 93+2 discussions. It hoped that as a result of broad consultations a just, reasonable, effective and feasible set of measures would emerge.

102. His delegation was pleased with the progress made so far under Programme 93+2, but it felt compelled to express concern about what appeared to be a wish on the part of some countries to deviate from - or go beyond - the original purpose of that programme.

103. Whatever the political intentions of those countries, the consequence might be to make the future deliberations on Programme 93+2 more complicated and hence delay - or even prevent - the achievement of the envisaged objective. His delegation hoped that all parties involved in those deliberations would co-operate in efforts to reach an early agreement in accordance with the original purpose of Programme 93+2.

104. Mr. SOKOLOV (Russian Federation) said his delegation was pleased that, thanks in large measure to the Chairman's efforts, the Board had reached general agreement on the further work to be done under Programme 93+2.

105. However, as the main purpose of strengthening the safeguards system was to enhance the Agency's ability to detect undeclared nuclear activities and materials in non-nuclear-weapon States, the suggestion made by certain delegations that nuclear-weapon States should assume legal obligations before the conclusion of the work on a model protocol implied going beyond what had been intended when the Agency had embarked upon Programme 93+2. The question of how the nuclear-weapon States might contribute to the implementation of Programme 93+2 could be considered within the framework of the safeguards agreements already concluded by them with the Agency.

106. Mr. BENMOUSSA (Morocco) commended the Chairman on the democratic nature of his consultations and wished him the best of luck in presiding over the committee just established by the Board.

107. Mr. DOSHI (India), congratulating the Chairman on the skillful manner in which he had tackled a range of difficult issues, said that, while the Indian delegation still had doubts about the safeguards strengthening programme, it nevertheless believed that, if the programme was implemented without undue haste and at the same time real progress was made towards universal nuclear disarmament, the Agency might ultimately succeed in helping to make the world a safer place. If that did happen, much of the credit would go to the Chairman.

108. Mr. MAZILU (Romania) said that the tangible results achieved by the Board during its present session had been due in large measure to the patience of the Chairman in seeking common positions on many sensitive issues. He wished the Chairman every success in presiding over the newly established committee and expressed the hope that the committee would make rapid progress.

109. Mr. ALLOTEY (Ghana) commended the Chairman on his efforts leading up to the decision just taken by the Board.

110. Emphasizing that his country was in favour of strengthening the effectiveness and improving the efficiency of the safeguards system, he expressed the hope that the "continuing imbalance in the funds allocated to the Agency's promotional activities and its safeguards activities" would in due course be reduced - if not eliminated altogether.

111. Mr. de YTURRIAGA (Spain) asked when in July the newly established committee would take up its work.

112. The CHAIRMAN said it was envisaged tentatively that the committee would take up its work on 2 July, considering organizational issues and holding a general discussion on 2 and 3 July and starting a first reading - article by article - of the draft protocol contained in Annex III to document GOV/2863 on 4 July, and that the session would continue until 12 July. However, it would be for the committee to decide on its timetable.

113. Also, it was envisaged tentatively that the committee would hold a further session from 7 to 18 October.

114. There would be no need for amendments to the draft protocol to be proposed for consideration during the July session. Also, the participation of safeguards experts would not be needed on 2 and 3 July.

115. Mr. de YTURRIAGA (Spain) said it would be helpful if it could be arranged that safeguards experts were not needed until the week starting 8 July.

