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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. 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 by the regular introduction of new developments and improvements in both its effectiveness and efficiency for detecting diversion of nuclear material placed under safeguards. The discoveries in Iraq, the problems which have arisen in the Agency's efforts to verify the declared nuclear inventory in the Democratic People's Republic of Korea, the Agency's positive experience in verifying the declared nuclear inventory in South Africa and the increasing importance of assurance regarding the absence of any undeclared nuclear activities and installations in States with comprehensive safeguards agreements have 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. This led, beginning in 1992, to a number of decisions by the Board of Governors reaffirming the requirements that Agency safeguards provide assurance regarding both the correctness and the completeness of nuclear material declarations by States with comprehensive safeguards agreements, endorsing some individual measures for increasing the Agency's capabilities in respect of verifying the completeness of States' declarations and requesting 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, within 2 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.

3. "Programme 93+2" has called for a major effort by the Secretariat. The work done could only have 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 General Conference in document GC(XXXVIII)/17.

4. In resolution GC(XXXVIII)/RES/10 the General Conference last year requested the Director General to:

continue with the assessment and development and, on a voluntary basis, testing of the measures being considered under "Programme 93+2" in order that a more effective and cost-efficient system may be achieved, covering all nuclear material in all peaceful nuclear activities within the territory of a State with a comprehensive safeguards agreement,

present to the Board of Governors in March 1995 proposals for a strengthened and more cost-efficient safeguards system, together with an evaluation of their technical, legal and financial implications, and

inform the General Conference at its thirty-ninth regular session of the action taken.

5. This report provides information, concerning "Programme 93+2," on the Secretariat's activities and the Board of Governors' consideration and decisions since the thirty-eighth regular session of the General Conference and on on-going work to implement measures under existing legal authority and to prepare proposals for the Board of Governors in December of this year for further strengthening measures to be implemented under complementary legal authority.

ACTIVITIES SINCE THE THIRTY-EIGHTH GENERAL CONFERENCE

6. The fourth progress report on "Programme 93+2" (GOV/INF/75) was presented to the Board of Governors at its December 1994 session. It reviewed in a comprehensive manner the work that had been done under each of the seven tasks comprising the programme and discussed the various measures being examined under the programme. While no action on "Programme 93+2" was recommended to the December Board, the discussion which took place provided further guidance to the Secretariat for its work under the programme and for its preparation of proposals for the March 1995 Board of Governors. In his summing up at the December session, the Chairman noted, *inter alia*, that the Board had reiterated its support for "Programme 93+2" as an exercise leading to a strengthened and cost-effective safeguards system and that many Governors had indicated a need for Member States to be involved in the continuing evaluation of the financial and legal implications of any proposals

7. The report to the March 1995 Board, document GOV/2784, is found in Annex 1. This report gave an overview of the proposed measures for strengthening the present safeguards system in a systematic and integrated manner; discussed how the various measures interrelate and how their synergistic effect would increase the level of assurance that could be attained; described each measure in detail in terms of its cost, effort, assurance and legal aspects, *i.e.*, whether a legal basis already exists for the Secretariat to implement the measure or whether complementary authority is needed; and presented recommended Board action.

8. The Director General introduced this report in his statement to the March session of the Board, the relevant part of which is reproduced as Annex 2. He stated that the measures presented in the report would provide significant improvements in the safeguards system, characterizing them as providing greater access to information and greater access to sites by inspectors. He urged Board approval of the recommendations in the report which would not imply endorsement of the specific measures described in the report but would allow the Secretariat to proceed with the preparation of specific proposals for the Board's consideration and approval in June.

9. There was an extensive discussion of document GOV/2784 in the Board during the March session. Although some Governors expressed reservations (at this stage) about certain aspects of some of the recommended measures, the Board endorsed the general direction of "Programme 93 + 2". It also requested the Secretariat to submit for consideration at its June

session, specific proposals for a strengthened and cost-effective safeguards system, taking into account the comments made during the discussion and any other comments which may still be received from Member States.

10. Full details of discussions in the Board including its decision on the matter are contained in Annex 3.

11. The Secretariat submitted for the Board's consideration at its June session document GOV/2807 (Annex 4) which contained a comprehensive set of strengthening and efficiency measures arranged in two parts. Part 1 consists of those measures which could, in the Secretariat's view, be implemented under existing legal authority and which would be practical and useful to implement routinely at an early date. Part 2 consists of those measures which the Secretariat proposes for implementation on the basis of complementary authority to be granted. The pragmatic step of partitioning the measures into two parts was taken to speed the implementation process. The Secretariat continues to emphasize the importance of the full set of measures in both parts as an integrated package.

12. The Director General, in his introductory statement to the June session of the Board relating to document GOV/2807 (Annex 5), mentioned that the work of the Agency to strengthen further the effectiveness of safeguards was strongly endorsed by the NPT Review and Extension Conference. He referred to the many helpful comments received from Member States on "Programme 93+2" and to the advice of SAGSI on the programme, which had contributed to the preparation of document GOV/2807. He stated that, rather than submitting the proposals in Part 2 of the document to the September Board, it would be more appropriate for the Secretariat to have the benefit of discussions at this year's regular session of the General Conference and of further informal consultations with Member States before submitting the proposals, together with a draft legal instrument, for the Board's consideration in December.

13. The Board's discussion of document GOV/2807 was equally extensive and lasted a full day. The Official Records, including the Board's decision are found in Annex 6. These include the extensive comments and suggestions made during the discussion, which the Chairman stated, in his summing up, should be taken into account in the next phase of the work. The Board took the action recommended in paragraph 6 of document GOV/2807, namely that "the Board take note of the Director General's plan to implement at an early date the measures described in Part 1 and that it urge 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 concerns will require consultations between the Secretariat and individual Member States.

ON-GOING WORK

14. Following the June Board, the Secretariat began the task of formalizing implementation of the Part 1 measures on a routine and universal basis under comprehensive safeguards agreements. A Policy Group, consisting of all Directors of the Department of Safeguards and chaired by the Deputy Director General for Safeguards, was established to set objectives and milestones, provide overall guidance and review, monitor and approve the measures to be carried out. A Working Group, including of the Heads of the Operations Procedures Sections and chaired by the Director of the Division of Safeguards Concepts and Planning, was established to ensure that the guidelines, procedures and documents needed for implementation of the measures are produced by appropriate Agency personnel. The responsibilities of these two groups will begin with the Part 1 measures and continue with Part 2 measures when approved for implementation by the Board.

15. The work of these groups is well underway. The plan for implementation of the Part 1 measures is being developed, and a programme for consultations with Member States will begin in September to elaborate the implementing arrangements and clarify concerns.

16. Development of the Part 2 proposals and of a draft legal instrument for granting the complementary authority for their implementation is nearing completion within the Secretariat. During September, consultations with Member States will intensify to facilitate completion of the documents for the December 1995 session of the Board to facilitate the Board's consideration of these documents.

ANNEXES

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| Annex 1 | Document GOV/2784: "Strengthening the effectiveness and improving the efficiency of the safeguards system: Programme 93 + 2 - 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 March 1995 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 March 1995 session of the Board of Governors |

- Annex 4 Document GOV/2807: "Strengthening the effectiveness and improving the efficiency of the safeguards system : Proposals for a strengthened and more efficient safeguards system - A report by the Director General"
- Annex 5 Statement regarding "Strengthening the effectiveness and improving the efficiency of the safeguards system: 93 + 2" made by the Director General in his introductory statement at the June 1995 session of the Board of Governors
- Annex 6 Discussion including decision on "Strengthening the effectiveness and improving the efficiency of the safeguards system: Proposals for strengthened and more efficient safeguards system" at the June 1995 session of the Board of Governors



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STRENGTHENING THE EFFECTIVENESS AND IMPROVING THE EFFICIENCY OF THE SAFEGUARDS SYSTEM

A Report by the Director General

I. INTRODUCTION

1. Effective verification at optimal cost is becoming ever more important in the field of arms control and nuclear non-proliferation. The more commitments States make with respect to the control and eventual elimination of nuclear weapons, the more important it becomes for them to be assured -- through credible verification -- that these commitments are respected. Recent events have demonstrated the need for the IAEA safeguards system to provide credible assurances not only regarding declared nuclear activities but also regarding the absence of undeclared nuclear activities. This report discusses how IAEA comprehensive -- or full scope -- safeguards can be made more effective and cost-efficient. It will have to be considered separately and subsequently to what extent measures proposed may be usefully applied in relation to item-specific safeguards agreements and to "voluntary offer" safeguards agreements with nuclear-weapon States.

2. The Statute of the IAEA permits the implementation of safeguards tailored to differing security demands of States parties to non-proliferation and nuclear arms control treaties. The agreements concluded in response to these demands foresee the continuous development of safeguards verification. Such development must at all times take into account the interest of the States not only in obtaining credible assurances, but also in not being impeded in their efforts to exploit the benefits of the peaceful use of nuclear energy. It must further take into account their interest in not being burdened by excessive costs or by cumbersome measures

to facilitate verification. The need to preserve industrial and commercial secrets and other confidential information must also be taken into account.

3. In this report, in which significant further development of comprehensive safeguards is described, it is appropriate to note that the system has, in fact, been in continuous development since its inception. As originally visualized, the IAEA was to serve as the center through which safeguarded nuclear trade would be conducted. As it actually developed, the system was first implemented to provide exporters of specified nuclear material, technology and facilities assurance that these were used for peaceful purposes only. With the Treaty on the Prohibition of Nuclear Weapons in Latin America and the Caribbean (the Tlatelolco Treaty) and the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), the overall objective of IAEA safeguards took a quantum leap forward in that they were designed to provide assurance that non-nuclear-weapon States parties were using all nuclear material, facilities and installations - existing and future, imported and indigenous -- for peaceful purposes only. With the development of a system of comprehensive safeguards along the lines of INFCIRC/153 (Corr.), safeguards were made to serve not only the interest of exporters in being assured that they were not contributing to an evolving nuclear weapons capacity, but also the interests of non-nuclear-weapon States which have foresworn nuclear weapons development, in providing credible assurance to others about their non-nuclear-weapon status.

4. With the emergence of new methods and the accumulation of experience, the techniques embodied in the comprehensive safeguards system have also developed continuously. This system, which is based on material accountancy, has proved to be reliable in providing assurance about the peaceful use of declared material and declared facilities and installations. This is of great practical and political importance. Material accountancy remains the cornerstone of the safeguards system. However, the system can be strengthened and made more efficient by new measures, in particular by improving the Agency's ability to detect undeclared activities in States with comprehensive safeguards agreements.

5. The problem of undeclared activities was highlighted in Iraq, but was not unknown. Indeed, the need for the safeguards system to provide assurances regarding both the correctness and the completeness of a State's nuclear material declarations was considered by the drafters of the INFCIRC/153 (Corr.), the basis for comprehensive safeguards agreements. The scope of INFCIRC/153 was not limited to the nuclear material actually

declared by the State; it also includes that which should be declared. However, the system such as it had developed up to the Iraqi case, had limited capability to deal with completeness. This was the result of practical, rather than legal, considerations.

6. The discoveries in Iraq, the problems which have arisen in the Agency's efforts to verify the declared nuclear inventory in the DPRK, the Agency's positive experience in verifying the declared nuclear inventory in South Africa and the increasing importance of assurance regarding the absence of any undeclared nuclear activities and installations in States committed by treaty to non-proliferation have made it imperative to update the safeguards system by adding to it measures that will give the Agency an improved capability of detecting clandestine nuclear activities. In February 1992 the Board of Governors re-affirmed the requirement that the Agency provide assurance regarding the correctness and completeness of nuclear material declarations by States with comprehensive safeguards agreements. As has been fully realized since the case of Iraq, even with the use of techniques which had not been available earlier, it is more difficult to design and implement a system which gives assurance that there are no undeclared nuclear activities in a State than it is to verify declared nuclear material.

7. It has been widely recognized that such measures must aim at securing Agency access to more information and greater access for inspectors to sites. A number of measures, e.g., concerning the early provision of design information and the scheme for reporting of certain imports and exports, have already been introduced. They focus on increased access: to information and to sites. Another development has been the increased access to and closer relationship with the United Nations Security Council. There has been a general view, however, that a more comprehensive and systematic inventory of measures, building on those already introduced, would provide the most effective overall approach to strengthened safeguards and would make it possible, at the same time, to eliminate or reduce some other measures, thereby saving costs. The present report will show that such trade-offs are possible.

8. In April 1993 the Standing Advisory Group on Safeguards Implementation (SAGSI) submitted to the Director General a report (SAR-15) containing a systematic examination of the safeguards system and recommended measures for improving its effectiveness and cost-efficiency. The Board, in June 1993, requested the Director General to submit to it concrete proposals for the assessment, development and testing of the measures proposed by SAGSI.

9. In response to the Board's request, the Secretariat presented in December 1993, a programme ("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 SAGSI, and to present, early in 1995, proposals for a strengthened and more efficient safeguards system. It was emphasized that any strengthening measures that would go beyond the scope of existing safeguards agreements could only be implemented on the basis of additional undertakings by the States concerned. The goal of "Programme 93+2" is to enable the Agency effectively to meet the completeness requirement by integrating a set of measures that increase the capability to verify completeness and that maintain the effectiveness of the current comprehensive safeguards system in a cost-efficient manner. Progress on "Programme 93+2" was reported to the Board in February 1994 (GOV/INF/729), in June 1994 (GOV/INF/737), to the General Conference in September 1994 (GC(XXXVIII)/17) and, again, to the Board in December 1994 (GOV/INF/759). SAGSI reviewed the proposed work in November 1993 (SAR-16) and reviewed progress in the programme at two junctures during 1994 -- March (SAR-17) and November (SAR-18), and its comments have been taken into account.

10. As noted above, "Programme 93+2" foresaw the identification and development of specific measures and an evaluation of the technical, financial and legal aspects of such measures. This has called for a major effort on the part of the Secretariat. The work was organized into seven major task areas as identified in Annex I to this report. This work could only have been accomplished with the support of Member States. Twenty Member States have been, or are, directly involved through the hosting of field trials, the conduct of specific development work through support programmes and the provision of expert assistance. A number of other States have indicated their interest by offering tangible assistance.

11. Member States, in the course of Board meetings, the General Conference, formal briefings and informal consultations, have availed themselves of numerous opportunities to provide the Secretariat with their views on "Programme 93+2". This close dialogue between the Secretariat and Member States has been a key ingredient in the evolving work of "Programme 93+2" and has influenced the proposals for strengthened, more cost-effective safeguards as put forward in this report.

12. The report gives first an overview of the proposed measures for strengthening the present safeguards system in a systematic, integrated manner. Thereafter, it discusses how

the various measures interrelate and how the synergistic effect of applying the proposed measures together would increase the level of assurance that could be obtained. Each new proposed measure is then described in greater detail. Its costs and benefits -- in terms of money, efforts and assurance -- are discussed, and, in respect of each proposed measure, there is a discussion as to whether a legal basis already exists for the Secretariat to implement that measure or whether complementary authority will be needed. Finally, future activities, conclusions and recommended Board action are presented.

13. A technical description of the work carried out under "Programme 93+2" can be found in detailed background task-by-task documentation which is available to Member States -- in English -- on request.

II. OVERVIEW

14. The proposed approach to a strengthened and more cost-effective safeguards system builds on the current system of material accountancy and control by integrating:

- (a) Elements of increased access to information and its effective use by the Agency, including:
 - (i) early provision of design information on the construction and modification of nuclear facilities (GOV/2554/Att.2/Rev.2);
 - (ii) information on transfers of nuclear material and specified equipment and non-nuclear material (GOV/2629);
 - (iii) Expanded Declaration by the State covering its present and planned nuclear programme;
 - (iv) information from environmental monitoring; and
 - (v) improved analysis and evaluation of all relevant information available to the Agency.

- (b) Elements of increased physical access for Agency inspections, including:
 - (i) special inspections in accordance with comprehensive safeguards agreements (GOV/OR.776);
 - (ii) broad access inspections as defined in paragraph 64 (with no-notice when useful and managed access where necessary) to all nuclear and nuclear-related locations identified in the Expanded Declaration; and
 - (iii) voluntary arrangements through which a State facilitates access to other locations which may be of interest to the Agency.
- (c) Optimal use of elements of the present system, including:
 - (i) continued emphasis on unirradiated direct-use material;
 - (ii) rationalization of safeguards on declared material through improved safeguards approaches, more reliable containment/surveillance and random unannounced inspections;
 - (iii) adjustments in safeguards goals related to timeliness, significant quantities and other safeguards parameters to reflect technical developments and fuel cycle practices;
 - (iv) increased co-operation with State or regional systems of accounting and control (hereafter referred to as SSACs) in the conduct of inspection activities, in joint use of equipment and analytical facilities and in support activities such as joint research and development projects and training;
 - (v) use of advanced technology with greater use of commercially available equipment in safeguarding declared nuclear material, including equipment capable of operating in an unattended mode and remote transmission of safeguards data; and

- (vi) administrative arrangements, such as additional and expanded field offices, simplified designation procedures, multiple-entry visas and independent means of communication for inspectors.

15. No safeguards system, no matter how extensive the measures, can provide absolute assurance that there has been no diversion of nuclear material or that there are no undeclared nuclear activities in a State. The level of assurance provided by the Agency's system depends upon a combination of elements including completeness of coverage of materials and activities; the nature, intensity and synergy of safeguards measures; the level of co-operation with State authorities and facility operators; and the nature of the fuel cycle and associated activities and quantities of declared material. Increased assurances over that provided by the current system through greater "nuclear transparency" can be acquired through a high level of co-operation between the State and the Agency involving increased access to information and to locations.

16. An important means of obtaining increased access to information would be through an Expanded Declaration in which States parties to comprehensive safeguards agreements would provide, in addition to the currently required information on all nuclear material, a description and the location of all nuclear-related processes (including facilities under construction and closed-down), production, research and development, and training. It would also include information resulting from environmental monitoring, a powerful tool for assuring the absence of undeclared nuclear activities at specific locations or sites. Increased access to locations, as proposed herein, would involve broad access to all locations identified in the Expanded Declaration (with "managed" access where commercial or other sensitivities are a concern) and voluntary arrangements with the State to facilitate access to other locations when the Agency has identified an interest. Another feature of increased access is that, when useful, it may take place without prior notice ("no-notice") to the State. "No-notice" is taken to mean no advance notification to the State of the timing, locations or activities of the inspection. Effective implementation of no-notice access would require agreement by the State to issue multiple-entry visas to, or not to require visas of, Agency inspectors while on inspection.

17. The development of proposals for a strengthened safeguards system has involved the re-evaluation of a number of technical and administrative issues related to the cost-effective implementation of safeguards on declared material in conjunction with increased utilization of SSACs and the strengthening measures. The synergistic effect of combining routine

inspections, broad access no-notice inspections at locations identified in the Expanded Declaration, increased co-operation with SSACs, advanced technology, particularly in the field of containment and surveillance, and more frequent declarations by facility operators of certain operational and nuclear material transfer data, would result in increased assurance regarding the exclusively peaceful use of facilities and the absence of undeclared activities (e.g., the value of the Expanded Declaration would be enhanced dramatically by broader access). This combination would also result in more effective and efficient safeguards on declared material in the natural and low-enriched uranium fuel cycles, with savings proportional to the size of the fuel cycle (e.g., reduced interim inspections at LWRs). This combination and others constitute the elements tested in the field trials.

18. Through implementation of the New Partnership Approach (NPA) with EURATOM, experience has been gained in ways to increase co-operation with SSACs which lead to more efficient safeguards on declared material. Technical elements from the NPA constituted an important part of the approach tested in Sweden and Finland. However, the NPA is based upon many years of experience with EURATOM. The attainment of similar levels of co-operation with other regional or national systems of accounting and control is dependent on the capabilities and functions of the respective systems and their transparency.

III. ANALYSIS OF BENEFITS, COSTS AND LEGAL AUTHORITY

19. The proposed measures for a strengthened and more cost-effective safeguards system, as well as the technical, cost-benefit and legal implications for each measure, are examined below. Some measures have an intrinsic value in improving safeguards independent of the other measures; however, the greatest benefits derive from the implementation of combinations of measures.

20. The overall costs are difficult to assess because costs are dependent upon many different factors. The net change in cost to the Agency is expected to be limited, particularly if the measures are implemented in a way that allows for off-setting of costs. This conclusion is based on a detailed evaluation of the costs of implementing current safeguards, the experience gained in the field trials regarding the implementation of the new measures and the cost-effectiveness of a greater emphasis on information analysis. Overall cost implications for operators are similarly believed to be limited, with modest increases for some kinds of facilities (e.g., LEU fuel fabrication plants to achieve effective verification of flows) and modest decreases for others (e.g., LWRs due to fewer interim inspections). The

greatest potential for reduced costs in safeguarding declared material is through the continuing development and use of advanced safeguards technology that monitors the movement of nuclear material without an inspector having to be present for operation or maintenance. A reduction in the requirement for Agency inspectors to go to facilities to meet timeliness goals -- through advanced technology and increased co-operation with SSACs or a relaxation in timeliness goals through accumulating assurance regarding the absence of undeclared activities (particularly, undeclared reprocessing or enrichment) -- provides a basis for reducing costs in implementing safeguards on declared material in the natural and LEU fuel cycles.

21. Would the measures now contemplated put an additional burden on the State, or would they amount to shifting to the State the cost of strengthening safeguards? Much of the new approach is predicated on a higher level of co-operation between SSACs and the Agency. For the SSAC, this higher level of co-operation implies, *prima facie*, more effort and thus higher costs, but the extent to which this is so is dependent upon the nature of the SSAC and the activities it is already carrying out. For example, if SSAC inspectors are accompanying Agency inspectors on routine inspections and the number of routine inspections at LWRs can be reduced, then this can have an off-setting effect with respect to the costs incurred in developing and maintaining the Expanded Declaration. Based on their respective experiences with the approach that was field-tested in Sweden and Finland, the SSACs of both States estimate an overall 20% reduction in total inspection effort for the SSAC. It should be noted that many of the measures which would increase effectiveness are not of a kind which would require increased efforts or costs, but only greater openness and good will, such as more information, greater freedom of movement for IAEA inspectors, multiple-entry visas and the acceptance of new techniques and equipment.

22. Whether comprehensive safeguards agreements concluded along the lines of INFCIRC/153 contain authority for the Agency to implement any particular proposed safeguards measure can only be determined through an interpretation of the provisions of such agreements. In accordance with Article 31 of the Vienna Convention on the Law of Treaties, a treaty is to be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of the object and purpose of the treaty. In applying this general rule to the interpretation of these agreements, the view could be taken that the existence of an obligation on the Agency -- to effectively verify both the non-diversion of declared material and the absence of non-declared material - - implies that the provisions of the safeguards agreements must be interpreted so as to enable

the Agency to fulfil that obligation. However, another view might be that a restrictive approach to interpreting these agreements is appropriate, that is to say, that while there may be obligations on the Agency, the authority necessary to implement specific measures to fulfill those obligations must be explicit. The legal analysis presented in this report does not assert that all of the authority needed to implement the proposed measures can be found in INFCIRC/153 agreements. Rather it seeks to define the authority which is explicitly or implicitly laid down in these agreements and points to instances where complementary authority seems to be necessary. This interpretation is based, inter alia, on a careful reading of the history of INFCIRC/153, its terms and subsequent practice. It should be noted that the analyses presented by the Secretariat do not prejudge the measures through which complementary authority could be obtained. For the Agency, the ultimate authority for the interpretation of comprehensive safeguards agreements along the lines of INFCIRC/153 rests with the Board.

A. BROADER ACCESS TO INFORMATION

23. In carrying out its obligations under comprehensive safeguards agreements, the IAEA is entitled to "information concerning nuclear material subject to safeguards under the Agreement and the features of facilities relevant to safeguarding such material" (INFCIRC/153, para. 8). "Nuclear material subject to safeguards under the Agreement" is understood as meaning not just that which is declared by the State, but that which is required to be declared. The right to information is not without limitations: paragraph 8 of INFCIRC/153 limits the Agency's right to such information to "the minimum amount of information and data consistent with carrying out its responsibilities under the Agreement". It further provides that information pertaining to facilities shall be the "minimum necessary for safeguarding nuclear material subject to safeguards under the Agreement". However, these limitations also confirm the Agency's right to information.

24. Through the work of "Programme 93+2", certain measures related to broader access to information have been identified as of use in a strengthened safeguards system. Building on the current system of nuclear material accountancy and control, and incorporating measures already approved by the Board (the early provision of design information and the reporting scheme), the additional measures would include an Expanded Declaration by States party to comprehensive safeguards agreements, the collection of information through environmental monitoring and improved analysis of all information available to the Agency.

1. Expanded Declaration

(a) Description

25. An Expanded Declaration is a means for obtaining from the State the information that will make its nuclear programme more "transparent". A draft outline of a model Expanded Declaration is included in this report as Annex II. The model Expanded Declaration has been developed in consultation with Member States hosting field trials, and is being used by the Agency in carrying out those trials. The technical background documentation for Task 4 provides substantial detail on the development of this measure, including a major excerpt from the Expanded Declaration submitted by the Canadian SSAC as part of the field trials. This excerpt, presented with the permission of the Canadian Government, provides a useful example of how the information requested could be presented.

26. The information requested in the Expanded Declaration falls within three general categories: that related to the State's System of Accounting and Control (SSAC) and that related respectively to present and planned nuclear activities of the State. Some of this information is already supplied by States with comprehensive safeguards agreements. Other information could be required under such agreements, but has not been requested in the past. The demand for still other elements of the information identified in Annex II may require complementary authority under existing comprehensive safeguards agreements.

27. As regards SSACs, the Expanded Declaration would require a State party to a comprehensive safeguards agreement to provide a description of the scope and timing of SSAC inspection and other related activities, as well as a completed SSAC questionnaire. The purpose of the questionnaire is to solicit from the State a description of the technical and manpower resources, operational capability, legal authority, information holdings and administrative structure of the SSAC. This information is a necessary basis for increased co-operation with SSACs, which will result in improving efficiencies in safeguarding declared material. This is because it will enable the Agency to make full use of SSACs, take due account of their technical effectiveness and avoid any unnecessary duplication of activities. The model SSAC questionnaire has been included in the technical background documentation for Task 4.

28. Under present nuclear activities, the Expanded Declaration calls for information on facilities which were closed down or decommissioned prior to the State's becoming party to

a comprehensive safeguards agreement, as well as certain historical accounting and operating records. In recent practice such information has been requested by and provided to the IAEA. Requests for such records under the Expanded Declaration would be made in connection with verification of the completeness and correctness of a State's declarations concerning its present activities.

29. The Expanded Declaration also identifies other information with respect to a State's present nuclear activities which would be useful under a strengthened safeguards system. The information includes that which is already routinely submitted to the Agency by States (such as design information, information on the production, processing, use and transfer of nuclear material, and certain information on the State's nuclear fuel cycle and research and development activities involving nuclear material), as well as other information which is not now routinely submitted to the Agency (see para. 2(c) of the expanded declaration).

30. As regards planned nuclear activities, the Expanded Declaration would incorporate information which the Board has already determined falls within the scope of existing comprehensive safeguards agreements (specifically, that related to the early provision of design information), as well as additional information concerning the national nuclear fuel cycle and planned R&D activities which, in large part, is not currently provided by States.

(b) Benefits

31. Nuclear material accountancy safeguards depend upon facility-level material accounting systems that produce periodic declarations regarding the locations and quantities of nuclear material holdings. The iterative inspection process provides for independent verification of the procedural elements of the facility accounting system and that material holdings are as they are declared to be. Assurances derive from the quality of the accounting system and the capability of the inspection process to identify and subsequently, with the State and operator, to resolve any inconsistencies. Any alternative to this "audit function" approach would require the Agency to maintain independent systems of records and accounts - an expensive and intrusive process with little, if any, perceived gain in effectiveness.

32. An Expanded Declaration along the lines of Annex II would provide an effective audit basis for the planning and conduct of Agency activities relevant to providing assurance about the absence of undeclared activities at declared locations. It would also provide the basis for consistency checks and follow-up against information obtained from other sources (e.g.,

procurement activities or environmental sampling). Compared to this approach, there appear to be no alternatives which would not involve extremely high costs and levels of intrusiveness with no apparent merit. Overall, the benefit to the State and to the Agency of an Expanded Declaration and associated inspector activities would be the cost-effective accumulation of assurances through greater nuclear transparency and, with that, the political, commercial and security benefits that would derive from a strengthened safeguards system.

(c) Costs

33. The experience from field trials helps only partially in estimating the total effort required of the Agency to process the considerable information that would result from an implementation of an Expanded Declaration. This is partly due to the fact that the model Expanded Declaration evolved through several iterations during the field trials, and that the way in which information would be presented is not yet standardized. Assuming consistency of format and automation, no more than one specialist per Operations Division (three in total) would be needed to make the information readily accessible and to keep the information updated. These resources could initially be found through the re-assignment of current staff. The cost to States is a function of the size of their respective nuclear programmes. The Canadian SSAC estimates that it spent a total of two person-months producing a first iteration of the Expanded Declaration for the field trials; the Swedish SSAC estimate is one to one and a half person-months; the Australian SSAC estimate is one person-month; and the Finnish SSAC estimate is three person-weeks. The experience with respect to maintenance through periodic updates is limited, and hence, the cost data are equally limited. However, the SSACs which participated in the field trials have indicated their view that continuing efforts are not substantial and will not result in any need for additional staff.

(d) Legal Analysis

34. *Information on SSACs:* INFCIRC/153 already provides adequate legal authority to require the kind of information about State Systems of Accounting and Control (SSACs) contemplated in the Expanded Declaration. Paragraph 7 of INFCIRC/153 requires each State party to a comprehensive safeguards agreement to establish an SSAC. Paragraphs 32 and 51 through 69, set forth the obligations of the SSACs. Safeguards are to be applied in such a manner as to enable the Agency to verify, in ascertaining that there has been no diversion of nuclear material, the SSAC's findings. In doing so, the Agency is required to "take due account of the technical effectiveness of the State's system". Paragraph 31 further requires

the Agency, to the extent consistent with paragraph 7, to make full use of SSACs, and to avoid unnecessary duplication of the SSAC activities. In addition, paragraph 81(b) requires that, in determining the actual number, intensity, duration, timing and mode of routine inspections, the Agency include as a criterion in its consideration the effectiveness of the State's accounting and control system. In order for the Agency effectively to fulfil these obligations, these provisions must be read as implying that the Agency is entitled to request and obtain the type of information identified in the Expanded Declaration as related to SSACs.

35. *Present nuclear activities:* A State party to a comprehensive safeguards agreement is required to provide the Agency with an initial report on all nuclear material which is subject to safeguards under its agreement. To be effective in ensuring that no presently existing nuclear material in the State goes unreported, the State system itself would have to be able to account for past production activities. For its part, the IAEA is obliged to ensure that safeguards are applied on all source and special fissionable material in all peaceful nuclear activities of a State party to a comprehensive safeguards agreement. This obligation extends to verification of the completeness and correctness of the State's declarations of nuclear material subject to safeguards under the agreement. In order to do so, the IAEA must have available to it information which permits it to draw the conclusion that all nuclear material declared by the State is accounted for and that there exists in the State no nuclear material subject to the agreement which has not been reported by the State. To be credible in this assurance, the IAEA must be enabled to take the steps necessary to verify that no nuclear material in the State has gone undeclared. As one step in this process, the Agency may request information on the State's past nuclear activities, including that related to the production of nuclear material prior to entry into force of the agreement. Without access to such information, the Agency would only be able to provide limited assurance as to the State's compliance with its obligation to place all nuclear material under safeguards. It may be argued that the State's obligation to facilitate access to accounting and operating records (as set forth in paras. 51-54 of INFCIRC/153) does not require the State as a matter of course to produce records of operations which predate the entry into force of the agreement. However, the State has a general legal obligation under paragraph 3 of INFCIRC/153 to co-operate with the Agency to facilitate the implementation of safeguards. States which have had nuclear programmes prior to the conclusion of a comprehensive safeguards agreement must be deemed to have an obligation to provide access to available records on the production of nuclear material and related facilities to the extent necessary to enable the Agency to verify the completeness and correctness of the State's declarations.

36. The Expanded Declaration would also solicit information on the State's nuclear fuel cycle. Paragraph 81(c) establishes as one of the criteria for determining the frequency, intensity and mode of routine inspections the "characteristics of the State's nuclear fuel cycle, in particular, the number and types of facilities containing nuclear material subject to safeguards". These provisions must be read as implying that the Agency is entitled to request and obtain the type of information referred to in paragraph 2.c.(i) of the Expanded Declaration, namely, a description of the national nuclear fuel cycle and other activities involving nuclear material, with a list of the sites involved.

37. As regards research and development (R&D) activities identified in paragraph 2.c.(ii), to the extent that such activities are carried out at a "facility", as defined in paragraph 106 of INFCIRC/153, the Agency already receives design information pursuant to paragraphs 42 to 46 of INFCIRC/153. Information is also received pursuant to paragraph 49 with respect to such activities at locations outside facilities (LOFs) if they customarily involve the use of nuclear material. Complementary authority would be required to ensure its provision of such other information related to R&D activities as is included on the Expanded Declaration.

38. Operational information beyond that currently specified in subsidiary arrangements as referred to in paragraph 2.c.(iii) of the Expanded Declaration, pursuant to paragraph 64 of INFCIRC/153, may be agreed upon between the State and the Agency as part of a set of measures to improve the cost-effectiveness of safeguards on declared material. For example, the State might agree to more frequent reporting on the operational status of any given nuclear facility.

39. Requiring the declaration of information identified in paragraphs 2.c.(iv), (v) and (vi) of the Expanded Declaration might be possible, depending on the configuration of the facilities and locations in question, as design information submitted in connection with a nuclear facility. However, for most cases of such facilities and locations, there are no specific provisions of INFCIRC/153, other than those related to special inspections, which would require the provision of such information. Accordingly, complementary authority would be necessary to make such information obligatory.

40. The only provision of INFCIRC/153 which refers expressly to information on nuclear-related equipment is contained in paragraph 43(b), which requires the State, in providing design information in respect of each facility, to submit a "description of the general arrangement of the facility with reference, to the extent feasible, to the form, location and

flow of nuclear material and to the general layout of important items of equipment which use, produce or process nuclear material". Apart from that limited information, the discussions held by the Board of Governors on the subject of reporting by States of certain items, as described in GOV/2629, reflect the position of most Member States that the provision of information with respect to such items as are identified in paragraphs 2.c.(vii), (viii) and (ix) is currently voluntary.

41. *Planned nuclear activities:* With respect to paragraph 3.a. of the Expanded Declaration, the Board has taken a decision on the early provision to the IAEA by States of design information on facilities which a State is planning on constructing or modifying. As regards paragraphs 3.b. and 3.c., complementary authority would be necessary to make such information obligatory.

2. Environmental Monitoring

(a) Description

42. Any production or manufacturing process loses some small fraction of the process materials to the immediate environment. The extent of the loss depends upon a wide variety of factors, including the nature of the process, the material, the control measures to limit losses and the migration of losses beyond the immediate process location. The processing of nuclear material is no exception, and even though great care is taken to prevent losses, small losses inevitably occur and migrate beyond the immediate environment where the loss took place. Further, nuclear materials have specific physical properties (e.g., radioactivity) that make it possible to detect and characterize losses that may be present in the environment in only very small quantities. This capability, together with the possibility of unambiguously correlating specific signatures with specific nuclear processes, is why environmental monitoring is a useful tool for the detection of possibly existing undeclared activities.

43. A sample for environmental monitoring may be a smear, using a clean sample medium, of any exposed surface inside or outside buildings or a sample of vegetation, soil, water or air. Samples are usually processed in a "bulk" mode or a "particulate" mode. "Bulk" mode refers to the analysis of the entire sample to arrive at the analytical result. The results thus obtained represent the average concentration of the analyte in the sample. In the "particulate" mode, individual particles are analyzed as separate entities. Bulk analysis and particulate analysis are complementary. Analytical results of primary interest for safeguards

include concentration of uranium and plutonium isotopes, other transuranium nuclides, long-lived fission and neutron activation products, and certain elemental, molecular and crystalline materials. A variety of technical studies have been completed through Member State Support Programmes that describe sample analysis and collection techniques and the correlation between specific signatures observed in the environment and potential sources.

44. A primary activity of "Programme 93+2" has been to evaluate the benefits of short-range environmental monitoring through sample collections within the perimeters of nuclear facilities. Under this measure, the Agency would seek access to sampling locations within nuclear facilities and LOFs, as well as locations within the perimeter of sites where such facilities and LOFs are located. Sampling at other sites identified on the Expanded Declaration would be within and outside buildings within the perimeter of the site. Environmental monitoring on sites, including public lands, not on the Expanded Declaration - except in the case of special inspections -- is not part of the currently proposed measure, but will be the subject of supplementary future work.

45. The status of environmental monitoring field trials as of the end of January 1995 is as follows:

COUNTRY	FACILITY TYPE	SCHEDULE	STATUS
Sweden	reactors, research center	13-27 Sep 1993	complete, report written
Hungary	reactor	27-29 Oct 1993	complete, report written
USA	enrichment	22-25 Mar 1994	complete, report written
Japan	reprocessing	11-15 Apr 1994	complete, report written
South Africa	enrichment	11-19 Apr 1994	complete, report written
Australia	research center	26-29 Apr 1994	complete, report written
Argentina	enrichment	06-13 May 1994	complete, report written
Indonesia	research center	17-20 May 1994	complete, report written
Republic of Korea	research center	20-24 Jun 1994	complete, report written
UK	reprocessing	26-30 Sep 1994	partial results, under evaluation
Netherlands	enrichment	05-06 Dec 1994	partial results, under evaluation
Japan	enrichment	mid-March 1995	---

46. To supplement the Agency's Safeguards Analytical Laboratory at Seibersdorf, an Extended Network of Analytical Laboratories, involving laboratories of the Agency and specialized laboratories in Member States, has been established. Other laboratories will be added to this network. A procedure for certification and auditing the quality assurance programmes of laboratories in the extended network has been developed. To strengthen its own analytical capability, the Agency is establishing a clean laboratory at Seibersdorf. The construction is on schedule with, commissioning set for mid-October 1995 and operation soon thereafter. The laboratory will provide an important capability for the handling, screening and distribution of environmental samples.

(b) Benefits

47. The overall conclusion from the trials is that the analysis of environmental samples collected in the immediate environment of a nuclear site provides an extremely powerful tool for gaining assurance regarding the absence of undeclared activities at and near such sites. Appropriate sample collection and handling procedures can effectively prevent cross contamination, and the sample distribution and the implementation of the reporting protocol by the Extended Network of Analytical Laboratories protect the identity of samples. Evidence of the existence of nuclear sites, and of major activities (enrichment, reprocessing, reactor) carried out at such sites, was obtained at distances depending on local conditions. The specificity of the results (i.e., the ability to identify signatures with specific activities) increases with decreasing distance. Samples collected in or near buildings provided very specific signatures of current and, in some cases, past activities carried out in the buildings.

(c) Costs

48. Criteria for the use of environmental monitoring in declared facilities will be developed in parallel with its early implementation. On a preliminary basis, the Secretariat estimates that, by the third year after the proposed environmental monitoring programme starts up, on the order of 500 to 1,000 samples would be collected and analyzed per year. This estimate includes samples associated with ad hoc inspections used to establish the completeness of initial reports and a more general implementation of environmental monitoring for strengthened safeguards. The efficient analysis of environmental samples requires a well-developed sample analysis strategy for each site based on site features. Some samples collected at a site would be archived without analysis, others would be submitted for

inexpensive screening measurements and some would be subjected to detailed analysis using highly accurate, sensitive and expensive methods. The samples would require special handling and processing.

49. The estimated annual costs for 1,000 samples (from field trial experience some samples may be analyzed with more than one method) are costs for sample planning and collection, handling and analysis, including quality assurance and data analysis. The estimated cost for operating the Seibersdorf Clean Laboratory (for handling, archiving, screening and distribution of environmental samples) would be in the order of 700,000 US dollars per year. Most sample collections would be carried out in conjunction with other inspection activities; the additional work and related data analysis could amount to an annual cost of approximately 1 million US dollars. The following table gives the costs per laboratory analysis, as average figures in US dollars obtained from the Analytical Laboratories:

Sample Analysis Method	Number of Samples	Average Cost (US\$)	Total Cost (US\$)/ Sample Type
Particulate (20 particles per sample)	200	10,000	2,000,000
Bulk (by mass spectrometry)	550	2,000	1,100,000
Bulk (other techniques)	150	400	60,000
Water associated	100	3,000	300,000
ESTIMATED ANNUAL ANALYTICAL COSTS			US\$ 3,460,000

50. Thus, the total estimated additional costs incurred by the Agency in implementing this environmental monitoring programme of 1,000 samples would be approximately 5.2 million US dollars per year. This would include the collection of replicate samples by the Agency for the State should the State so desire. Any significant deviation in the number of samples analyzed from the assumed 1,000 samples per year would have a direct impact on total costs. 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, but the experience from the field trials is that such questions are quickly resolved.

(d) Legal Analysis

51. Paragraph 74 of INFCIRC/153 provides that, in conducting inspections (ad hoc, routine and special), the Agency may carry out certain activities, including, in particular, the application and use of surveillance measures (para. 74(d)) and the use of other objective methods which have been demonstrated to be technically feasible (para. 74(e)).

52. Environmental monitoring, although a relatively recently developed technique, constitutes a surveillance measure, as contemplated under paragraph 74(d), that is, a measure for the collection of information through inspector and/or instrumental observation aimed at the monitoring of the movement of nuclear material, the observation of operations and the obtaining of relevant operational data.

53. Paragraph 74(e) provides an additional basis for justifying the conduct of environmental monitoring under INFCIRC/153. Paragraph 74(e) permits the Agency to use "other objective methods which have been demonstrated to be technically feasible". This is reinforced by paragraph 6 of INFCIRC/153, which provides, inter alia, that the Agency "shall take full account of technological developments in the field of safeguards", and paragraph 47, which provides for re-examination of design information in light of "developments in safeguards technology or of experience in the application of verification procedures." Through the field trials environmental monitoring has been demonstrated to be a technically feasible and objective method of verification with respect to short-range detection of nuclear activities.

54. It is reasonable to conclude, therefore, that wherever the Agency has a right of access to conduct inspections, it has the right to implement environmental monitoring. Under ad hoc inspections, such locations are limited to those sites where the initial report or inspections carried out in connection with it indicate that nuclear material is present (INFCIRC/153, para 76(a)). Under routine inspections, such locations are limited to strategic points (para. 76(c)). As regards special inspections, such locations may include places in addition to those provided for under ad hoc and routine inspections where the circumstances warrant such action (para. 77).

55. Pursuant to paragraph 48 of INFCIRC/153, the IAEA, in co-operation with the State, has the right to send inspectors to facilities to verify the design information provided to the IAEA. Access for such verification is not limited to strategic points, but it is limited to that associated with design information for facilities. INFCIRC/153 does not specify the methods which are to be employed in verifying design information. Environmental monitoring can contribute significantly to the verification of design information. Hence it is reasonable to conclude that environmental monitoring may be used to verify design information at any location to which the Agency has access to carry out design information verification.

3. Improved Analysis of Information

(a) Description

56. The purpose of the work on improved analysis is the establishment of a comprehensive approach towards the acquisition, processing and evaluation of information available to the Agency about a State's nuclear activities. In general this information would derive from three sources:

- (i) information provided by States with comprehensive safeguards agreements as summarized in the Expanded Declaration (Annex II) including that currently provided;
- (ii) information deriving from safeguards activities including results from strengthening measures (e.g., environmental monitoring); and
- (iii) information from all sources available to the Agency, including the public media, scientific publications and existing Secretariat databases (power reactors -- PRIS, research reactors -- RRDB, fuel cycle facilities -- NFCIS and the International Nuclear Information System -- INIS), as well as other information made available by Member States.

57. Automated systems in the Agency for dealing with large volumes of material accountancy data and inspection results have been in place for years. A computerized system for the storage and retrieval of information from open sources and that obtained through the reporting scheme has also been established. The latter system is being augmented with text

processing software that provides the capability to automatically scan large volumes of text for key words or phrases.

58. An important part of the effort toward improved analysis of information is the development, with assistance from Member States, of a physical model (called "proliferation critical path") describing all known pathways (combinations of processes) for the production of weapons-usable material and weaponization. Each process is characterized by indicators of the existence or development of the process, such as specialized equipment, dual-use equipment, nuclear and non-nuclear materials, associated training and signatures from environmental samples. The development of this model is providing a disciplined approach to defining what information should be collected and how it is best structured for analysis. Thus it would provide a framework for key-word based literature searches, for the evolution of a more specific Expanded Declaration and for comparing indicators of activities with a State's declared nuclear programme.

59. The technical background documentation for Task 5 provides details regarding work toward the objective of a flexible information analysis system.

(b) Benefits

60. The broad based and systematic analysis of information regarding a State's nuclear programme is geared toward the identification, at an early stage, of any instance where the available information might suggest the conduct of activities inconsistent with the State's declaration to the Agency. Such instances, as is currently the case when inconsistencies are discovered in nuclear material declarations, would be subject to immediate follow-up and clarification with the State concerned. This is a natural part of the assurance building process.

61. The development of the proliferation critical path model provides a disciplined approach to defining what information should be collected and how it is best structured for analysis. This structured approach to information analysis should minimize the information requested from the State to that which is needed to provide assurance that there is no clandestine activity leading to a nuclear weapons capability.

(c) Costs

62. The computer hardware and software for initial implementation are available in the Secretariat. The hardware is a powerful workstation computer with scanning and multi-media capability. In all cases, commercially available and supported software is being used. This will minimize software development and maintenance costs. It is estimated that three professionals will be necessary to operate the system. This could result in additional yearly costs of approximately 300,000 US dollars.

(d) Legal Analysis

63. Comprehensive safeguards agreements require the Agency to draw conclusions from its verification activities (INFCIRC/153, para. 90), which presupposes the analysis and evaluation of the results of such activities. Improvements in the Agency's analytical techniques would therefore be consistent with the overall objective of a strengthened and more cost-effective safeguards system, and can be pursued within the Agency's existing legal authority.

B. INCREASED PHYSICAL ACCESS

1. Broad Access

(a) Description

64. The possibility of increased physical access is key to a strengthened safeguards system. As confirmed by the Board of Governors, the IAEA's existing authority to carry out special inspections, when necessary and appropriate, may be exercised with a view to ensuring that all peaceful nuclear activities in States with comprehensive safeguards agreements are subject to safeguards. However, as also indicated by the Board, such inspections, as regards undeclared locations, are only expected to occur on rare occasions. The broad access designed to complement the Expanded Declaration is intended as a mechanism for more regular (although not routine) use. This access is being sought to enable the Agency to conduct inspections, as necessary, in order to give increased assurance about the absence of undeclared activities and the non-misuse of facilities. The access being sought, and that assessed in the course of the field trials, comprises:

- (i) access needed beyond the currently designated "strategic points" in safeguarded facilities to any location on the site containing the facility;
- (ii) access needed to other nuclear-related locations identified in the Expanded Declaration which are declared as not containing nuclear material; and
- (iii) voluntary arrangements through which a State facilitates access to other locations which may be of interest to the Agency. Several States have volunteered to provide such access to the Agency.

65. The geographical area that constitutes a site or location in categories (i) and (ii) would be identified by the State in the Expanded Declaration. In most cases this would be straightforward, and be the area within a perimeter fence or a building (e.g., a facility). For access in categories (i) and (ii), any limitations due to safety reasons or areas where access needs to be managed (e.g., shrouding) due to commercial or other sensitivities need to be identified in the Expanded Declaration.

66. Inspection activities requiring broad access at category (i) sites often can be carried out most efficiently in conjunction with routine inspections on declared material. The no-notice feature is dealt with separately in this report.

67. As regards category (iii), questions may sometimes arise about activities or locations not identified in the Expanded Declaration and the resolution of such questions may be achieved through Agency access. A State may wish to offer such access on a voluntary basis.

68. A total of 25 no-notice broad access inspections and two announced broad access inspections have been carried out to date in four countries hosting field trials. In the course of these inspections, access was requested and provided to 21 locations at sites in category (i) and to seven locations at sites in category (ii). Inspection activities included environmental monitoring and design information verification.

(b) Benefits

69. When South Africa had acceded to the NPT and the comprehensive safeguards agreement had entered into force, a series of inspections were carried out (in the Spring and

Summer of 1993) specifically for the purpose of verifying the completeness of South Africa's initial report. These particular inspections illustrate clearly what can be accomplished when a State and the Agency work together towards the goal of nuclear transparency. Throughout the inspections, the Agency identified the need for access to locations and operating records. The State undertook the enabling actions necessary to secure the access and permit the requested inspection activities.

70. Physical access and maximum effectiveness are inextricably intertwined. The broad kind of access described above now has been further tested through a number of field trials. It has been demonstrated that broad access can be arranged by the State and the operator with but a modest effort; that it can be managed in a way which does not intrude unacceptably on facility operations and which also protects commercial sensitivities; and that such access is sufficient for carrying out inspection activities that can contribute to assurance about the absence of undeclared nuclear activities. The benefits are increased effectiveness of safeguards implementation and potential increases in efficiencies with respect to safeguards on declared material.

71. Should a State seek to proceed secretly on production of weapons-usable nuclear material and development of nuclear weapons, there would be advantage to the State in co-locating clandestine activities and peaceful activities. Utilization of existing infrastructure, equipment and staff is more efficient and less susceptible to detection. The Iraqi clandestine nuclear weapons programme had its beginning at the Tuwaitha Nuclear Research Center, a known site with some facilities containing declared nuclear material under safeguards. The development of sites away from Tuwaitha occurred as development work proceeded to larger scale production. Broad access at sites containing safeguarded facilities and at other sites on the Expanded Declaration provides a deterrent to the co-location of clandestine and peaceful activities. This does not mean that a State could not proceed with an independent weapons development programme at locations separate from those identified in the Expanded Declaration, but it does make such a development much more difficult and costly.

(c) Costs

72. Activities to assure the absence of undeclared nuclear activities at category (i) sites would, under most circumstances, be carried out in conjunction with routine inspections for safeguarding declared material. Inspection activities requiring broad access, pursuant to the Expanded Declaration, would require additional Agency person-days of inspection (PDIs).

However, this additional inspection effort should be partially off-set by savings in current efforts to safeguard declared nuclear material (see para. 85 below).

73. SSACs participating in the field trials estimate that a one-time effort ranging between two-person days and one-person week (SSAC and operator combined) had been needed to establish the no-notice broad access procedures at locations identified in the Expanded Declaration and to communicate these procedures to the Agency. These procedures describe the specific steps to be taken by the three parties -- the Agency inspector, the operator and the SSAC -- to secure the requested access when the inspector arrives at a site. While the carrying out of Agency inspection activities would require additional effort on the part of the SSAC and operators, the field trial experience is that this effort would be more than off-set by savings elsewhere (see para. 21 above).

(d) Legal Analysis

74. *Access to locations identified in category (i):* Although access under routine inspections is limited to the strategic points specified in the relevant subsidiary arrangements and to the records maintained pursuant to paragraphs 51 to 58 of INFCIRC/153, access to locations identified in category (i) might be secured through routine inspection by the identification of additional strategic points. The Agency has the right under routine inspections to verify "all nuclear material subject to" a comprehensive safeguards agreement (para. 72(b)) and, to that end, has the right to select as a strategic point any location "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 safeguards measures is obtained and verified; a strategic point may include any location where key measurements related to material balance accountancy are made and where containment and surveillance measures are executed" (INFCIRC/153, para. 116). However, access beyond strategic points in the carrying out of routine inspections would require complementary authority.

75. Access to other locations under category (i) (i.e., locations outside nuclear facilities but within the sites) generally would be required infrequently. The Agency would not have a right to carry out routine inspections at such locations. However, access might be secured to such locations in the context of design information verification. Pursuant to paragraph 48 of INFCIRC/153, the IAEA, in co-operation with the State, has the right to send inspectors to facilities to verify design information. The information required to be provided to the

Agency includes not only that specified in paragraph 43, but "such other information as is relevant to the application of safeguards" (as provided for in para. 44), as well as information on modifications in the facility design relevant for safeguards purposes. Clearly this includes information on the status of its operation. Accordingly, insofar as the Agency is entitled to receive design information on the status of operation of a facility, it may also request access to verify such information in accordance with paragraph 48.

76. Access to locations identified in category (i) may also be obtained through ad hoc inspections for the purpose of verifying the initial report and changes thereto. Such inspections are not limited to strategic points, but may be conducted at any locations where the initial report or inspections conducted in connection with it indicate the presence of nuclear material. Access to such locations may also be obtained under circumstances warranting special inspection.

77. *Access to locations identified in categories (ii):* Access to other locations in the Expanded Declaration which are declared to be nuclear-related but not containing nuclear material would require complementary authority to be obligatory except to the extent that conditions for ad hoc or special inspections prevail.

78. Access to locations in category (iii) is being sought only in the context of a voluntary, case-by-case arrangement with the State.

79. *Managed access:* The concept of "managed access" can be relevant to all three categories of location and is already accommodated within the existing provisions of INFCIRC/153. Paragraph 46(b)(iv), which provides that, in determining material balance areas in facilities and LOFs to be used for Agency accounting purposes, if a State so requests, a special material balance area around a process step involving commercially sensitive information may be established. In addition, paragraph 76(d) of INFCIRC/153 provides that, in the event of the State concluding that any unusual circumstances require extended limitations on access by the Agency, the State and the Agency shall promptly make arrangements with a view to enabling the Agency to discharge its safeguards responsibilities in the light of these limitations.

2. No-Notice Inspections

(a) Description

80. No-notice is taken to mean no advance notification regarding the timing, activities or locations of an inspection. In practice this would mean that the State and the operator would be informed of the Agency's intention to perform such an inspection only when the Agency inspector arrives at the entrance to the site. As noted above, any implementation of no-notice inspections clearly presupposes that States require no visas for, or grant multiple-entry visas to, Agency inspectors. No-notice inspections are intended, for the most part, for locations with declared nuclear material and for use in conjunction with advance and near-real-time declarations by facility operators.

81. The no-notice broad access procedures established for the field trials by SSACs and operators have worked well. The maximum time between the arrival of inspectors at a site and the time at which they achieved the requested access was set at two hours for planning purposes during most of the trials. This is the time for achieving access under the Limited Frequency Unannounced Access (LFUA) inspections at gas centrifuge enrichment plants. Not once during the 25 no-notice broad access inspections conducted to date under the field trials was this time exceeded and, in most trials, access was provided within minutes. The no-notice feature was also used in requesting access beyond strategic points during routine inspections.

(b) Benefits

82. Random sampling and statistical inference have been utilized for years as a cost-effective way to verify large stocks of nuclear material. That is, conclusion of non-diversion for a large population of items containing nuclear material is inferred from the results of verification measurements on a randomly selected subset of the items. These methods are equally valid for events or conditions distributed in time. Thus the verification of material flows, the confirmation of facility operating conditions and the verification that there are no undeclared activities at a site at randomly selected points in time allow an inference regarding the situation over the whole time interval (e.g., one year). The no-notice feature for some inspections provides this possibility.

83. The no-notice feature by itself would result in added assurance that facilities are not being misused and in more effective safeguards on declared material, particularly in the natural and LEU fuel cycles. However, the combination of no-notice, broad access and increased co-operation with SSACs (at least to the extent that the SSAC, or operator, perform the periodic surveillance film exchanges) could result in significant improvements in the cost-effectiveness of a strengthened safeguards system.

(c) Costs

84. The cost implications of the no-notice feature alone, for the Agency, are negligible. The additional flexibility may, in fact, result in some travel efficiencies for certain kinds of inspections. For States and operators, this feature would require that they maintain an appropriate level of responsiveness (e.g., personnel on call, additional travel, etc.) that would incur additional costs. Once procedures are in place, continuing costs for the SSAC would depend upon their current requirements (e.g., to accompany inspectors). Additional costs to operators would primarily be costs associated with different and more timely reporting requirements. Should no-notice and increased co-operation with SSACs be implemented in combination with other elements (e.g., advanced technology), the cost savings for the Agency over a period of time could be significant.

85. In 1993 the direct costs of interim inspections at LWRs and OLRs to meet the current timeliness goal of three months for irradiated direct-use material were approximately 7 million US dollars. The total costs (direct plus indirect) based on a proportional distribution of indirect costs were over 16 million US dollars. The statement in paragraph 20 above that the overall cost implications for the Agency of implementing the proposed measures are limited is based on the conclusion that -- through advanced technology, increased co-operation with the SSAC and an accumulating assurance regarding the absence of undeclared reprocessing -- significant savings can be made in this area and these savings will off-set costs associated with implementing some of the other measures.

(d) Legal Analysis

86. Paragraph 83 of INFCIRC/153 sets out the notice normally required for ad hoc, special and routine inspections in subparagraphs (a), (b) and (c), respectively. Paragraph 84 provides that, as a supplementary measure, the Agency "may carry out without advance notification a portion of the routine inspections" in accordance with "the principle of random

sampling". The IAEA is obliged, "whenever practicable" and on the basis of the operational programme to advise the State periodically of its general programme of announced and unannounced inspections, specifying the general periods when inspections are foreseen. This mechanism has already been made use of by the Agency to secure access to a facility, or to a location within a facility, within a specified and limited time period, as referred to above. The Agency's existing right to carry out unannounced inspections is limited to routine inspections at strategic points. With regard to other locations under category (i), complementary authority would be necessary. As noted above, absent a State's granting multiple-entry visas or not requiring visas for Agency inspectors, an effective exercise of that right is not possible.

87. As regards those locations referred to in category (ii) complementary authority would be necessary to secure the Agency's right to carry out such no-notice inspections. Since access to locations in category (iii) would be sought, case-by-case, through voluntary arrangements with the State, the concept of a no-notice inspection at these locations is not relevant.

C. ELEMENTS OPTIMIZING THE USE OF THE PRESENT SYSTEM

88. Taken as a whole, the various technical and administrative measures considered under "Programme 93+2" represents a management agenda for years to come. Measures related to safeguards equipment procurement and utilization; staff qualifications, training and utilization; the establishment and management of regional offices; and automation are internal management issues that have been and remain components of the efforts to improve continually the cost-effectiveness of safeguards.

89. Through a combination of elements of the other proposals the Agency will, in co-operation with States, rationalize safeguards at LEU fabrication and conversion facilities through measures that enable cost-effective verification of declared material balances, including in particular random inspections for verifying inventory changes, and at reactors, in particular the measures for timely detection, through new technology, such as encryption of video records and their remote transmission and other unattended systems.

1. Safeguards Technology Advances

(a) Description

90. The Agency will continue to introduce, in co-operation with States and as safeguards technology developments permit, new safeguards measurement and surveillance systems that can operate unattended and transmit inspection data remotely, including cases where the Agency and the State jointly use the data. The extent to which such equipment can be used in a facility depends on facility design and operating practices, and certain inspection activities, such as design verification and anomaly investigation, do not lend themselves to replacement by unattended equipment. A number of systems have been implemented, and others are under development. Existing cases of equipment functioning unattended include bundles counters, core discharge monitors, containment and surveillance and NDA measurement systems at MOX fuel fabrication facilities. Future possibilities include tank monitoring and sampling at reprocessing plants and verification of spent fuel transfers between storage bays at reactors and to dry storage canisters, of receipts, storage and shipment at fuel fabrication plants.

91. The near-real-time transmission of accountancy data and the remote transmission of video signals are being demonstrated in the course of field trials in Sweden and Canada. A broad range of remote monitoring possibilities including such things as electronic seals, radiation and motion detectors and video surveillance is being demonstrated through a series of field trials under the International Remote Monitoring Project (Argentina, Australia, Germany, Japan, JRC-Ispra, Sweden and the United States). This work, including the installation and testing of an IAEA remote monitoring station in 1995, is scheduled for completion in 1997. Other possibilities involving commercially available satellite networks for direct communications, data transmission and photo surveillance are also being examined.

(b) Benefits

92. The use of non-destructive assay (NDA) and containment/surveillance (C/S) equipment capable of operating in an unattended mode, particularly coupled with an additional capability for remote interrogation and/or transmission, offers the possibility of reductions in requirements for inspectors to be physically present with resultant reductions in radiation exposure for inspectors and operator personnel and less intrusiveness in facility

operations. The availability of such equipment, particularly where it is utilized in "difficult-to-access" areas, can also lead to more effective safeguards.

(c) Costs

93. The technical background documentation for Task 2 provides an analysis of installation and operational costs and estimated savings in inspection effort for a number of potential applications of equipment operating in an unattended mode and equipment with the added feature for remote interrogation and data transmission. For example, the installation of remote monitoring equipment, within the context of current safeguards implementation criteria, were evaluated for 79 facilities in five countries (countries with regional offices or in close proximity to regional offices/Agency Headquarters). The net annual savings are estimated to be 1.3 million US dollars for the Agency to be balanced against initial equipment and installation costs of 6.25 million US dollars. These analyses do not consider, except in qualitative terms, the sizeable savings that could accrue to operators and SSACs. There is, however, an important caveat. Equipment operating remotely must be reliable. Equipment failures and inconclusive data have adverse effects on efficiency gains through the efforts required to collect additional data or re-establish continuity of knowledge lost through failures. Cost savings for future facilities will depend on facility design and the degree to which it accommodates use of unattended equipment.

2. Increased Co-operation with States and SSACs

(a) Description

94. The Agency will seek as appropriate increased co-operation with States and SSACs whereby:

- (i) States accept simplified procedures for designation of inspectors, grant multiple-entry visa, or visaless entry for inspectors on inspections, and permit Agency use of commercially available satellite systems for direct communication between inspectors in the field and Headquarters;
- (ii) the SSAC carries out activities that enable the Agency to conduct its inspection activities with less effort or cost, or more effectively, or both;

- (iii) the Agency and the SSAC jointly carry out selected inspection activities in a manner that enables the Agency to acquire all of the needed inspection results while ensuring the validity of the results and maintaining the requirement for the Agency to draw its own independent conclusions, but with less effort or cost; and
- (iv) the Agency and the SSAC jointly carry out selected safeguards support activities, such as inspector training, development of safeguards equipment, procedures and approaches, and equipment procurement.

95. Increased co-operation with national and regional systems for accounting and control is a basic premise inherent to strengthened and more cost-effective safeguards. Elements of increased co-operation examined under "Programme 93+2," including efficiency gains resulting from increased co-operation in safeguarding declared material, have been referenced throughout this report. Additional details are available in the technical background documentation for Tasks 2 and 4.

(b) Benefits

96. The benefits of simplified designation procedures and multiple entry or visaless entry into States have been discussed by the Board of Governors on numerous occasions. In the context of the strengthening measures being evaluated under "Programme 93+2" the granting of visaless entry or multiple-entry visas for inspectors while on inspections is essential for the implementation of "no-notice" inspections. Direct satellite communications between Headquarters and inspectors in the field would improve the effectiveness and efficiency of safeguards through more timely exchange of information and instructions.

97. The benefits of increased co-operation with SSACs and regional systems are already accruing in the current implementation of safeguards on declared nuclear material. The efficiency gains being made through implementation of the New Partnership Approach (NPA) with EURATOM, the sharing of equipment, joint inspector training exercises and the indispensable research and development support provided through Member State Support Programmes are all examples. The point has been made time and again that the broad political, security and commercial benefits deriving from a strengthened safeguards system has as its basis, increased levels of co-operation between the Agency and SSACs.

(c) Costs

98. The implementation of the NPA with EURATOM, with appropriate corrections for facility closures, has resulted in a sizeable reduction (about 50%) in Agency person-days of inspection (PDIs) in States belonging to the European Union without any relaxation of the requirement that the Agency draw to its own independent conclusions. With Austria, Finland and Sweden joining the European Union it is estimated that approximately 200 PDIs will be saved. Certain technical elements from the NPA were incorporated in the Task 4 field trials in Sweden and Finland. Some cost implications of these in combination with other measures were provided earlier in this report. An important conclusion from the field trials in these two countries was, given their particular internal regulatory requirements, that even with the increased effort necessary to support the strengthening measures they estimated an overall reduction in costs for the SSAC through increased co-operation with the Agency.

3. Safeguards Implementation Parameters

(a) Description

99. In 1978, SAGSI recommended the adoption, on a provisional basis, of a set of quantities of nuclear material of safeguards significance and conversion/detection times for the purpose of determining safeguards requirements. Technical analyses in connection with evaluations related to costs, particularly in the context of evaluating possible trade-offs, indicate that some of these values may have been overtaken by progress in nuclear technology (these analyses are included in the technical background documentation for Task 1). SAGSI began a review of the current starting point of safeguards during their November 1994 meeting and indicated their interest in re-examining current values of other implementation parameters. Any update of the values assigned to the safeguards implementation parameters would have to be evaluated in the broader context of all of the measures undertaken toward a strengthened and more cost-effective safeguards system.

(b) Benefits

100. Through the implementation criteria, the frequency of inspections and the intensity of verifications carried out during inspections depend upon the values assigned to technical implementation parameters. The benefits of a review of the values assigned to these

parameters must be seen as part of a strengthened safeguards system where there is congruence between these values and modern nuclear technology.

(c) Costs

101. The cost implications associated with changes in the values of significant quantities, conversion/detection times and the starting point of safeguards were examined under Task 1. By far the most significant costs implications are associated with changes in detection times and the number of interim inspections. For example, a doubling of the timeliness goal for spent fuel would reduce direct inspection costs about 3 million US dollars per year. Any reduction in frequency of interim inspections because certain safeguards objectives are met or partially met through other means has the potential to save substantial costs. Two options for strengthening safeguards at the starting point were also examined. The option which would assure that all uranium compounds having purity suitable for nuclear uses are subject to safeguards would involve 20-25 conversion plants coming under full safeguards. This could involve 300-500 PDIs (up to 1.7 million US dollars yearly) from the Agency and additional expenses for the State and operator.

4. Legal Analysis

102. Paragraph 3 of INFCIRC/153 requires a State to co-operate to facilitate the implementation of safeguards. The acceptance of simplified designation procedures for inspectors, the granting of multiple-entry visas or the waiving of visa requirements for inspectors, and the acceptance of the use of satellite communications would certainly facilitate the implementation of safeguards and be in line with this general obligation. A specific obligation in these regards, however, cannot be read into paragraph 3. Complementary actions by States would be needed to secure such measures.

IV. FUTURE ACTIVITIES

103. The results of "Programme 93+2", as herein described, conclude a major phase of the Secretariat's efforts to identify ways in which the Agency's safeguards system can be strengthened and made more cost-effective. That is not to say, however, that every facet of every task in "Programme 93+2" has now been fully explored. For example, under Task 2 work will continue on cost assessments of the use of safeguards technology advances and on arrangements with States for their introduction. Under Task 3, work will continue to

complete the "clean room" laboratory at Seibersdorf and to make it operational for the screening and distribution of operational samples. Assessments will be made of additional applications of environmental monitoring, in particular, wide area monitoring for the detection of undeclared nuclear activities outside the vicinity of sites on the Expanded Declaration. Under Task 4, efforts will continue to test the integrated approach for specific combinations of facilities and to define the maximum potential to derive from closer co-operation between the Agency and SSACs. The model Expanded Declaration will be further refined as additional results from on-going field trials become available. Work on the information management and analysis system for the systematic evaluation of all safeguards-relevant information available to the Agency will also continue. As decisions are made to implement additional measures, they will need to be incorporated into the implementation criteria, inspection planning and reporting, data processing and evaluation.

V. CONCLUSIONS

104. Broad information, as indicated in the annexed outline of a model Expanded Declaration, about a State's nuclear programme could contribute significantly to the transparency of the State's nuclear activities and, in conjunction with the other strengthening measures, to the assurance the Agency can provide as to the absence of undeclared nuclear activities. Such information provides an indispensable basis for planning the other measures and in interpreting their results. The costs to States and to the Agency of providing and using this information are relatively small. A large part of the information in the Expanded Declaration can be requested by the Agency under existing comprehensive safeguards agreements. This includes the information on (a) SSACs, (b) production of nuclear material prior to entry into force of the comprehensive safeguards agreement, (c) the facilities which produced such material, and (d) additional information on activities on the sites of facilities for which current comprehensive safeguards agreements require the submission of design information. The obligatory provision to the Agency of other information in the Expanded Declaration would require complementary authority.

105. The analysis of environmental monitoring samples (smear, water, vegetation, soil and air) taken at nuclear sites provides an extremely powerful tool for gaining assurance of the absence of undeclared nuclear activities at and near such sites. The proposed start-up environmental monitoring programme would involve some 1,000 samples analyzed per year for a general programme including establishing the completeness, in respect of nuclear material and activities, of initial reports and design information. The Agency's annual costs

for this programme are estimated at about 5.2 million US dollars. The costs to States would be very small. Such a programme may be carried out under the provisions of existing comprehensive safeguards agreements. Except under special inspections, access for environmental monitoring at sites in the Expanded Declaration which do not contain nuclear material or facilities would require complementary authority.

106. A comprehensive system is being developed for the acquisition, processing and systematic evaluation of the large volume of safeguards-relevant information becoming available to the Agency. The system will permit identification, at an early stage, of any instance where the available information suggests activities inconsistent with the State's declaration to the Agency. Agency costs to operate the system are estimated at three professionals. Such information analyses can be carried out within the Agency's existing legal authority.

107. Broad physical access is key to a strengthened safeguards system and complements the increased information about States' nuclear activities. It is intended for more regular use than special inspections and would contribute significantly to the increased assurance about the absence of undeclared nuclear activities and the non-misuse of facilities. This access would entail access beyond current strategic points on the sites of safeguarded facilities to any location on the site; access to other sites on the Expanded Declaration; and facilitation by the State of access to locations not on the Expanded Declaration for which the Agency had identified a need. The fields trials have demonstrated the practicality of broad access at the different types of sites identified on the Expanded Declaration. The access would be used to confirm selected information in the Expanded Declarations by States and to help resolve any inconsistencies in these Declarations and other information available to the Agency. It would involve additional inspection effort, depending in part on the scope of the Declarations but more so on the occurrence of inconsistencies, whose frequency cannot now be forecast. This additional effort should be partially offset by savings in safeguards on declared nuclear material as described in paragraph 85 above. Access beyond the strategic points at safeguarded facility sites is within the Agency's authority for ad hoc inspections and design information verification under existing comprehensive safeguards agreements. Access to other sites on the Expanded Declaration would require complementary authority.

108. No-notice for some of this broad access, as well as for some current routine inspections, would contribute significantly to both the effectiveness and efficiency of inspection activities in respect of both undeclared activities and declared nuclear material.

No-notice is an essential element of random inspection and statistical inference whereby the conclusions from a modest amount of random inspections become valid for all of the material and events from which the random selection was made. Fewer no-notice inspections than inspections with notice are required to achieve the same results. States and operators would need to maintain an appropriate level of readiness and provide different and more timely reports. Existing comprehensive safeguards agreements provide for some no-notice (unannounced) inspections at safeguarded facilities. Arrangements for no-notice access to other sites on the Expanded Declaration would be part of the complementary authority for access to such sites.

109. The Secretariat is prepared to submit to the Board in June a set of proposals which it believes would be useful to implement under the Agency's existing authority, as well as, a set of proposals which it believes would be useful to implement under complementary authority for the Board's consideration.

VI. RECOMMENDED ACTION

110. The Board is invited to confirm that:

- A. The purpose of comprehensive safeguards agreements is the continuing verification of the correctness and completeness of States' declarations of nuclear material in order to provide maximum assurance of the non-diversion of nuclear material from declared activities and of the absence of undeclared nuclear activities.
- B. The safeguards system of the IAEA should be so designed as to give effect to that purpose. The IAEA should be enabled to fulfil its mandate under such agreements, either on the basis of existing authority provided for in such agreements or on the basis of complementary authority to be conferred.
- C. An increased access to safeguards-relevant information and safeguards-relevant sites is of key importance to the realization of a more effective and efficient safeguards system.
- D. Under comprehensive safeguards agreements, the States Parties and the Agency have an obligation to co-operate fully to achieve effective implementation of the agreements. The Agency must fully perform its part of the co-operation. Similarly,

the States Parties must take administrative and other measures to enable the Agency to fulfil its responsibilities under these agreements.

111. The Board is invited to take note of this report and to request the Secretariat to submit its proposals as envisaged in paragraph 109 to the June session of the Board.

Organization of Work under "Programme 93+2"

- Task 1: Cost Analysis of Present Safeguards Implementation** - an assessment of the costs of implementing safeguards as a function of the magnitude of the technical safeguards parameters (timeliness, significant quantities (SQ), and probabilities of detection).
- Task 2: Assessment of Potential Cost Saving Measures** - the identification and evaluation of a number of technical and administrative measures that have the potential to reduce costs associated with the current implementation of safeguards.
- Task 3: Environmental Monitoring Techniques for Safeguards Application** - an evaluation through field trials of the use of environmental monitoring techniques to enhance the Secretariat's ability to detect undeclared nuclear activities.
- Task 4: Improving the Effectiveness and Efficiency of the Safeguards System through Strengthening Measures and Increased Co-operation with State Systems for Accounting and Control (SSAC)** - an assessment and testing of measures (other than environmental monitoring) to strengthen safeguards by providing increased assurance of the absence of undeclared nuclear activities in a State; an assessment of how, and under what conditions, increased co-operation with SSACs could be achieved and what savings could result; and an assessment of possibilities for cost savings in traditional safeguards activities resulting from the strengthening of the safeguards system.
- Task 5: Improved Analysis of Information on States' Nuclear Activities** - to develop a coherent and comprehensive approach to the acquisition, management, and analysis of the information available to the Agency about a State's nuclear activities.
- Task 6: Enhanced Safeguards Training** - the identification, development, and implementation of training programmes required to ensure that the staff of the Secretariat have the necessary skills to carry out the new measures to strengthen and improve the cost-effectiveness of safeguards.
- Task 7: Proposal for Strengthening and Improving the Efficiency of the Safeguards System** - the integration of the results of Tasks 1 through 6 into proposals for more effective and efficient safeguards.

D R A F T

Expanded Declaration^{1/} - Outline

1. Information on the State or regional system of accounting and control (hereafter referred to as SSAC):
 - a. A completed SSAC questionnaire concerning administrative, legal and technical aspects of the SSAC;
 - b. The scope and timing of SSAC inspections and other related activities.
2. Present nuclear activities:
 - a. Information on past nuclear activities^{2/} relevant to assessing the completeness and correctness of the State's declarations of present nuclear activities:
 - (i) Information on the nature, purpose and design of nuclear activities and facilities which had been closed down or decommissioned prior to entry into force of the Safeguards Agreement;
 - (ii) Historical accounting and operating records predating the entry into force of the Safeguards Agreement.
 - b. Information presently routinely provided:
 - (i) Design information and modifications thereto, including closed-down and decommissioned facilities;
 - (ii) Accounting and operating records;
 - (iii) Accounting and special reports;
 - (iv) Operational programme.

^{1/} The expanded declaration is not intended to identify categories of information to which the Agency may require access under the provisions for special inspections.

^{2/} Activities prior to the entry into force of the Safeguards Agreement.

- c. Information not presently routinely provided:
 - (i) A description of the national nuclear fuel cycle and other activities involving nuclear material, with a list of the sites involved;
 - (ii) A description of nuclear research and development (R&D) activities at nuclear facilities and other locations containing nuclear material (LOFs), at nuclear training institutes, at R&D centers, at universities, and elsewhere;
 - (iii) Information, to be agreed with the State, on operational activities additional to that provided under 2.b.(iv) above;
 - (iv) Information on the nature of each of the buildings on the sites on which are located nuclear facilities, LOFs or nuclear R&D activities, including maps of sites;
 - (v) Information on the nature of any other location directly related to the operation of nuclear facilities, LOFs or R&D activities;
 - (vi) Information on the nature of commercial, industrial or military undertakings in the vicinity of such sites containing nuclear facilities, LOFs or R&D activities;
 - (vii) Location and status of known uranium ore deposits and mines;
 - (viii) Domestic manufacturers, where known, of major items of nuclear equipment or materials for the nuclear activities specified in 2.c.(i) above, or for other States;
 - (ix) Information identified in GOV/2629 ("Strengthening the Effectiveness and Improving the Efficiency of the Safeguards System (GC(XXXVI)/RES/586): Universal reporting system on nuclear material and specified equipment and non-nuclear material").
- 3. Planned nuclear activities:
 - a. Early provision of design information (GOV/2554/Att.2/Rev.2);
 - b. Plans for the further development of the national fuel cycle;
 - c. A description of planned nuclear R&D activities.

29. Thirdly, the Secretariat did not believe that the measures described were very onerous or that they would in the long term burden the budgets of the Agency or of States. They *would*, however, call for greater co-operation and good will - for example, the abolition of visa requirements for inspectors visiting countries for inspection purposes, or at least the issuing to them of multiple-visit visas, and the granting to inspectors of greater freedom of access beyond so-called strategic points within safeguarded nuclear installations during routine inspections. On the other hand, they would not allow inspectors to move about at will.

30. Fourthly, although some of the proposed measures could be taken independently of others and still be useful, the greatest additional strengthening of safeguards and the greatest economies would be achieved through adoption of the whole spectrum of measures.

31. Finally, acceptance by the Board of the recommendations contained in paragraph 110 of document GOV/2784 would not imply an endorsement of the specific measures described in the document or of the legal interpretations which were advanced. Such endorsement would have to await consideration by the Board in June of the merits of the measures and the plan for implementation, with regard both to the measures for which, in the Secretariat's view, legal authority already existed and to those for which specific authority might need to be obtained through the consent of the relevant Member State. However, acceptance of those recommendations - perhaps with some minor adjustments - would enable the Secretariat to proceed with the preparation of specific proposals for consideration and approval in June.

ANNEX 3

DISCUSSION INCLUDING DECISION ON "STRENGTHENING THE EFFECTIVENESS AND IMPROVING THE EFFICIENCY OF THE SAFEGUARDS SYSTEM: PROGRAMME 93+2" AT THE MARCH 1995 SESSION OF THE BOARD OF GOVERNORS

Excerpt from the record of the Board's 860th meeting

82. The CHAIRMAN recalled that the question of how to make the Agency's comprehensive safeguards more effective and cost-efficient had been on the Board's agenda for nearly four years, and on the General Conference's agenda for almost as long. The Board had already adopted some measures towards that end, such as early submission of design information and more extensive voluntary reporting of nuclear-related imports and exports. In February 1992, it had reaffirmed the Agency's right to undertake special inspections when necessary under comprehensive safeguards agreements to ensure that all nuclear materials in peaceful nuclear activities were under safeguards. In addition, the Board had agreed with the Director General that a more systematic exploration of techniques to strengthen the safeguards system was needed, and that an expanded SAGSI should be asked to examine new ideas for improving the effectiveness and cost-efficiency of comprehensive safeguards.

83. The results of SAGSI's work on the matter had been periodically reported to the Board and to the General Conference, and both bodies had encouraged the Director General to intensify his efforts and to submit by March 1995 an integrated programme, together with an evaluation of the technical, legal and financial implications of the measures it contained. The programme, which had come to be known as Programme 93+2, was now before the Board in document GOV/2784.

84. He drew attention to the recommendations contained in paragraph 110 of the document, reminding members of the Board that the Director General had already pointed out that acceptance of those recommendations did not imply endorsement of the measures described in the document, or of the legal basis for such measures: that would be for the Board to consider in June. However, approval of the recommendations, perhaps with minor adjustments, would allow the Secretariat to proceed with the preparation of specific proposals for consideration and approval in June.

85. Mr. WALKER (Canada) said his Government had long been committed to the objectives of Programme 93+2 and considered it to be one of the most important activities the Agency had undertaken in recent years.

86. Field trials of enhanced and unannounced access to nuclear facilities had recently been held in Canada, focusing on verification of the absence of undeclared material and activities. The success of those trials had been largely due to the interest and co-operation shown by the Canadian nuclear industry. A tripartite meeting had been held, at which representatives of the industry, the Agency and the SSAC had identified ways in which strengthened and more cost-effective safeguards could be achieved in a mutually satisfactory manner, and experience had shown that such safeguards could be compatible with the need for efficient operation. The second phase of the trials was designed to show how such concepts could be used in an integrated approach to meet traditional safeguards goals effectively and efficiently. He was confident that the trials the Agency was conducting would lead to new approaches to safeguards, which would not only be more credible but also more cost-effective for all parties concerned.

87. In addition, the Canadian SSAC had made extensive efforts to design and develop an enhanced declaration. Canada believed that an expanded declaration and enhanced access were critical to the Agency's ability to fulfil its responsibility to ensure that safeguards were applied to all nuclear material in peaceful use in all States with full-scope safeguards agreements.

88. A number of elements of the programme put forward in document GOV/2784 would require time for further consideration, and he noted that the Secretariat was not proposing that any specific measures be adopted at the present stage. It was more important that the Board confirm its support for the programme's objectives, and return to consider details at the next series of meetings once Member States had had an opportunity to comment.

89. He recalled that the NPT, to which the vast majority of Agency Member States had acceded, had provided for the application of safeguards to ensure the dual objectives of non-proliferation and the peaceful uses of nuclear energy. Thus, in the Treaty's fifth preambular paragraph, States parties undertook to co-operate in facilitating the application of IAEA safeguards to peaceful nuclear activities, and the following paragraph expressed support for research and development and other efforts to further the application of the principle of effective safeguarding of source and special fissionable material.

90. In addition, the Charter of the United Nations stated that the peoples of the United Nations were determined to ensure, by the acceptance of principles and the institution of methods, that armed force should not be used save in the common interest. That implied the creation of a rules-based system which would prohibit the use of force or threat of force. The Agency's safeguards system, which provided assurances, ensured transparency and helped to build confidence, was the beginning of such a system, and represented a significant step forward towards a world free of the threat of nuclear annihilation. In the future, that system would need to be developed and made more comprehensive, so that eventually it would become in effect a substitute for nuclear weapons as a means of guaranteeing fundamental national security interests.

91. If Member States were serious about disarmament, they must also be serious about verification and its development. Refusal to recognize the need for verification would mean that certain States would continue to regard continuing possession of nuclear weapons as essential to their national security interests.

92. The Board had a responsibility to demonstrate to the forthcoming NPT Review and Extension Conference that the Agency and its Member States were committed to the Treaty's goals. It should convey to the Conference its firm determination to strengthen implementation of the Treaty by improving the safeguards system so that it could provide credible assurances that all Members were respecting their obligations.

93. In conclusion, he hoped that the Board would strongly endorse the principles and objectives of Programme 93+2.

94. Mr. EL HUSSEIN (Sudan)*, speaking on behalf of the Group of 77, said the Group supported efforts to strengthen and improve the efficiency of the safeguards system through Programme 93+2, in line with resolution GC(XXXVIII)/RES/10.

95. However, it noted that a number of measures recommended in document GOV/2784 went beyond existing arrangements and required complementary authority. It therefore advocated further deliberations by all concerned, with a view to defining appropriate legal arrangements for such measures. It welcomed all measures to strengthen safeguards that might lead to efficiency gains and cost reductions, and that could reasonably be expected to be applied in a transparent and equitable way to all Member States concerned.

96. Mr. NIEWODNICZANSKI (Poland) recalled that the Board had requested the Secretariat to examine ways of making safeguards more effective and cost-efficient because the Board had concluded, following the events in Iraq, that the safeguards system should be strengthened to provide greater assurance that declarations by Governments regarding their nuclear material and installations were correct and complete.

97. With reference to paragraph 109 of the report, it was his understanding that the Secretariat, taking into account the Board's deliberations at the current meeting, would submit for the Board's consideration in June a set of proposals selected from those presented in the report. When making that selection, the Secretariat should make every effort to achieve a compromise between new, more effective measures and existing, less effective measures, so that while a higher level of assurance of compliance with safeguards obligations was achieved, the safeguards budget would be kept to a minimum.

98. His delegation could support the action recommended in paragraph 110 of the report. The four approaches listed in that paragraph had resulted from practical experience of the shortcomings of Agency safeguards based on strict adherence to the principle of verification only of declared nuclear material, and they were essential for the desired increase in safeguards efficiency.

99. Ms. MACHADO QUINTELLA (Brazil), having expressed support for the statement made by the Chairman of the Group of 77 and commended the clarity of document GOV/2784, which she had read with intellectual pleasure, said that regretfully her delegation had some difficulty in accepting the present wording of paragraph 110, although it believed that there would be scope for consensus after some adjustments, as no one was likely to deny the desirability of increasing the level of assurance provided by the safeguards system. All were committed to strengthening the system; the question on which views differed was how to achieve that common goal.

100. What the Board was being asked to approve in subparagraph 110.A was not a confirmatory interpretation of document INFCIRC/153, but rather a new concept regarding the purpose of comprehensive safeguards agreements - one that would require the modification of existing agreements or their amplification by additional legal instruments.

101. As things stood at present, the purpose of existing comprehensive safeguards agreements was to verify that there was no diversion of nuclear material to the manufacture of nuclear weapons or of any other explosive device. Confirming what was stated in subparagraph 110.A, that the purpose of such agreements was the continuing verification of the correctness and completeness of States' declarations of nuclear material, would thus represent a substantial departure, with no legal basis, from the original purpose as defined in paragraph 2 of document INFCIRC/153 and in Article III(1) of the NPT.

102. The assertion made in paragraph 5 of document GOV/2784 regarding the intentions of the drafters of document INFCIRC/153 was entirely uncorroborated by the records of the Board's Safeguards Committee (1970), which she had studied at length. In approving the concept put forward in document GOV/2784 regarding the purpose of comprehensive safeguards agreements, the Board would therefore not be confirming previous

understandings, but introducing new ideas which would require amendments or protocols to existing agreements in order that the envisaged new safeguards measures might be applied. Such measures could, of course, be introduced on the basis of bilateral arrangements between the Agency and each Member State concerned, but there was as yet no proper legal basis for changing the Agency's safeguards system from one aimed at the verification of non-diversion to one aimed at verification of the non-existence of undeclared activities.

103. Verification of the absence of undeclared nuclear materials or activities required actions that had not been considered by the drafters of document INFCIRC/153 and had not been provided for in, for example, the Quadripartite Agreement. In her country's case it would be very difficult, if not impossible, to obtain approval by the National Congress for a revision of the Quadripartite Agreement so soon after its ratification.

104. Her delegation therefore proposed that, instead of trying to establish a legal basis for the envisaged new measures, the Board first discuss whether those measures were needed and whether they were justified in cost/benefit terms. It could not accept subparagraph 110.C of the report, acceptance of which would mean that the Board was confirming that more intrusive measures were necessary without any discussion of how necessary they were or of how far they were compatible with paragraphs 8 and 71-82 of document INFCIRC/153.

105. All international co-operation had to be based on the principle of mutual trust, but the Agency seemed to be abandoning that principle in favour of the idea that all countries were proliferators unless it could be proved that they were not. How far did a country have to go in order to provide the necessary evidence? The Board decision regarding the early provision of design information had been reflected in the Quadripartite Agreement, but she would be curious to know how many States had already adapted their subsidiary arrangements in order to reflect that decision. Furthermore, the "universal reporting scheme", in which more than 40 Member States - including Brazil - were participating, had closed one of the main gateways to non-compliance. With arrangements like the early provision of design information and "universal reporting", and, with the pressure of public opinion, countries should be deterred from nuclear proliferation. The Chemical Weapons Convention ought not

to be taken as an example, since the subject it addressed was totally different from non-proliferation; also, the Convention was universal and non-discriminatory. It should not be assumed that States willing to accept certain obligations under the Convention would be willing to accept those obligations pursuant to comprehensive safeguards agreements.

106. There was no time at the current session to reach consensus on all the issues raised in the report, such as: those proposed new measures which were in line with existing comprehensive safeguards agreements and those which would require additional undertakings; the measures that might be implemented immediately; the means by which the measures requiring additional legal undertakings were to be introduced (whether a revision of document INFCIRC/153 or the negotiation of protocols with individual States); the identification by each State of the additional commitments it wished to make, as opposed to a Board decision on the measures to be proposed - and accepted - as a single package; and the countries to be requested to provide additional information (she saw no reason why, for example, nuclear-weapon States should be exempted from providing certain types of information, such as information on research and development).

107. Not only was there a lack of information in the report regarding the legal aspects of the proposals, there was also no precise information about the costs - for the Agency, for operators, and for regional, subregional and national systems of accounting and control. She had the impression that the costs were not known or that the Secretariat knew them but did not wish to divulge them at the moment.

108. Commenting on individual paragraphs of the report, she noted that in paragraph 1 of document GOV/2784 there was a reference to States' commitments and said that, if further commitments were to be demanded of non-nuclear-weapon States, she could not help wondering about the commitments which the international community expected the nuclear-weapon States to make - and keep.

109. With regard to paragraphs 2, 3 and 4, where there were references to the continuous development of safeguards, she believed that technological developments in the safeguards field should not be confused with the evolution of the safeguards system itself. The system had evolved from one based on safeguards agreements deriving from the Statute to one based

on comprehensive safeguards agreements deriving from document INFCIRC/153, but a safeguards agreement was a legal instrument not subject to evolution; if additional undertakings were to be entered into, that called for a protocol or some other form of additional legal instrument acceptable to the parties.

110. The statement in paragraph 6 that in February 1992 the Board had reaffirmed the requirement that the Agency provide assurance regarding the correctness and completeness of nuclear material declarations by States was misleading: that requirement had been affirmed not as a general principle, but in respect of the initial inventories of two specific countries - and on both occasions Brazil had expressed reservations.

111. Paragraph 32 contained a curious statement: "Compared to this approach, there appear to be no alternatives which would not involve extremely high costs and levels of intrusiveness with no apparent merit." What alternatives had been considered?

112. As to environmental monitoring activities, many countries were already carrying out such activities in order to ensure the safety of their populations, and her delegation saw no reason why in those countries environmental monitoring should not simply be expanded in order to meet the needs of non-proliferation safeguards.

113. In short, Brazil was not prepared to confirm what was stated in subparagraphs 110.A-D, which in its view had legal implications. The Secretariat seemed to be proposing a total overhaul of the safeguards system - instead of an improvement of the existing one - and the adoption of a much more intrusive approach which might affect the legitimate commercial and economic interests of Member States without ever attaining the "maximum assurance" which was promised in subparagraph 110.A and which - as everyone knew - could not be attained.

114. Nevertheless, she still thought that a consensus was possible if all Board members made a serious effort to help achieve a constructive compromise. Her delegation was prepared to make such an effort, and it was also prepared to distribute a text which might replace paragraph 110 - in the hope that it would serve as the basis for a consensus.

Excerpt from the record of the Board's 861st meeting

1. Mr. SABURIDO (Cuba) said that document GOV/2784 outlining the current status of Programme 93+2, though important, had not been circulated early enough for the authorities in his country to evaluate it fully.
2. During the Board's meetings in June 1994, his delegation had re-emphasized the need to maintain an adequate balance between strengthening and cost-effectiveness measures and had pointed out that the legal and financial implications of the proposals should be examined at a sufficiently early time.
3. The aim of comprehensive safeguards agreements was to detect swiftly any diversion to non-peaceful uses of significant quantities of nuclear material, and the means of doing so was by verifying the nuclear material declarations of States. Therefore, the Board could not confirm what was recommended in paragraph 110.A of the document within the current legal framework.
4. Cuba supported measures which would help improve the efficiency and effectiveness of the safeguards system - as long as they remained within the limits of the Statute and other legal documents regulating the Agency's activities. The proposals relating to short-range environmental radiological monitoring at declared locations, increased co-operation with SSACs in areas which did not go beyond the current powers of the Agency, improvement of analysis methods for information which the Agency was permitted to have access to, and increased training in approved measures, did meet that criterion. However, given that the measures which had been put forward would entail some initial increases in costs, they would require careful evaluation in order to be sure that they were justified by a real increase in effectiveness. Moreover, any increase in costs should not affect the budgetary resources which the Agency allocated to the rest of its main activities, nor should the financial burden devolve upon States.

5. On the other hand, some of the proposals which were being put forward were not covered by the current legal documents, such as those relating to greater physical access and increased access to information, use of other freely accessible information sources, and environmental sampling at undeclared locations. Those proposals would certainly require more extensive discussion than was possible in the Board, since they entailed modifications to the legal instruments regulating the Agency's activities and an extension of its powers. All of the Agency's Member States would need to be involved in such discussions on equal terms. For that reason, it was also not possible, within the current legal framework, for the Board to confirm what was contained in paragraphs 110.B and C.

6. Concepts relating to physical access and access to information which were contained in the Chemical Weapons Convention could not readily be extrapolated to the case of Agency safeguards, since the States party to the Chemical Weapons Convention were not divided into groups which possessed such weapons and groups which did not, and there was therefore a substantial difference between the Chemical Weapons Convention and the nuclear non-proliferation regime.

7. Thus, paragraph 110 of document GOV/2784 would need to be modified before his delegation could take note of it as requested in paragraph 111; indeed, in its current form it was not acceptable to many countries. Only those measures which were covered by the current mandate of the Agency, and which would enable the Agency to fulfil the mandate given to it by the General Conference, should be suggested to the June Board for its consideration.

8. It was very difficult to assert that any technology, no matter how advanced, could provide absolute certainty with regard to the timely prevention of undeclared activities, if a State wished to conduct such activities. The detection of isolated cases should not be allowed to become the *raison d'être* of Programme 93+2; its proper aim was rather the improvement of the efficiency and effectiveness of the safeguards system. Safeguards activities had to be conducted on the basis of mutual trust and co-operation, and recognition of that principle was an indispensable precondition for the success of Programme 93+2.

9. In conclusion, he associated himself with the comments which had been made earlier by the Governor from Brazil.

10. Mr. HELLER (Mexico) thanked the Director General for his report in document GOV/2784 and the Secretariat for the efforts it was making in developing Programme 93+2. However, he would have preferred it if an integrated proposal had been submitted to the Board for its consideration, as had been requested, in view of the close connection which the present item had with the forthcoming Conference of Parties to the NPT. Mexico fully supported the nuclear non-proliferation regime and therefore attached great importance to efforts to improve the efficiency and effectiveness of the safeguards system. The Government of Mexico had demonstrated its commitment to that policy on many occasions, for instance by offering to adhere voluntarily and in a non-binding manner to the revised notification system for imports and exports of nuclear material and of specified non-nuclear material and equipment.

11. The purpose of INFCIRC/153-type safeguards agreements, as set forth in paragraphs 1 and 2 of document INFCIRC/153, was to verify that all source or special fissionable material in all peaceful nuclear activities was not diverted to nuclear weapons or other nuclear explosive devices. Safeguards agreements gave the Agency the right to pursue that end and specified the powers it had and the mechanisms it could use to achieve it. All the measures which were being proposed in document GOV/2784, on a preliminary review, served the purpose which was set forth in paragraphs 1 and 2 of such agreements. However, some of the proposed measures went beyond the powers and mechanisms which had been explicitly or implicitly authorized by INFCIRC/153. Thus States party to safeguards agreements would need to determine which measures went beyond the field of application of their safeguards agreements. Paragraph 22 of document GOV/2784 stated that safeguards agreements could be interpreted in a broader or more restrictive fashion. He did not wish to adopt an unnecessarily restrictive interpretation of safeguards agreements; however, unless the powers of the Agency and the obligations of Member States were clearly specified, obstacles could be encountered in the future with the performance of activities that went beyond the current legal framework as voluntarily accepted by Member States. Therefore an additional legal instrument would have to be developed that would cover those activities

which required additional powers. That additional instrument could take the form of a protocol which would be legally binding, or a new information circular containing an additional safeguards agreement which would need to be signed by each Member State. That instrument would have to be voluntary and, initially, a situation would arise where the safeguards regime was not universal. However, the Agency and Member States could make intensive efforts to promote universal adhesion to the strengthened safeguards regime and thus avoid stratification of INFCIRC/153-type safeguards agreements. With regard to the possibility of granting the Agency authority under existing safeguards agreements to implement some of the new measures, it would be necessary to analyse each of the measures in order to identify which required additional authority and therefore a new legal instrument.

12. His delegation was also concerned over problems with the translation of document GOV/2784, where substantial changes in meaning had been introduced. In order to avoid a situation where countries were adopting documents with different implications, he requested the Secretariat to consult Member States on the correct translation of the documents, since pre-eminence could not be given to one particular language version.

13. At a more detailed level, paragraph 110.A confused safeguards methods with safeguards aims and would need to be redrafted on the model of paragraphs 1 or 2 of document INFCIRC/153 if it was to enjoy the agreement of Member States. Furthermore, should the Members of the Board accept that one of the objectives of safeguards was to guarantee the absence of undeclared activities, that could not be interpreted as a tacit acceptance that the Agency had the powers to implement the measures set forth in document GOV/2784. The powers of the Agency would need to be explicitly set forth in suitable legal instruments before States could accept those new measures. Paragraph 110.C had extensive implications and the meaning of "access to safeguards-relevant information and safeguards-relevant sites" had to be clearly defined. Moreover, a suitable legal framework would need to be established to give the Agency the additional authority required to obtain access to information and locations which were not covered by INFCIRC/153-type agreements. Finally, his delegation understood the reference in paragraph 110.D to co-operation between

States Parties and the Agency, and to their obligations, as applying only to the existing arrangements under INFCIRC/153 and not as implying any authorization for the measures proposed in document GOV/2784 which went beyond the scope of INFCIRC/153.

14. Mr. DOSHI (India) said that document GOV/2784 only applied to INFCIRC/153-type agreements, and that his country was not a party to such an agreement and could not accept the hint in paragraph 1 of the document that the proposed measures might subsequently be extended to apply also to other types of agreement.

15. He commended the thoughtful and thought-provoking comments which had been made by the Governor from Brazil. By expanding the scope of the Agency's responsibilities and shifting the focus from declared to undeclared activities, the Agency might create new problems for itself rather than solving existing ones. He questioned the practicability of some of the proposed measures, wondering whether they were not an overreaction. His country had difficulty in accepting in their totality the recommendations which were contained in paragraph 110 of the document. He urged the Board not to take any hasty decisions on the issue but rather to discuss and examine it thoroughly.

16. Mr. AKAO (Japan) said that his country had always emphasized the need for measures to strengthen the safeguards system and greatly appreciated the work which the Secretariat had done on Programme 93+2. However, in preparing its proposals for the June Board meetings, the Secretariat should bear in mind that improving the safeguards system's efficiency was just as important as strengthening it.

17. His delegation had no problem supporting the action recommended in paragraphs 110 and 111 of the document. Indeed, paragraph 110 could serve as guidelines for the general direction of the Agency's further work, although some of the wording used would require further consideration and should not be viewed as prejudging the specific measures which might be decided upon later. Those specific measures should be discussed in detail at the June Board and thereafter, and SAGSI should continue to be involved in the analysis and evaluation of such measures.

18. He sympathized with many of the views which had been put forward by the Governor from Brazil and hoped that, when the Secretariat presented its proposals to the June Board, it would take full account of those comments, particularly those relating to the legal framework. Furthermore, he trusted that Programme 93+2 would be carried out in close co-operation and consultation with Member States, and that the Board would be kept informed of any progress made.

19. Mr. ARCILLA (Philippines) welcomed the Director General's progress report on Programme 93+2 contained in document GOV/2784. His delegation was prepared to take note of that report and to request the Secretariat to submit its proposals to the Board in June.

20. One area which the Secretariat could investigate further was the possibility of harmonizing the various SSACs in order to facilitate the implementation of safeguards measures.

21. Turning to the recommended action, he said that, as a party to the NPT, the Philippines would have no difficulty in reconfirming the purpose of comprehensive safeguards agreements and the obligations of the States Parties and the Agency under such agreements. Paragraphs 110.B and C and the third sentence of paragraph 110.D would have to be substantiated before the Board considered the specific proposals in June. The intention behind the second sentence of paragraph 110.D should also be clarified.

22. The last sentence of paragraph 1 of document GOV/2784 referred to a possible extension of the proposed measures to cover other types of safeguards agreements. His delegation believed that the non-proliferation regime should be universal in nature and that that issue should accordingly be considered in conjunction with Programme 93+2. He therefore requested that the Secretariat prepare a paper on that aspect by June.

23. In conclusion, he said that if there was any message which the IAEA should send to the NPT Review Conference and to the world, it was an unequivocal commitment to non-proliferation both vertical and horizontal and, ultimately, to complete nuclear disarmament, as well as to strengthened international co-operation in the peaceful uses of nuclear energy.

24. Mr. PRETTRE (France), speaking on behalf of the European Union, said that it was of vital importance for the Agency and its Member States that an effective safeguards system be in place to verify compliance with international commitments undertaken by States in connection with the peaceful use of nuclear energy. Following the events in Iraq, the whole international community was eager that the Agency should be able not only to monitor declared material at least as efficiently as it had done in the past, but also to reinforce and improve its capacity to detect any clandestine activities. That concern would take on particular importance at the forthcoming NPT Review and Extension Conference, where the European Union would strongly support an unconditional extension of the Treaty for an indefinite period of time. By giving that instrument the permanence it had lacked to date, the international community would be consolidating the nuclear non-proliferation regime in a decisive fashion. On the other hand, if the NPT were to be robbed of its effectiveness, extending it for an indefinite period would be of no avail. The discovery of the Iraqi nuclear programme should serve as a lesson and not as a precedent.

25. The document which had been presented to the Board on Programme 93+2 was of a very high quality and was the result of a great deal of work. It took account of comments made by Member States during the consultations which had been held at the various stages of its elaboration, and he congratulated the Director General and everyone who had taken part in the exercise. As requested by the Board, the overall architecture of the system which was being put forward was not that of a catalogue of partial and disparate measures but a coherent whole. The measures which had already been in place in the past to detect diversion of declared nuclear material had been combined with new measures aimed at improving the Agency's capacity to detect clandestine activities. Those two categories of measures complemented and reinforced one another in a system which should at the same time help improve the management of safeguards activities and their efficiency. Thus, an elegant solution was being advanced which responded to requirements that had seemed to be contradictory.

26. Experience had shown that reinforcement of the safeguards system implied increased access to information and sites. An extension of the range of information provided to the Agency, extension of access rights and simplification of entry formalities for inspectors, greater co-operation with national and regional accounting and control systems, environmental sampling, the analysis of all information collected by the Agency, and measures to optimize the current system were the essential elements underlying Programme 93+2. The European Union attached great importance to the measures aimed at detecting anomalies, incoherencies or contradictions in information collected. Such anomalies could be indications of abnormal activities and, in such cases, the Agency was justified in conducting research and asking questions until those uncertainties were clarified. It was appropriate that the Agency should be selective with regard to the information it analysed since the objective was not to ensure the accuracy of all information but to uncover and resolve possible contradictions. For the same reason, not all samples had to be subjected to detailed analysis. That meant that safeguards measures could be relaxed when the Agency had access to all the information it required and analysis of that information revealed nothing which required further clarification. Conversely, they could not be relaxed if those two conditions were not met. The proposals put forward in document GOV/2784 took a more flexible and diversified approach to safeguards which should promote a high level of confidence in the efficiency of the measures applied while at the same time reducing costs for the Agency and inconvenience for operators. Implemented in the manner which the Secretariat was proposing, the system should encourage transparency and dialogue between Member States and the Agency, giving each State the opportunity to demonstrate that it was respecting its commitments.

27. That being said, some of the elements of the system still needed to be defined more closely. The European Union was ready to contribute to that process and would be submitting comments to the Secretariat in writing. As recognized in document GOV/2784, new measures which went beyond those foreseen by safeguards agreements currently in force would require an additional, explicit and voluntary commitment on the part of the States concerned. That side of the issue required careful consideration and consultation with Member States.

28. With those comments, and taking note of the interpretation which the Director General had given of paragraph 110 of document GOV/2784 in his introductory statement, the European Union could support the action recommended to the Board.

29. Mr. MIŠÁK (Slovakia) said that his country fully supported all measures aimed at strengthening the safeguards system. Safeguards were not an intrusion on a State's sovereignty; rather they aimed at promoting transparency and creating an atmosphere of mutual trust among States.

30. Prompt access to reliable information was essential for an effective safeguards system. Slovakia therefore supported even measures which went beyond the scope of current safeguards agreements, such as environmental monitoring and expanded access rights. Greater co-operation with regional safeguards offices, expanded information access and improved data handling, as well as multiple-entry visas for inspectors, should also help rationalize the system and make it more efficient. It was paradoxical that certain States which had accepted international inspections still demanded that inspectors apply for visas. His country was also able to support any measures which sought to eliminate the accumulation of stockpiles of highly enriched uranium or plutonium and to ensure that, where those materials already existed, they were subject to the highest standards of safety, security and international accountability. With the end of the Cold War, new needs for the verification of nuclear material from weapons had opened up. The Agency should be allowed to monitor all fissile material which was no longer being used for a deterrent purpose.

31. The NPT was an exceptionally important global mechanism for the solution of nuclear non-proliferation issues and the steady increase in the number of its signatories confirmed the high esteem in which it was held by the international community. Slovakia hoped that the NPT would be extended unconditionally for an indefinite period of time at the forthcoming Conference of the Parties to the NPT.

32. The proposals contained in document GOV/2784 should help improve the effectiveness of the safeguards system in a cost-efficient manner. Slovakia endorsed the recommendations contained in paragraph 110 of the document and was ready to participate in the ongoing work on Programme 93+2.

33. Mr. AHMAD (Pakistan) noted with appreciation that document GOV/2784 incorporated significant clarification and elaboration of the previous progress report (GOV/INF/759). The Agency's work to establish an effective safeguards system at optimal cost should be applauded, though the proposals now presented were indeed far-reaching in their technical, legal and logistic implications, as the Governor from Brazil had emphasized. While associating himself with the position of the Group of 77, as outlined earlier by the representative of Sudan, he wished to express some preliminary thoughts by which he felt the Board should be guided in evaluating specific measures for the strengthening of safeguards.

34. The three key elements of the proposed approach were (a) increased access to information and its effective use by the Agency, (b) increased physical access for Agency inspections, and (c) optimal use of elements of the present system. Proposal (c) seemed to be the most promising approach and should be focused upon by the Secretariat.

35. As to the other elements, it was important first of all to ensure, with the increasing number of States accepting safeguards under the INFCIRC/153 or other full-scope models, that the cost of implementing safeguards agreements did not grow out of all proportion to the resources allocated for the Agency's other main activities. Cost reduction, or at least cost neutrality, should be a major, if not the principal, criterion against which to judge any proposed strengthening measure. Considering the vastly increased scope of seeking, collating and analysing information as well as the broad sweep of some other, more action-oriented proposals, it seemed difficult to contend seriously that the cost-neutrality claim, made in paragraph 21 about some measures, would extend to all proposals presented in document GOV/2784. The preliminary cost estimates for environmental monitoring given in paragraphs 49 and 50 suggested the resource-intensiveness of that approach.

36. Secondly, the Agency, as an international organization, should scrupulously guard against the possibility that any of its steps be perceived as discriminatory or tending to categorize countries as "reliable" or "unreliable". Some of the suggested measures were so designed as to follow from information provided by Member States. Such third-party information could, for many reasons, be biased; the Agency should not be seen to adjust its response according to the perception of certain powerful States. Also, the extent of safeguards efforts should be commensurate with the magnitude of nuclear activity in a country. Otherwise the very atmosphere of trust that the safeguards regime was intended to build and fortify would be vitiated. It should be carefully considered whether any potential effectiveness gain of a debatable measure was worth the risk of losing the degree of confidence already achieved.

37. Thirdly, the feasibility and even scientific merit of some of the proposed measures had not been adequately demonstrated. There had been some field trials, but the countries where they had been conducted could hardly be considered representative of the majority of States where the real exercise would take place. He wondered how far the results obtained might be expected to remain valid in quite different and uncharted territory. The concept of "no-notice" inspections, in particular, might be perceived to infringe upon the sovereignty of Member States. In addition, there would probably be practical difficulties of entry and transportation logistics.

38. Fourthly, the legal basis for several new measures was unclear and the legal cover for some proposals seemed to be overstretched. For instance, in paragraphs 51-53 of document GOV/2784, the Secretariat maintained that the Agency had a right to conduct environmental monitoring under INFCIRC/153 paragraph 74(d) and (e) as reinforced by paragraph 6. Actually, paragraph 74(d) authorized the Agency to "apply and make use of surveillance and containment measures" for the purposes of paragraphs 71-73, which related exclusively to nuclear material under safeguards for which environmental monitoring was irrelevant. In any case, environmental monitoring could hardly be categorized as a surveillance or containment measure. Paragraph 74(e), read with paragraph 6, was similarly inapplicable because environmental monitoring could not be described as just a technological

development; it was a whole new concept. A jet engine could perhaps be called a technological development in relation to a turbo-propeller engine; but an aircraft could hardly be termed merely a technological development of a railway train.

39. In summary, the additional measures aimed at providing the Agency with increased information and broader physical access would require careful scrutiny by Member States, in particular with regard to their degree of intrusiveness. They would need universal acceptance by those they would affect. They should be simple in concept and non-discriminatory in practice. Some assurance would also be wanted that those measures would not place an additional burden on Member States in terms of the costs to be shared by them. Most importantly, the efforts made by the Secretariat in implementing such additional safeguards measures should not in any way affect the Agency's ability to fulfil its obligations with respect to its promotional activities for the benefit of all Member States. Those issues had not been adequately addressed by the Secretariat from the technical, legal and practical standpoints. It would therefore be premature for the Board to take action as suggested in paragraphs 110 and 111 of document GOV/2784.

40. Mr. BAER (Switzerland) said that the document before the Board was a major step forward in the quest for a better safeguards system.

41. With regard to "declared" facilities, the report was of course on familiar ground, and a more effective and efficient use of existing possibilities should be aimed for. However, where "undeclared" facilities were concerned, the Agency was entering unknown territory, and it should move extremely carefully in that minefield, remembering that politics was the art of the possible. It was important to take action - one could not pretend that the Iraqi events had never taken place - but had the lessons of the past been learned?

42. While his delegation had some reservations to express, they were not intended to detract from its generally very good opinion of document GOV/2784. Some of the proposed measures did seem a little questionable, but there would be time to discuss details and to file down the rough edges later.

43. The issue of costs was always an important one for his country and he commended the Secretariat on the success of its efforts to hold costs down.

44. While agreeing with the thrust of the report, he felt that the expression "it is reasonable to conclude" referred to the opinion of the writer, an opinion that his delegation might or might not share.

45. The issue of increased physical access raised many questions. It was a delicate topic which required careful explanation and discussion with power plant operators. Although the Secretariat had proceeded with suitable care in paragraphs 64-87, some aspects of legal interpretation called for further discussion.

46. The visa problem was not an issue for his country, as all inspectors either did not require visas or were in possession of a long-term visa renewable in Vienna. He agreed with the opening sentence of paragraph 95 that "increased co-operation with national and regional systems for accounting and control is a basic premise inherent to strengthened and cost-effective safeguards".

47. The Secretariat had shown welcome open-mindedness in agreeing that new approaches might be needed and that safeguards implementation parameters might need to be updated. Its document was an excellent basis for discussion. It was now up to the Board to make the decisions, and his delegation was fully aware of its responsibility. It was rare for Member States to be called upon to decide on principles affecting the *raison d'être* of the Agency, and so they must take extra care in formulating their views. The Secretariat had perhaps been over-helpful in drafting the recommended action in paragraph 110.

48. For the moment, activities that required complementary authority should be kept separate from those that did not, as they would undoubtedly give rise to prolonged discussions. The Board should proceed immediately with the measures not calling for complementary authority in order to avoid delaying the improvement of existing safeguards and so as not to get entangled in legal matters at the present meeting. The clarification of questions of complementary authority should proceed in parallel for later implementation. As to the proposed Expanded Declaration, some aspects of the proposal were unacceptable to his delegation in their present form, but the text submitted was an excellent basis for discussion.

49. In summary, his delegation welcomed the outcome of Programme 93+2 and warmly congratulated the Secretariat on the results achieved so far. It agreed with the major thrust of the report and encouraged all Member States to react constructively to the proposals contained therein. Accordingly, he fully approved document GOV/2784 and looked forward to a second reading, in the parliamentary sense, in which the Board, with the guidance of the Secretariat, would develop, by consensus, measures to strengthen the effectiveness and improve the efficiency of the safeguards system.

50. Mr. CHEN (China) said that over the past two years the Secretariat had done a great deal of work on the assessment, development and testing of measures to strengthen the effectiveness and improve the efficiency of the safeguards system. It had conducted field trials and evaluations on many important technical issues and had studied the related legal and financial implications, resulting in document GOV/2784.

51. The Agency's safeguards system was an important component of the international nuclear non-proliferation regime, which for twenty years had provided an indispensable guarantee for the implementation of the NPT. The positive role played by the existing safeguards system should be fully affirmed. However, the changing international situation and the development of science and technology meant that further improvements needed to be introduced to make the system more effective, rational and practical.

52. The Chinese Government attached great importance to the present issue and endorsed in principle the adoption of appropriate measures to strengthen the effectiveness of the safeguards system. As such measures would involve complicated technical, financial and legal problems, China considered that measures which had proved to be technically effective and at the same time conducive to cost-saving, within the existing legal framework, should be introduced first. Measures that went beyond the existing legal framework should be fully discussed by Member States in order to achieve a consensus on their implementation that was based on consultation and negotiation.

53. As far as the existing legal framework was concerned, the report before the Board provided a preliminary analysis of the strengthening measures proposed by the Secretariat in connection with the basic content of the comprehensive safeguards agreement. That effort

was to be welcomed. However, it was also imperative to conduct an article-by-article legal examination of the comprehensive programme and to consider specific measures for strengthening the safeguards system. If necessary, external legal experts could be invited to participate.

54. The resolution on Programme 93+2 adopted at the thirty-eighth session of the General Conference contained a clear request to the Director General to present to the current session of the Board "proposals for a strengthened and more cost-efficient safeguards system". During the Board meetings in December, the Chairman had stated that the Board expected to receive, before its March 1995 session "an integrated and comprehensive set of proposals together with a detailed evaluation of the technical, financial and legal implications of implementing each proposal". Unfortunately, document GOV/2784 was not yet a comprehensive set of proposals containing specific measures. It was rather a progress report, containing a preliminary analysis of the technical, financial and legal implications which could not provide a basis for a detailed legal analysis. It was therefore not possible to give the confirmation suggested by the Secretariat in paragraph 110. The Board could, however, take note of the report and request the Secretariat to make further studies on the basis of the views expressed on the present occasion and to put forward a comprehensive programme with all specific measures for consideration at a future Board session.

55. China was paying close attention to the progress of Programme 93+2. Its experts believed that international treaties should contain provisions with fixed meanings which could not be subject to any deliberate extension or narrowing of interpretation to suit certain needs. Taking a broad interpretation in order to extend the obligations of States Parties would not only diminish the seriousness of such a treaty, it simply would not work. Some important concepts in document GOV/2784 lacked clear definitions and as a result uncertainties might arise in understanding the obligations of Member States. Producing additional sensitive information in an Expanded Declaration should be accompanied by a set of strict measures for maintaining confidentiality so as to avoid abuses. Similarly, there should be confidentiality of sample identity for the environmental samples sent to laboratories outside the Agency for analysis purposes. There should be a set of objective analytical and assessment mechanisms which the Agency could apply to information coming from different

channels, as otherwise there was a danger that the Agency might be misled or lose credibility and give rise to political disputes. Particularly in cases of strongly intrusive inspections launched on the basis of information from a third party, appropriate trigger approval mechanisms should be established to prevent the abuse of such information.

56. In conclusion, his delegation believed that the Agency's measures to strengthen the effectiveness of the safeguards system should not affect the legitimate rights and interests of countries making peaceful use of nuclear energy and should not impede the continued development of promotional activities. The sovereignty of Member States should not be infringed. As stated in paragraph 4 of document INFCIRC/153, safeguards should be implemented in a manner designed to avoid hampering the economic and technological development of the countries concerned or their international co-operation in the field of peaceful nuclear activities. If those basic principles and the objectives mentioned in the Statute were observed, it would be possible genuinely to strengthen the effectiveness of the safeguards system, improve its efficiency and arrive at a consensus on the legal arrangements.

57. Mr. SIEVERING (United States of America) said that the Agency's safeguards regime was to be strengthened to provide a reasonable level of assurance, first, that no material was being diverted from declared activities, and second, that all nuclear materials and activities were in fact under safeguards. It was clear from the development of INFCIRC/153 that the rights and obligations of the Agency applied to all nuclear material and all peaceful nuclear activities in a State and were not limited to what had been declared. That meant there could be credible assurance of the correctness and completeness of national declarations, or in other words, assurance of the absence of undeclared nuclear material and activities. All of that should be achieved while improving cost-effectiveness.

58. The United States strongly supported the Secretariat's efforts on Programme 93+2 as reported in document GOV/2784, which was an appropriate response to the Board's request for meaningful analysis of the technical, financial and legal implications of the proposed measures and provided a suitable basis for the Board to begin consideration of specific ways of strengthening the effectiveness and improving the efficiency of safeguards.

59. His delegation supported confirmation of the four principles in paragraph 110 and the request in paragraph 111 for the submission of proposals to the Board in June. Confirmation of those principles would set the stage for consideration of particular measures to begin in June and would assure all parties to the NPT that the Agency was actively pursuing its responsibilities under the Treaty in an effective and efficient fashion and that its verification activities would bring increased security for all States by providing an assurance of the absence of undeclared activities as well as non-diversion of declared material. That assurance in turn was the basis on which States could implement the technical co-operation programmes which were so important to many of the Member States of the Agency.

60. Confirmation of those principles would not prejudice future debate by the Board on the particular measures outlined in the report or on how to implement them; the Director General had made that clear in his introductory statement. The United States delegation would be making detailed comments in writing to the Secretariat and he encouraged other delegations to do the same.

61. He looked forward to reviewing the Secretariat's proposals in June. The review process might take some time to complete, and Board approval might require more time. His delegation would of course favour the early implementation of those new proposals for which clear authority already existed. Ultimately, however, the Board would approve a full set of proposals that would allow safeguards to be implemented more efficiently and more effectively.

62. Mr. BENATTALLAH (Algeria) said that his delegation associated itself with the statement made on behalf of the Group of 77 and welcomed the present exchange of views on document GOV/2784 and the action recommended by the Secretariat. The elaboration of generally agreed measures for strengthening the efficiency and enhancing the effectiveness of the safeguards system would help build confidence among States and foster the development of international co-operation in various fields, including those relating to the peaceful uses of nuclear energy.

63. The initial objective of reviewing the Agency's safeguards had been to seek ways and means of establishing an improved, efficient and cost-effective system in order to remedy the imperfections of the present system. Algeria had contributed to the process of reflection on how to improve the system within the framework of the Agency's Statutes and the provisions of its legal instruments.

64. Algeria's accession to the NPT after its unilateral and voluntary decision to place its nuclear facilities under Agency safeguards was fully consistent with its support for the Agency and its activities.

65. The implications of the measures proposed in document GOV/2784 were of vast importance. The measures which were eventually selected should be based on concepts which were clear and appropriate in the context of the Agency's statutory role and the relations of confidence and co-operation which it must maintain with its Member States. They should also reflect an atmosphere of good faith among States.

66. He trusted that the tradition of consultation and consensus decision-making would be continued on the present important issue. The extended and in-depth consultations to be held before the next Board session would help to clarify the basic concepts and evaluate in greater detail the technical, scientific, legal and financial implications of the measures to be selected and the legal arrangements which would be appropriate.

67. His delegation took note of the legal analysis in paragraph 22 of document GOV/2784 whereby the Secretariat recognized that a restrictive interpretation of safeguards agreements was possible in the light of which the Agency would need to be given explicit authority to implement measures necessary to fulfil existing obligations.

68. The Group of 77 had noted that a number of the measures described in the document went beyond current arrangements and required additional powers. The Secretariat had identified as the main elements requiring such powers, access to information and the extension of physical access, both of which raised a number of conceptual and legal questions. In particular, the sources of such information should be reliable and objective and

compatible with the statutory mandate of the Agency. Moreover, if such information was to be credible and not subject to questioning, it should be rigorously scientific and obtained through transparent co-operation between the Agency and its Member States.

69. The objective evaluation of the recommended measures for the technical, scientific and financial improvement of the safeguards system was still at the theoretical or at least experimental stage and had not yet given a clear and satisfactory view of their effectiveness and especially of the cost savings which would result from their implementation.

70. In the light of those considerations, his delegation believed that the action recommended by the Agency required further evaluation and analysis of the technical, legal and financial implications. He noted with interest the Director General's comment that the reaffirmation of the basic principles underlying the Agency's action would not prejudice the debate or any decisions to be taken. It was in that spirit that his delegation would consider whatever conclusions the Board eventually arrived at, but in the meantime he wished to reiterate his delegation's willingness to play an active part in future consultations on the subject.

71. Ms. OK (Turkey) said that document GOV/2784 suggested a number of measures which were important for the strengthening of safeguards and in addition established a reasonable legal basis and framework for the proposed arrangements; accordingly, her delegation fully endorsed paragraph 110 of the document, subparagraph C of which referred to increased access to safeguards-relevant information and sites and was particularly important given that the purpose of safeguards agreements was not only to verify the correctness and completeness of States' declarations, but also to provide assurance of the non-diversion of nuclear materials from declared activities and of the absence of undeclared nuclear activities. For several years her Government had insisted on the early implementation of Programme 93+2 and it was unfortunate that the programme could not, as her delegation had hoped, play a valuable contributory role in the forthcoming NPT Review Conference. Nevertheless, a positive message should be conveyed to that Conference and full implementation of the programme should soon follow.

72. Her delegation had noted with sympathy the concerns expressed by the Governor from Brazil and some other speakers, but it was too early to discuss those issues at the present meeting. The Director General had mentioned in his introductory statement that acceptance of the recommendations in paragraph 110 did not imply endorsement of the specific measures described in the document or of the legal interpretation given. Such endorsement would be required only after the Board had considered specific measures in June. The same applied to the necessary legal authority. It accordingly seemed untimely and unnecessary to concentrate now on issues which would be discussed in June.

73. Recent incidents involving undeclared nuclear activities cost both the international community and the Agency a great deal. Her own country was still suffering from the economic and social losses incurred as a consequence of one such incident. All measures which would reduce the risk of such occurrences deserved support. In particular, drawing up technical and legal provisions that would enable the Agency to identify such incidents immediately seemed an obvious contribution to world peace.

74. The strengthening of safeguards was a very important component of disarmament and non-proliferation. Although the programme had not yet been implemented, a unified and strong indication along those lines was required for the forthcoming NPT Conference. She hoped that the Board could reach a consensus on sending a positive signal to that important event, which would constitute a milestone in the history of disarmament.

75. Mr. RYZHOV (Russian Federation) commended the Secretariat on the report contained in document GOV/2784, which showed that significant progress had been made in developing Programme 93+2. Of all the aspects to be considered, the technical aspects of the proposed new measures had been addressed most fully to date. With Member States' help the Secretariat had to a great extent demonstrated the technical feasibility of a number of new safeguarding methods, notably environmental monitoring, which could be used to make safeguards an effective instrument for control. It was worth pointing out, however, that as several of the methods proposed for detecting undeclared nuclear activities were of a qualitative rather than a quantitative nature, a procedure for evaluating the results of

inspection activities would need to be developed in order to avoid subjectivity in the drawing of conclusions. Consideration should also be given to the presentation of the results of safeguarding activities in the safeguards implementation report.

76. The Secretariat had made a preliminary assessment of the financial and legal implications of implementing the proposed measures. Additional work was needed, however, to clarify outstanding points and questions.

77. Most of the measures proposed were directed towards detection of undeclared nuclear activities and supplemented existing safeguards measures. His delegation would have liked to see a more detailed quantitative assessment of the savings that could be made by curtailing or simplifying existing procedures; that would have made it possible to assess the overall economic impact of implementing Programme 93+2. For example, his delegation was in favour of a relaxation of timeliness goals through accumulating assurance regarding the absence of undeclared activities, as outlined in paragraph 20 of document GOV/2784, as a basis for reducing the costs of implementing safeguards on declared nuclear material. A detailed assessment of the consequences of measures of that kind would thus have been useful.

78. Much work remained to be done on the legal aspects: as stated in paragraph 9 of the document, any strengthening measures that went beyond the scope of existing safeguards agreements could only be implemented on the basis of additional undertakings by the States concerned. The extent, of those legal undertakings, as well as the form they should take, needed to be determined. It was important to establish how universal such a new legal basis would be and how the Agency would proceed if several groups of countries showed different degrees of willingness to implement the new approaches.

79. With regard to the action recommended in paragraph 110, his delegation took it, from what the Director General had said in his introductory statement, that acceptance by the Board of those recommendations would not imply an endorsement of the specific measures described in the document or of their legal interpretation. The Director General had also noted that acceptance of paragraph 110 - with some minor adjustments - would enable the Secretariat to proceed with the preparation of specific proposals for consideration and

approval in June. His delegation felt that paragraph 110 should be reworked to reflect the real task before the Board, namely to examine the idea of an effective safeguards system, rather than to give a legal interpretation of agreements already concluded. His delegation was prepared to participate in finding acceptable compromises on those lines.

80. Approval of the new approach would depend on which mechanism the Agency proposed for implementing it, a matter to which the Secretariat should pay particular attention in June. Moreover, new measures for strengthening the effectiveness and improving the efficiency of the safeguards system should be tested under real conditions. Willingness on the part of countries to start implementing such new measures on a voluntary basis could help solve many of the problems - including the legal ones - associated with implementation. While the Secretariat should continue its development work on all aspects of the programme, he appealed to Member States to provide assistance in carrying out field trials of the proposed methods, approaches and technology. The Russian Federation was helping the Agency in some areas, particularly in evaluating additional uses of environmental monitoring and in detecting undeclared nuclear activities. It looked forward to detailed discussion of the Secretariat's proposals for Programme 93+2 at the June meetings of the Board.

81. Mr. RIANOM (Indonesia) said that as a party to the NPT his country attached great importance to full application of Agency safeguards on a multilateral basis to all Member States. It therefore welcomed the substantial progress made by the Secretariat with regard to strengthening the effectiveness and improving the efficiency of the safeguards system. He hoped the Secretariat would provide more details and specific proposals regarding the legal basis, increases in efficiency and cost reductions for discussion at the June Board, and he trusted that the Secretariat would take into account all the suggestions and comments made at the present meeting. He proposed that it should convene an informal open-ended briefing to clarify how Programme 93+2 would be implemented before the Board met. Finally, he associated his delegation with the statement made by the representative of Sudan on behalf of the Group of 77.

82. Mr. NASSER (Egypt) noted with great interest the report contained in document GOV/2784. The competent authorities in his country were currently studying the technical and legal aspects.

83. His delegation believed that the Board should take the following points into account in its deliberations on Programme 93+2: firstly, the political and conceptual appropriateness of the proposal to concentrate on undeclared facilities in seeking to strengthen safeguards and the concomitant need to develop additional procedures; secondly, the practical and technical soundness of the proposals. A comparison was needed of the cost of implementation and the benefits derived; thirdly, provided that Member States demonstrated the political will to accept the proposals and that the latter were technically and financially feasible, the legal and financial arrangements which would be needed to enable the Agency to implement the strengthened safeguards system.

84. Experience had shown that the Agency's safeguards system was an effective tool for assuring non-proliferation from nuclear activities in declared facilities in countries accepting the system. It did not, however, offer full guarantees of the absence of undeclared activities or the correctness or completeness of declarations made by States entering into safeguards agreements with the Agency. Such guarantees were particularly important in view of the accelerating nuclear disarmament process, and Egypt, which had always been unequivocal in its support of non-proliferation and strengthened safeguards, hoped for greater transparency in that area and therefore supported all efforts to that end, including the proposals contained in Programme 93+2. It looked forward especially to receiving in June the Secretariat's proposals regarding the item-specific safeguards agreements mentioned in paragraph 1 of document GOV/2784.

85. Turning to the practical and technical implications of the proposals, he said that there was some lack of clarity regarding the financial burden involved; he hoped the Secretariat would be able to provide a clearer picture in June. It was his delegation's understanding that the increase in overall cost would be slight at first and then grow only gradually. Any lessening of the burden to Member States would be welcome.

86. Referring to paragraph 22 of the document, he said that for legal reasons a restrictive approach should be preferred in interpreting safeguards agreements. The general rule was not to over-interpret exceptions - and safeguards activities were themselves exceptions.

87. If Member States had the political will to strengthen the safeguards system, it would be easy to agree on a legal framework for implementing the necessary measures. In a first stage, it would be established, through detailed consultations between the Secretariat and Member States guided by a restrictive interpretation of existing agreements which of the proposed measures required a new legal basis. In the second stage, the form of that legal basis would then be decided upon.

88. Before concluding, he expressed support for the statement made on behalf of the Group of 77. He looked forward to the Secretariat's input for the June Board meeting and hoped it would take all comments into account, including those submitted in writing.

89. Mr. WALKER (Australia) commended the quality and comprehensiveness of the report contained in document GOV/2784. His country was committed to global security objectives - meaning security of individual States and provision of the prerequisites for comprehensive nuclear disarmament - and was firmly convinced that safeguards procedures must be strengthened in order to prevent such situations as had occurred in Iraq and the DPRK. While its preliminary analysis of the report was very positive, Australia, in common with other countries, needed more time to examine in detail the technical, legal and financial implications of the recommendations made therein. However, he was pleased to note the Director General's clarification that acceptance by the Board of the recommendations contained in paragraph 110 of document GOV/2784 would not imply endorsement of the specific measures described in the report or the legal interpretations advanced. The task of Board members at the present meeting was thus to reiterate their firm support for the basic principles of a strengthened safeguards system as set forth in paragraph 110. His delegation did not believe that any amendments to paragraph 110 were necessary but would not oppose minor adjustments if careful scrutiny showed that they would not lead the Board to conclude that obligations were being rendered less comprehensive.

90. His delegation agreed with the Director General's opinion that the proposed measures would offer the greatest additional strengthening and the greatest economy only if adopted as a whole and that they should be applied as equitably and transparently as possible.

91. He had listened with interest and some bemusement to the view expressed by several Governors that the safeguards system should be based on trust and that consequently it should concentrate solely on declared inventories and not include measures directed at detecting undeclared nuclear activities. Such a safeguards system would not offer the solid objective basis for confidence which his country demanded of a safeguards system that was to provide both national security assurances and a framework permitting the pursuit of economic benefits from international trade in nuclear material. Similarly, he had the greatest difficulty in understanding the objections which had been raised to paragraph 110.C calling for increased safeguards-relevant access and information. As to paragraph 110.A, it seemed self-evident that if safeguards were to verify "all source or special fissionable material in all peaceful nuclear activities within the territory of the State, under its jurisdiction or carried out under its control anywhere", as required under paragraph 2 of INFCIRC/153, then they must verify the correctness and completeness of declared inventories, and thereby necessarily also the absence of undeclared activities.

92. All delegations appeared to be expressing support for strengthening the effectiveness and improving the efficiency of the safeguards system. That, he hoped, meant that they would also support the means needed to achieve that objective. As the Director General had said in his introductory statement, the essential requirements for improved safeguards were co-operation and transparency.

93. Mr. LEMOS SIMMONDS (Colombia) said that document GOV/2784 should be taken as a new starting-point for examination and adoption of additional measures on a very important issue affecting the security of all. The aim of Programme 93+2 was to ensure that safeguards were credible but did not hinder the peaceful uses of nuclear energy, that verification activities did not entail excessive costs, and that confidentiality of information was observed. Greater transparency was needed in all activities subject to safeguards, and Programme 93+2 had brought a significant step forward in that respect.

94. Previous speakers' comments, especially the extremely interesting ones made by the Governor from Brazil, showed that the Director General had been right to say in his introductory statement that the Secretariat's proposals would give rise to discussion and criticism. However, while further adjustments could no doubt be made to the formulation of paragraph 110, or to details regarding the cost of the proposed measures, in his delegation's opinion the report contained in document GOV/2784 already provided an adequate basis for a consensus among Member States and the Board of Governors to persevere with Programme 93+2 and bring it to a successful conclusion.

95. Finally, he too expressed support for the statement made earlier by the representative of Sudan on behalf of the Group of 77.

96. Mr. EL FASSI (Morocco) reiterated the high priority accorded by his country to the Agency's safeguards as a means of promoting confidence between States and strengthening their collective security. He fully supported the principle of strengthening the effectiveness and improving the efficiency of the system by adopting the measures proposed by the Secretariat under Programme 93+2. However, given that the necessary authority for implementing some of those measures was not contained in INFCIRC/153-type agreements, the Secretariat would need to: identify those measures which were not covered on a restrictive interpretation of those agreements; establish - in co-operation with the States concerned - the necessary legal framework for application of the measures; and ensure that those measures were applied in a cost-efficient and transparent manner, equitable for all States. Furthermore, strengthening of the safeguards system should not result in any reduction in available resources for technical co-operation in the developing countries. It should also be consistent with the Agency's role of promoting the peaceful uses of nuclear energy and the transfer of technology. In conclusion, he too supported the statement made on behalf of the Group of 77.

97. Mr. GOESELE (Germany) fully endorsed the statement made by the Governor from France on behalf of the European Union. Document GOV/2784 gave a comprehensive picture of the steps that needed to be taken to strengthen the safeguards system and to address the problem of undeclared activities. He commended the Director General's introductory remarks on the subject and agreed that confirmation of the principles contained in

paragraph 110 of the document would not prejudice the decisions to be taken on concrete measures for strengthening the system, which would need detailed consideration by the Board and consultations with the Governments of States concerned. Many aspects needed to be taken into account, including some where parliamentary approval might be required. His delegation intended to send more detailed comments to the Secretariat in writing and looked forward to continuing the debate in June.

98. Mr. FITZGERALD (Ireland), after associating his delegation with the remarks made by the Governor from France on behalf of the European Union, said that the comprehensive and lucid report submitted in document GOV/2784 was timely in view of the forthcoming NPT Review Conference. It was clearly of vital importance that the credibility of the verification provisions contained in Article III of the Treaty should be maintained, and the Agency's Member States had a duty to ensure the continuing validity of the assurances provided by the Agency's safeguards system.

99. Not for the first time, the Secretariat had pointed out, in the introduction to the report, that the existing safeguards system could offer only limited assurances as to the absence of undeclared nuclear activities. While agreeing with that analysis, and accepting that the safeguards system had undoubted weaknesses, his delegation was convinced that the Agency would be able to use its accumulated experience and improved technology to address the shortcomings the report identified. However, an important measure of Member States' resolve to support that endeavour would be their collective willingness to provide the necessary resources - for the quality of verification obtained depended on what Member States were willing to pay for.

100. Difficult work lay ahead in implementing the programme outlined in document GOV/2784. While there might be differing views as to what needed to be done, it was clear that to do little or nothing was not a satisfactory solution. Indeed, the analysis contained in the report and the teachings of experience made it clear that it would be intellectually dishonest to pretend that change and improvement were not necessary, or that verification need only apply to declared activities.

101. The weaknesses identified in the present system had to be remedied; in that regard, the actions recommended in paragraph 110 had the merit of clearly establishing the relevant areas of responsibility. In particular, improving the system's effectiveness undoubtedly depended on achieving increased access to facilities and unrestricted inspections. It was not reasonable to curtail the Agency's ability to act and at the same time expect it to provide the assurances that the world required.

102. With those comments, his delegation could endorse the principles and approach outlined in paragraph 110 of document GOV/2784 and looked forward to examining the concrete proposals to be submitted by the Secretariat at the Board's June meetings.

103. Mr. PESCI BOUREL (Argentina) commended the Secretariat for its efforts in producing document GOV/2784 and expressed particular appreciation of the significant contribution Member States had made to Programme 93+2 by testing and analysing proposed measures.

104. His delegation had not yet had time to study the large amount of relevant technical documentation in detail, but on the whole it agreed with the Secretariat that the measures outlined in document GOV/2784 would make a positive contribution to the strengthening of the Agency's safeguards system.

105. As a next step, it might be useful to produce an integrated proposal describing all the proposed measures in more detail. The single integrated safeguards system thus constituted would continue to be based on appropriate nuclear material accounting, supplemented by greater Agency access to relevant sites and information. Clearly, the integrated system would not include all the necessary measures from the very start, since some of them would continue to be developed over time. Nevertheless, it should be possible at the present time to produce a proposal that gave an adequate picture of the overall benefits and potential savings of the new system.

106. It was important that the integrated system should not place too much emphasis on applying the new safeguards strengthening measures to installations and nuclear materials that were already covered by the existing safeguards system, especially where current measures already provided sufficient assurance that nuclear material and facilities were being properly used.

107. The Secretariat should spell out more clearly the costs associated with the implementation of the strengthened system. It was his delegation's understanding that the new measures, being technically more sophisticated, would make it possible to streamline current safeguards efforts and to use the resources thus saved to fund part of the new measures.

108. It would also be essential to define accurately the legal basis for the proposed measures in order to ensure their proper application. That would not only avoid possible differences of interpretation liable to prevent the desired strengthening being achieved, but also make for wider support from Member States.

109. There were a number of other specific aspects that his delegation considered particularly important, namely the need for effective ongoing training for safeguards personnel, increased efforts on the part of the Secretariat to raise technical standards, the urgent need to streamline inspection work in on-load refuelled reactors, and the establishment of regional offices in areas with significant nuclear activities.

110. His delegation also felt that the existing links between the Agency and SSACs should be strengthened. In that regard, he reiterated that Argentina was always ready to collaborate in conditions of full transparency with the Agency and ABACC in pursuing their common goals more effectively and efficiently. That was a political commitment which his country hoped would be duly taken into account and fully reflected in future documentation concerning the subject under discussion.

111. In conclusion, pending further substantive discussion within the Board and a further statement by the Director General on the matter, his delegation could endorse document GOV/2784 and its purpose of enabling the Agency to obtain greater assurance that no activities had taken place which were incompatible with the commitments and obligations entered into by Member States under comprehensive safeguards agreements.

112. Lastly, he expressed his delegation's support for the statement made by the representative of Sudan on behalf of the Group of 77.

113. Mr. MEADWAY (United Kingdom) associated his delegation with the statement made by the Governor from France on behalf of the European Union and commended the Secretariat for the thorough and professional work it had carried out under Programme 93+2 and for the lucidity of the report in document GOV/2784.

114. While acknowledging that much detail work remained to be done, his delegation endorsed the main elements of that programme and believed that if they were put into practice they would enhance the already crucial role played by the Agency's safeguards system in the international community's efforts to prevent the proliferation of nuclear weapons.

115. In particular, his delegation welcomed the following aspects of the report:

- The manner in which its proposals built upon the established means by which the Agency verified that States discharged their political commitments;
- The manner in which that approach had enabled the proposals to address the strengthening of the Agency's ability to detect undeclared nuclear activities and pursue them once detected, while also streamlining the existing safeguards on declared nuclear material;
- The cautious and responsible detailed legal analysis, which struck a good balance between clearly delineating the Agency's rights and obligations under INFCIRC/153 and the safeguards agreements derived from it, and stating its readiness to seek complementary powers where necessary;

- The amount of detailed costing and technical work that had been done, which would provide a good foundation for the Director General and his staff to continue the efforts to improve safeguards operations in respect of declared material in the future.

The importance of the last-named aspect should not be underestimated, even though no immediate decisions were required of the Board. His delegation had been struck by the fact that, apparently reading the same document, different delegations had reached widely different conclusions as to the costs of the future programme.

116. He welcomed the comments made by the Director General in his introductory statement with regard to the action recommended in paragraph 110 of the document. There was no need, at the present stage, for the Board to attempt a legal redefinition of the obligations established by INFCIRC/153. His delegation was satisfied that, for the moment, the action recommended in paragraph 110 was heading in the right direction. The comments made by the Governor from Brazil and others on that subject seemed a little premature, although the Board would need to reach a consensus during the current meetings on the problems they had raised.

117. In conclusion, his delegation agreed with that of France that the measures outlined in the document before the Board constituted a very important foundation for the long-term improvement of existing safeguards measures, and that they sought to apply the lessons of the past in an appropriate manner.

118. Mr. POLUREZ (Ukraine) said that as a recent signatory of the NPT, his country particularly welcomed the efforts the Secretariat had made to improve the safeguards system under Programme 93+2. It was also grateful to those delegations which had made proposals for improving document GOV/2784 and to the Director General for the clarifications provided in his introductory statement. Although document GOV/2784 was still undergoing analysis in Ukraine, his delegation could endorse the action recommended in paragraph 110.

119. Mr. HOBEICA (Lebanon) said it was essential that the Agency's safeguards system should provide credible assurances regarding the absence of undeclared nuclear activities and the appropriate conduct of safeguards verification in relation to declared activities. Lebanon therefore fully supported the three main elements in the approach proposed in document GOV/2784, namely increased access to information and its effective use by the Agency, increased physical access for Agency inspections, and optimal use of features of the present system. It also welcomed the assessment given in the report of the technical, cost-benefit and legal implications of the proposed measures, which would enable them to be evaluated and approved on an individual basis.

120. Emphasizing the global nature of the NPT, whose provisions should be respected by all countries without exception, and also of the safeguards system which underpinned it, he noted that there was an urgent need to establish a nuclear-weapon-free zone in the Middle East as a first step towards freeing the world of weapons of mass destruction.

121. In conclusion, he endorsed the action recommended in paragraph 110 of document GOV/2784 and associated his delegation with the statement made by the representative of Sudan on behalf of the Group of 77.

122. Mr. OJANEN (Finland), having endorsed the statement made by the Governor from France on behalf of the European Union, said that the competent authorities in Finland had closely studied the new safeguards approach outlined in document GOV/2784 and considered that it largely fulfilled the mandate with which Programme 93+2 had been launched, namely to submit to the Board, early in 1995 and before the NPT Review Conference, proposals for a strengthened and more efficient safeguards system. The report provided a firm basis on which the Board would be able to take decisions at its June meetings. It also spelled out very clearly the need for continuous development work on the Agency's safeguards system. Programme 93+2 had demonstrated that by introducing streamlining measures and using new, more intrusive safeguards techniques, the Agency could significantly enhance the credibility of the assurances it could offer with regard to safeguards implementation and the absence of undeclared nuclear activities. The Director General's statement had provided further clarifications as to how such increased assurances could be obtained, by means of environmental monitoring at sites containing nuclear

materials included in voluntary extended declarations, without any changes to the present legal framework. However, further legal analysis would be required, both nationally and by the Agency, in order to establish the legal basis for implementing some of the proposed measures.

123. His delegation supported the general thrust of the action recommended in document GOV/2784, and particularly in paragraph 110. It considered that the Agency already possessed the mandate to achieve improved access and deploy new safeguards technologies in line with Programme 93+2, on the basis of either INFCIRC/153 or voluntary arrangements with the SSAC and the host country concerned.

124. Finland was also satisfied with the report's evaluation of the financial implications of introducing new safeguards measures under Programme 93+2. The annual net increase in the safeguards budget would be very modest, being mainly accounted for by environmental monitoring costs.

125. With regard to paragraph 109 of the document, his delegation felt that measures which were possible under the Agency's existing authority should be implemented as soon as was feasible, and that measures for which complementary authority was needed should be discussed as soon as possible and appropriate decisions taken.

126. In conclusion, he wished to put on record that his country had been particularly pleased to contribute to the development of the environmental monitoring techniques proposed for Programme 93+2. Finland was ready to continue that co-operation with the Agency, whether or not it involved further testing of new safeguards approaches.

127. Moreover, Finland had allowed field trials of extended access inspections in line with the voluntary extended declaration it had made. The trials of extended access and no-notice inspections had shown that its national legislation and practice would need further development in order to accommodate the new safeguards approach. Pending further legal analysis by the Agency and the Finnish SSAC, his country would now begin preparing for full national implementation of the decisions to be taken by the Board in June.

128. Mr. ALLOTEY (Ghana) commended the Secretariat for the comprehensive information it had provided in document GOV/2784. As a signatory to the NPT, Ghana supported all efforts to strengthen the effectiveness and improve the efficiency of the safeguards system, and could thus endorse the action recommended in paragraph 110, which would enhance efficiency, reduce costs, raise credibility and ensure greater transparency.

129. In conclusion, he associated his delegation with the statement made by the representative of Sudan on behalf of the Group of 77.

130. Mr. MAZILU (Romania)* began his remarks with a statement intended to refute allegations made in recent press articles that Romania possessed a special military nuclear programme capable of producing an atomic bomb. Three years previously, the Agency had investigated the situation with regard to several hundred milligrams of plutonium separated at a research reactor in Romania under the previous régime and found to have been unaccounted for. The matter had then been closed, to the satisfaction of the Romanian authorities and Government and the Agency's Board of Governors.

131. Romania had never possessed a military nuclear programme, and the new régime had demonstrated full transparency in enabling the appropriate organizations to corroborate that fact. Subsequently Romania had signed a safeguards agreement with the Agency. It was ready to co-operate fully with the Agency on developing and enhancing its safeguards system, and it had supported Programme 93+2 since its inception in 1993.

132. Turning to the sub-item under discussion, he thanked all those associated with Programme 93+2 since December 1993, in particular the Member States whose extensive support had allowed real and rapid progress to be achieved.

133. He agreed with the Secretariat that increased transparency and greater access for inspectors were the most important elements in any attempt to strengthen the existing safeguards system. His authorities also concurred with the view expressed in the report that the purpose of comprehensive safeguards agreements was the continuing verification of the correctness and completeness of a State's declaration of nuclear material in order to provide

maximum assurance of the non-diversion of nuclear material from declared activities. His delegation considered that the Agency's safeguards system should be designed to give effect to that aim, and also that the Agency should be able to fulfil its mandate on the basis of the authority it had under the terms of existing safeguards agreements.

134. In conclusion, he endorsed the action recommended in paragraph 110 of document GOV/2784.

Excerpt from the record of the Board's 862nd meeting

1. Mr. COOK (New Zealand)* said that as far as New Zealand was concerned there was no more crucial issue before the Agency than the one now under discussion. Decisions taken by the Board in June on the implementation of Programme 93+2 would determine the direction of the safeguards system well into the next century.
2. He therefore wished to emphasize the importance attached by his delegation to the basic principles set forth in paragraph 110 of the report contained in document GOV/2784. Like many small non-nuclear countries, New Zealand believed that its fundamental security interests required a strong and credible safeguards system. If safeguards could not be relied on to provide assurances not only about the non-diversion of nuclear material, but also about the absence of undeclared nuclear activities, there could be no international confidence in the non-proliferation regime.
3. His delegation therefore fully supported the approach suggested by the Director General as a basis for the detailed proposals to be submitted in June. The Board should endorse the basic principles, without attempting to decide on the specific components of a strengthened safeguards system at the present stage.
4. It was clear from the debate the previous day that the proposal had legal, technical and financial aspects which would need to be considered in more depth in the June session of the Board, but he was encouraged by the overwhelming support for the general direction of Programme 93+2. If the political will existed, and if Member States were serious in their wish to prevent the spread of nuclear weapons, then there should be no insurmountable obstacles to the establishment of a more effective and efficient safeguards regime.
5. Mr. de YTURRIAGA (Spain), having expressed support for the statement made the previous day by the representative of France on behalf of the European Union, said that a number of interesting points had been made in the course of discussion, notably by the representatives of Brazil, Cuba, Mexico and - on behalf of the Group of 77 - Sudan. Despite

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

the apparent confrontation, his delegation believed that the differences of view were more formal than substantive and that consensus was achievable - if one focused on the objective, rather than the wording, of the proposals before the Board and on the spirit as well as the letter of document INFCIRC/153.

6. The basic undertaking made by a State was - pursuant to paragraph 1 of document INFCIRC/153 - to accept safeguards on all source or special fissionable material in all peaceful nuclear activities within its territory, under its jurisdiction or carried out under its control anywhere, for the purpose of verifying that such material was not diverted to nuclear weapons or similar devices. Pursuant to paragraph 2, the Agency had the obligation to ensure that the agreed safeguards were applied to all such material, which should be controlled by the State (in conformity with paragraph 7) in such a way as to enable the Agency to verify that no diversion of material had taken place. Lastly, paragraph 3 established that the State and the Agency would co-operate to facilitate the implementation of the safeguards.

7. The concept "all activities" covered both declared and undeclared activities. He was sure that everyone agreed with the Director General as to the need for the Agency's safeguards system to provide credible assurances regarding every type of activity and with his affirmation that the overall objective of the system was to establish with certainty that the non-nuclear-weapon States parties to the NPT or to regional treaties of a similar nature, such as the Tlatelolco Treaty, were using all their nuclear material, equipment and facilities solely for peaceful purposes.

8. He was also sure that everyone shared the Director General's view that nuclear material, equipment and facility accounting was the cornerstone of the safeguards system and that the system could be strengthened if measures were taken to improve the Agency's ability to detect all activities, including undeclared ones.

9. He did not think it was the Director General's intention to change the basic objective of safeguards agreements, which was the application of safeguards to all nuclear material and activities in order to verify that the material was not diverted or used for non-peaceful purposes. Logically, if that objective was to be achieved, the Agency's safeguards system

had to provide reliable assurances concerning the accuracy of declarations of non-nuclear materials or the unjustified absence of such declarations.

10. The Director General had indicated that the problem of undeclared activities had been highlighted in Iraq, although it had not been unknown previously, and that the Agency's system had only a limited capacity for assessing the completeness of declarations. That had been demonstrated also in the case of the DPRK.

11. The Governor from Brazil had argued that the fact that two specific countries had not played fair did not justify changing the rules of the game. He did not share her fears that an attempt was being made to replace the principle of trust by that of suspicion, or that States would become obliged to prove their innocence in matters of non-proliferation. If, for instance, a government took measures to combat a rise in crime, law-abiding citizens should not feel that they were being targeted, provided that the measures were reasonable and in compliance with the rule of law.

12. He was sure everyone agreed that reasonable and adequate measures should be taken in order to prevent avoidance of the effective implementation of safeguards. The problem was to agree on the nature and scope of such measures, and on how they might be applied in practice without infringing existing international legal instruments.

13. A number of Governors believed that the conclusions presented in the Director General's report went beyond the commitments assumed on the basis of document INFCIRC/153 and that consequently they could be accepted only if that document was amended or if additional protocols to existing safeguards agreements were adopted. That view was perfectly legitimate, perhaps even correct, and he could understand the consternation of the Director General and his advisers at the prospect of having to modify the 120 or so comprehensive safeguards agreements currently in force.

14. However, one should avoid being unduly formalistic and explore other possibilities, such as recourse to the general principles governing the interpretation of treaties codified in the Vienna Convention on the Law of Treaties, Article 31.1 of which stated that a treaty "shall be interpreted in good faith in accordance with the ordinary meaning to be given to

the terms of the treaty and in the light of its object and purpose."¹ The object and purpose of document INFCIRC/153 and of the safeguards agreements derived from it was to prevent the diversion of nuclear material to non-peaceful activities. That object would have to be taken into account during consideration of the possible incompatibility of the measures which the Secretariat was proposing with the document and agreements in question.

15. In his delegation's view, the Director General was not proposing any "contra legem" measures (i.e. measures in open contradiction with document INFCIRC/153 and the safeguards agreements derived from it) - only "propter legem" and "praeter legem" measures which were in line with the object and purpose of document INFCIRC/153 and designed to improve the way the safeguards regime functioned, to the benefit of all Member States. The Board now had to see - in a spirit of compromise - whether those measures could be put into practice without formal amendments either to document INFCIRC/153 or to the safeguards agreements derived from it.

16. It might be that ultimately - at the current or the June session of the Board or in the General Conference - agreement would be reached on the viability of a large number of the measures. If such agreement were reached, it might take the form of an interpretative declaration made by the Board or the General Conference bearing in mind that in Article 31.3 of the Vienna Convention on the Law of Treaties it was stated that in the interpretation of a treaty, together with the context, account should be taken of (a) any subsequent agreement between the parties regarding the interpretation of the treaty or the application of its provisions and (b) any subsequent practice in the application of the treaty which established the agreement of the parties regarding its interpretation.

17. Mr. AHLANDER (Sweden)*, having associated himself with the statement made by the Governor from France on behalf of the European Union and having expressed support for Programme 93+2, said it might be useful to inform the Board of the results of field trials carried out in Sweden under its programme of support for Agency safeguards.

¹ Emphasis added.

18. In the summer of 1993, Sweden, through its Nuclear Power Inspectorate, had agreed to carry out field trials within the framework of Tasks 3 and 4 of Programme 93+2.

19. Within the framework of Task 3, various aspects of suggested environmental monitoring methods had been tested in September 1994. Samples of water and sediments collected outside the perimeters of three power reactor sites and one R&D site (all located on the Swedish coast) had been analysed and the analytical results evaluated.

20. That had been the first field trial of the techniques in question, and the Swedish authorities had concluded that it was possible to work out the practical arrangements for sampling, for storing the required equipment and for the shipment of samples with a reasonably limited effort and with minimal impact on the work of the operator. In their opinion, the application of those techniques would constitute an important means of detecting possible undeclared nuclear activities.

21. Field trial activities within the framework of Task 4 had started in August 1994 and were scheduled to continue at least until the end of the current year. The aim was to test an integrated approach designed to achieve a greater degree of transparency on the basis of an expanded declaration.

22. The field trial involved greater Agency access to information on both present and planned national nuclear activities and on the operation of the facilities in question, greater physical access for Agency inspectors (including access through "no-notice" inspections), greater co-operation with the Swedish SSAC, the near-real-time transmission of accountancy data and the remote transmission of video signals (images) from surveillance equipment.

23. The results of the testing of one inspection arrangement pointed to the possibility of reducing the inspection frequencies at certain facilities and also of reducing the workload at the national level.

24. It had been concluded that expanded declarations, greater Agency access to information and greater physical access for Agency inspectors (including access through "no-notice" inspections) were important requirements for the strengthening of the safeguards system.

25. A data transmission system linking the Agency with the Swedish Nuclear Power Inspectorate had been established under Sweden's safeguards support programme. The data being transmitted included accountancy data (for example, inventory change reports) and operational data (for example, data on all safeguards-relevant shipments of nuclear material). In his view, such a system would contribute very much to greater efficiency in the implementation of safeguards.

26. A system for the remote transmission of video signals was being tested, surveillance equipment having been installed in one of the reactors at the Barsebaeck nuclear power plant. The surveillance equipment was triggered by signals due to specific events such as the movement of head cranes, heavy loads or big objects. The video recordings could be stored on site or sent to the Swedish Nuclear Power Inspectorate; also, the video camera at the plant could be connected to a monitor at the Inspectorate. Use of the technique had made it possible to reduce significantly the number of images taken and therefore the time needed for review. Moreover, there was no reason why the aforementioned data transmission system linking the Agency with the Swedish Nuclear Power Inspectorate could not be used for the same purpose. The approach was a very important one from the point of view of efficiency and costs.

27. The Swedish authorities did not think there should be any difficulties with the measures tested in Sweden. On the contrary, those measures could contribute greatly to the achievement of a more effective and cost-efficient safeguards system. It was therefore important that the ongoing trials continue and be further developed.

28. Mr. LEE (Republic of Korea)*, commending the Director General and his staff, particularly the Deputy Director General for Safeguards, for the report contained in document GOV/2784, said that it had far-reaching implications for the future of the NPT and the credibility of the safeguards system.

29. His Government, which had demonstrated its commitment to Programme 93+2 by hosting a field trial of environmental monitoring techniques, believed that the Board should confirm what was set forth in subparagraphs 110 A-D of the report and take the action described in paragraph 111.

30. In the opinion of his Government, which believed that the purpose of comprehensive safeguards agreements was to provide maximum assurance of the non-diversion of nuclear material from declared activities and of the absence of undeclared nuclear activities through continuing verification of the correctness and completeness of States' declarations, the present safeguards system had demonstrated its inherent limits as a means of providing credible assurance of non-diversion; the best way of achieving a more effective and efficient safeguards system was to ensure increased access to safeguards-relevant locations and information while rationalizing elements of the present system.

31. His delegation endorsed the Secretariat's comprehensive and integrated approach and considered the measures proposed in the report to be important steps in the right direction, although some of them might require further development and evaluation. It attached particular importance to the proposed measures for verifying the absence of undeclared nuclear facilities and activities.

32. His Government was firmly committed to more effective and efficient safeguards and hoped that the Director General would be submitting concrete proposals to the Board for consideration at its June session.

33. Mr. EBBENHORST (Netherlands)*, having associated himself with the statement made by the Governor from France on behalf of the European Union, said that Programme 93+2 was a significant step forward in the process of improving and strengthening the safeguards system and developing an effective verification process which would provide more credible assurances regarding both declared activities and the absence of undeclared activities. It was important for the Agency to be able to provide assurances that the declarations of governments regarding their nuclear activities were correct, and for that reason his country had supported - and would continue to support - the Secretariat's efforts in that direction.

34. In his delegation's view, the purpose of the excellent report in document GOV/2784 was to serve as a basis for discussions on the way in which the safeguards system should be strengthened. Those discussions would result in some adjustments to the Secretariat's proposals, so the Board should not be in a hurry to take decisions on those proposals. The

taking of decisions on them would extend over a number of Board sessions, beginning with the session in June. For the present, the Board was being requested to endorse the Secretariat's approach and the underlying principles. As the Director General had made clear, it was not being asked to take decisions at the current session on how those principles were to be implemented.

35. With the NPT Review and Extension Conference due to take place the following month, his delegation considered it important that the Board express strong support for the Agency's safeguards system and for making it more effective and efficient. Accordingly, it would like to see the Board take the action recommended in paragraphs 110 and 111 of document GOV/2784.

36. Mr. ADEKANYE (Nigeria)*, having expressed support for the statement made the previous day by the representative of Sudan on behalf of the Group of 77, said that the Secretariat's efforts to meet Member States' requests for a more effective and efficient safeguards system should be seen in the context of the more general efforts, in which the Agency - with its positive profile - was participating, to build a credible non-proliferation edifice in the post-Cold War era. With the 1995 NPT Review and Extension Conference drawing near, the role of the Agency in such matters was becoming especially topical. Indeed, the approach proposed for creating a more effective and efficient safeguards system might well determine whether Member States would be willing to entrust the Agency with additional verification functions. The need for the Secretariat to carry all Member States along with it in its efforts could therefore not be overemphasized.

37. His delegation took the view that it would be neither desirable nor useful to take a rapid decision on the proposals contained in document GOV/2784, particularly in view of the fact that not all facets of all the tasks to be carried out under Programme 93+2 had yet been fully explored. Further consultations were necessary on, for example, the question of States granting the Agency additional authority; as discussions in the Board on the subject of Agency safeguards in certain Member States had shown, the granting of additional authority could not be taken for granted.

38. Nevertheless, his delegation believed that the Agency was on the right path. It welcomed the preliminary evaluation of the legal and other implications of Programme 93+2 and was looking forward to the Board's examination in June of a set of concrete proposals reflecting suggestions made by Member States. He hoped that by the time of the Board's June session all interested Member States would have made a thorough study of the proposals and thus be in a position to provide the support and co-operation necessary for ensuring their effective implementation.

39. Mr. ROUX (South Africa)*, having expressed support for the statement made by the representative of Sudan on behalf of the Group of 77, said that South Africa was so far the only country which had voluntarily halted and dismantled its nuclear weapons programme, to the complete satisfaction of the Agency and the international community. Through its co-operation in the verification process, it had demonstrated the political will to be fully transparent. There could be no doubt about his country's commitment to transparency and effective safeguards. His country was prepared to co-operate fully in efforts directed towards those two objectives, and it was for that reason that it had participated in environmental monitoring field trials.

40. However, he wished to emphasize his country's view that the envisaged new system should be developed within a legally acceptable framework, should be cost-effective, should not be discriminatory and should be applied in a transparently equitable way. Given that view, his country - while impressed by the work which the Director General and the Secretariat had done - had reservations about their recommendations. There were legal uncertainties regarding many recommended new measures, which fell outside the ambit of document INFCIRC/153 and whose legal implications needed to be studied more thoroughly. In addition, his delegation was not fully convinced by the Secretariat's estimates of the cost implications of the new measures for the countries involved and hoped that by June the Secretariat would be able to give a reasonably precise indication of the costs.

41. A further point needing to be emphasized was the already existing gap between, on one hand, countries subject to full-scope safeguards based on document INFCIRC/153 and, on the other, countries with safeguards agreements based on document INFCIRC/66/Rev.2. Care should be taken to ensure that the strengthening of safeguards did not lead to a situation

where States in the former category felt they were being discriminated against. That would run counter to the aim of persuading more countries to enter into full-scope safeguards agreements.

42. The proposed expanded declaration - if introduced - and the associated increase in Agency access would place the Secretariat in a powerful position regarding information on States' nuclear activities, so it was important that the Agency take commensurate actions to ensure confidentiality. In his delegation's view, the confidentiality clause in INFCIRC/153-type agreements would not be sufficient; additional assurances would be necessary if mutual confidence was to be established.

43. His delegation was available for further discussions and intended to play a constructive role in strengthening the safeguards system through Programme 93+2.

44. Mr. PAPADIMITROPOULOS (Greece)*, having endorsed the statement made by the Governor from France on behalf of the European Union, commended Programme 93+2 and said that the measures proposed by the Director General would make for greater regional and global security.

45. In the view of his delegation, most of the proposed measures could be taken within the framework of the authority conferred on the Agency by INFCIRC/153-type agreements. For some, however, specific authority might have to be granted by the States party to such agreements, and he hoped that Member States would co-operate fully with the Secretariat in that regard.

46. Some delegations appeared not to be aware of the distinction between, on one hand, the political purpose and, on the other, the technical objectives of safeguards. The political purpose was to enable States to demonstrate that they were complying with the obligations which they had entered into under international safeguards agreements. The technical objectives concerned the prevention of diversions of nuclear material and the timely detection of a diversion should one occur. The measures proposed in document GOV/2784 were designed to facilitate achievement of the technical objectives without a change of political

purpose. In the light of the additional clarifications provided by the Director General, Greece therefore hoped that the Board would take the action recommended in paragraphs 110 and 111 of document GOV/2784.

47. Having taken that action, the Board would be able to discuss the application of the proposed measures in greater detail at its June session. Meanwhile, he hoped that the Chairman and the Director General would continue consulting with Member States with a view to achieving broad approval of the proposed measures, without which it would not be possible to attain the required level of safeguards credibility.

48. The DIRECTOR GENERAL, responding to comments, said that the discussion had left him with the impression that in the Board's view the Secretariat was on the right track - that there was near-consensus on the direction being followed, with adjustment, clarification or expansion necessary in only a few areas.

49. It would have been paradoxical if the general thrust of Programme 93+2 had not been found right: the demand for a stronger, more cost-effective safeguards system had originated in the Board, arising even before the discoveries made in Iraq, and becoming still stronger afterwards. He did not think that - as had been suggested during the Board's discussion - the exercise now under way was like "trying to kill a fly with a hammer". The Agency's "traditional" safeguards, geared to verification at declared installations and not to the detection of possible non-declared safeguards-relevant installations, called to mind a man looking for a lost key near a lighted street-lamp who, when asked whether he was sure he had lost the key there, said "No, but it's easier to look here." Admittedly, that analogy was slightly misleading: there were many keys near the street-lamp, and they all had to be found and accounted for. The Agency needed to do even more, however: it had also to look for any keys lying away from the street-lamp in the darkness. It had not tried doing that before the events in Iraq; since those events, the Board, the United Nations and public opinion expected it to.

50. In the case of Iraq, the Agency had spent four years building up a complete picture of the country's secret nuclear-weapon programme; in the case of the DPRK, it had sought the Security Council's support for its efforts to obtain a complete picture of what had been

happening there; and in the case of South Africa, it had taken great pains - with considerable co-operation on the part of the South African authorities - to verify that the country's initial declaration was correct and complete.

51. Given the experience of recent years, in which the Board had been closely involved, it should not be surprising that a major aim of Programme 93+2 was to strengthen the ability of Agency safeguards to verify the completeness and correctness of declarations of countries' nuclear inventories. After the events in Iraq there could be no excuse for not realizing how necessary that was, and he hoped the Board would convey that message to the NPT Review and Extension Conference.

52. Document INFCIRC/153 fully justified efforts to verify that no nuclear material had been diverted from non-declared installations, for it stated that all nuclear material was subject to safeguards, whether it had been declared or not, and the Agency could carry out such verification only if it could confirm that countries' declarations were correct and complete - that nothing had been forgotten or hidden.

53. It should be possible to reformulate subparagraph 110.A of document GOV/2784 in order to bring it fully into line with paragraphs 1 and 2 of document INFCIRC/153.

54. With regard to the question of interpreting document INFCIRC/153 and safeguards agreements based on it, he said that, in his view, the Secretariat's position as reflected in paragraph 22 of document GOV/2784 was a reasonable one. The Board could opt to interpret the Agency's Statute and document INFCIRC/153 liberally, but the Secretariat should not read more authority into them than was clearly implied.

55. Referring to paragraph 22 of document GOV/2784 and to what the Resident Representative of Spain had said about the interpretation of treaties, he said that the Secretariat had concluded that some of the measures proposed in document GOV/2784 could be regarded as already being authorized by document INFCIRC/153, which the Board had approved, and by implication under the safeguards agreements based on that document. However, prudence was called for in interpreting an instrument such as a safeguards agreement; unlike document INFCIRC/153, it was a bilateral instrument and thus not open to interpretation exclusively by a policy-making organ of the Agency.

56. The fact that there were some proposed measures which the Agency was not already authorized - explicitly or by implication - to apply was not a reason for not applying them; it was a reason for seeking agreement to their application. Certainly, if the Board considered the proposed measures in question to be sound, both technically and from a cost-benefit point of view, the Secretariat would seek such agreement from each individual State.

57. How should the Secretariat go about doing that? He agreed with the suggestion that the Secretariat should indicate those measures which, in its view, the Agency could apply without obtaining special agreement - for example, the requesting of additional information about SSACs or the use of environmental monitoring at facilities to which inspectors already had access. He believed that the application of such measures should start without great delay.

58. In that connection, he wished to point out that there was nothing to prevent States parties to comprehensive safeguards agreements from permitting, on a voluntary basis, the application of measures whose application the Agency could not, in their view, demand under existing agreements. For example, under Programme 93+2 Finland had "survived" short-notice inspections, the making of an expanded declaration and the granting of broader inspector access without impediment to its industrial development and without having to reveal commercial secrets - and the representative of Sweden had recounted a similar experience with regard to his country.

59. However, there was a need for something more stable than voluntary permission, which States could after all withdraw. Beyond the authority which the Agency possessed on the basis of - or could imply from - existing comprehensive safeguards agreements, it would need additional authority based on a further legal instrument to be concluded with each of the States in question.

60. Such a legal instrument might take one of several forms - for example, an exchange of letters, a protocol to an existing safeguards agreement, or modified subsidiary arrangements. However, while the form of the legal instrument might vary, the list of measures should be the same in all cases, being laid down in a model endorsed by the Board.

61. It might take some time before all States parties to comprehensive safeguards agreements concluded such a legal instrument with the Agency. However, the Agency so far had managed reasonably well without the measures in question and could wait a little longer. In any case, as already indicated, the necessary changes could be made on a voluntary basis until the legal process was completed.

62. It was expected that in those States which accepted the proposed package there could be significant reductions in inspection effort at most power reactors, while the inspection effort at bulk-handling facilities remained extensive. In that connection, further clarification was needed as to the inspection effort which the Secretariat considered to be permissible or desirable in the case of facilities and materials listed in expanded declarations.

63. The safeguards system was not based on confidence - it was supposed to create it, and the degree of confidence created was directly dependent on the scope and reliability of the verification process. At present, the assurances given by the Agency related essentially to declared activities, and it was for the Board and States parties to comprehensive safeguards agreements to decide whether the verification process should also involve verifying the absence of non-declared materials and installations. The degree of confidence attainable regarding the absence of non-declared materials and installations would probably not be as great as that attainable regarding the use of declared materials and installations, but it would go well beyond the current virtually non-existent degree of confidence.

64. The Department of Safeguards and inspectors had to respect the confidentiality of the information obtained by them unless something needed to be reported to the Board. Also, they should be aware that information made available to the Agency or obtained from the public media might be erroneous.

Excerpt from the record of the Board's 864th meeting

49. The CHAIRMAN said that, in reflecting on a summing-up which would command full acceptance in the Board, he had had the benefit of advice and inputs - often difficult to reconcile - from many representatives of Member States. It had not been possible to articulate all the views of every country in the summing-up, but he hoped that the text which he now proposed to read out, while not taking into account all the aspects of the discussion, would be seen to reflect the broad majority view in the Board:

"The Board commends the Secretariat for the quality of document GOV/2784 and the work done in developing proposals for a strengthened and cost-effective safeguards system, together with the accompanying evaluation of their technical, legal and financial implications, otherwise known as 'Programme 93+2'.

"The Board reiterates that the purpose of comprehensive safeguards agreements, where safeguards are applied to all nuclear material in all nuclear activities within the territory of a State party to such an agreement, under its jurisdiction or carried out under its control anywhere, is to verify that such material is not diverted to nuclear weapons or other nuclear explosive devices. To this end, the safeguards system for implementing comprehensive safeguards agreements should be designed to provide for verification by the Agency of the correctness and completeness of States' declarations, so that there is credible assurance of the non-diversion of nuclear material from declared activities and of the absence of undeclared nuclear activities.

"It was recognized that under comprehensive safeguards agreements the States parties and the Agency have an obligation to co-operate fully in achieving effective implementation of the agreements.

"While recognizing that a strengthened safeguards system will benefit from technological developments and call for greater access to relevant information and greater physical access to relevant sites for the Agency, either on the basis of existing authority provided for in comprehensive safeguards agreements or on the basis of complementary authority to be conferred by the States involved, while noting that some Governors have reservations at this stage about the need for greater access to sites and while not at this stage taking a decision on any of the specific measures proposed in document GOV/2784 or on their legal basis, which were not fully discussed at the present session, the Board endorses the general direction of Programme 93+2.

"The Board takes note of document GOV/2784 and requests that the Secretariat, taking into account the comments made during our discussions and any comments which may still be received from interested Member States, submit for the Board's

consideration in June specific proposals for a strengthened and cost-effective safeguards system. Naturally, the technical, legal and financial implications of these proposals should also be covered. It is understood that the Secretariat will take into account the principles set out in paragraph 4 of document INFCIRC/153."

50. Copies of the summing-up were being circulated to all present.

51. Mr. ARCILLA (Philippines) said that the summing-up just read out by the Chairman seemed to be nothing but a proposed decision of the entire Board that was apparently acceptable to certain delegations which the Chairman had deemed fit to consult initially.

52. How could the Board even begin to talk about making comprehensive safeguards more efficient, transparent and cost-effective when its own working procedure could not be regarded as such?

53. The sensitive nature of the matter under consideration had been clear to everyone beforehand, and perhaps most of all to the Chairman, who had consulted with certain delegations even before the morning meeting of the previous day - delegations which had been informed in advance that consultations would also take place after the early adjournment of that meeting, which had obviously been planned ahead.

54. That early adjournment could scarcely be termed "efficient"; there had been ample time to request either of the two Vice-Chairmen to take over the chairmanship. He understood that one of the Vice-Chairmen had been approached but had politely declined in order to participate in the consultation process.

55. It was not very cost-effective to adjourn a meeting one-and-a-half hours ahead of schedule instead of using the available time (and the services of the interpreters) in order to consider subsequent agenda items, not to mention the inconvenience caused to many Member State representatives with responsibilities other than those concerning the Agency's work.

56. On the question of transparency, it was perhaps the Chairman's privilege to select the delegations with which he was going to consult. The Philippines delegation had no idea as to the criteria applied in the selection, but the Board should not lose sight of the fact that it

consisted of 35 members with varying views and that its decisions were taken by all its members. He believed that planned consultations should be announced in advance and that all Board members should be invited to participate.

57. The Philippines delegation had apparently failed to impress upon the Board the seriousness of its position on safeguards. As the points which it had made had not been reflected in the summing-up and as his delegation had not had the privilege of explaining them in the consultations, he would now make them again for the consideration of the entire Board.

58. Firstly, his delegation would have liked to see a reference in the summing-up to its suggestion that the Secretariat take the lead in harmonizing SSACs, with a view to their standardization; as the Secretariat had pointed out, differences between SSACs had a substantial bearing on the cost-effectiveness and other aspects of safeguards implementation. Secondly, his delegation wanted the summing-up to reflect its request - which was in some measure supported by other delegations - that the Secretariat submit, by June 1995, a paper on which of the measures ultimately proposed under Programme 93+2 could be applied in the case of item-specific and "voluntary offer" safeguards agreements.

59. Ms. MACHADO QUINTELLA (Brazil) said that, as she had stated on previous occasions, her country was strongly committed to the cause of non-proliferation and supported the strengthening of the safeguards system in the sense both of making it more cost-effective and efficient and of enhancing the Agency's ability to detect non-declared nuclear material and activities. How those goals should be achieved, however, was something still to be determined, and her delegation was looking forward to a thorough, open discussion on Programme 93+2 in June.

60. Brazil, having ratified the Quadripartite Agreement, was fully engaged in meeting its obligations pursuant to it. However, new obligations going beyond the Agreement's provisions would have to be negotiated on a voluntary basis; they could not be the result of unilateral interpretations.

61. Thanking the Chairman for having noted in his summing-up the reservations at the present stage of some Governors about the need for greater access to sites, she said that her delegation was among those which did not want to prejudge the contents of the strengthened safeguards system.

62. She appreciated the clarification given by the Director General in his introductory statement to the effect that acceptance of the recommendations made in document GOV/2784 would not imply endorsement of any of the specific measures described in that document or of the legal interpretations advanced by the Secretariat.¹

63. Mr. CHEN (China) said that his delegation had two difficulties with the Chairman's summing-up. Firstly, the phrase "the Board endorses the general direction of Programme 93+2" was rather vague and perhaps redundant. In fact, several delegations had made important comments regarding the general direction of the future strengthened and more cost-effective safeguards system, and the phrase did not do justice to those comments.

64. Secondly, the final sentence of the summing-up ("It is understood that the Secretariat will take into account the principles set out in paragraph 4 of document INFCIRC/153.") seemed to be an attempt to reflect views which had been put forward by his delegation and some other delegations. If it was such an attempt, it had not succeeded. Rather than talking of the principles set out in paragraph 4 of document INFCIRC/153 being taken into account by the Secretariat, one ought to say clearly that the strengthened safeguards system should be implemented in a manner designed to avoid hampering the economic and technological development of States, undue interference in States' peaceful nuclear activities, the promotional activities of the Agency and international co-operation in the peaceful utilization of nuclear energy.

65. Ms. MACHADO QUINTELLA (Brazil) said that the phrase "the Board endorses the general direction of Programme 93+2" was creating difficulty for her delegation also. It was unnecessary and should be either deleted or clarified.

¹ See para. 31 of GOV/OR.858.

66. Mr. MEADWAY (United Kingdom), having expressed strong support for the summing-up, said he considered the statement made by the Governor from Brazil to be very constructive.

67. His delegation had no difficulty regarding what the Governor from China had said about the last sentence of the summing-up. However, it had always understood that the principles set out in paragraph 4 of document INFCIRC/153 would be integral to the strengthened safeguards system just as they were to the present system.

68. With regard to what had been said by the Governor from the Philippines, document GOV/2784 referred to the need to consider item-specific and "voluntary offer" safeguards agreements separately and subsequently, and the Board would in due course have to consider the extent to which the measures proposed could usefully be applied in relation to them. At present, however, it was too early for the Board to attempt to reach a conclusion.

69. As to the suggestion regarding the harmonization of SSACs, it had not been taken up by other speakers. Accordingly, while it should be reflected in the summary record, it should not, in his view, be reflected in the Chairman's summing-up.

70. Mr. de YTURRIAGA (Spain), noting that the text of the summing-up had been circulated in English only, said that the summing-up, and especially the penultimate paragraph, posed considerable linguistic difficulties for someone who was not a native English speaker. It was absurd to try taking serious decisions under such conditions.

71. With regard to the comments made by the Governors from China and Brazil, he had no difficulty with the word "endorses", but he would welcome clarification of the words "general direction".

72. With regard to the final sentence of the summing-up, he sympathized with the Governor from China. Perhaps one could resolve the difficulty by amending the sentence to read something like: "Strengthening of the safeguards system should take account of the principles ..."

73. The CHAIRMAN invited the Director General to explain his understanding of the phrase "the Board endorses the general direction of Programme 93+2".

74. The DIRECTOR GENERAL said that, in his view, the phrase was not unnecessary and by endorsing the general direction of Programme 93+2 the Board would not be approving specific measures.

75. With regard to the last sentence of the summing-up, he did not think it was necessary to spell out the whole of paragraph 4 of document INFCIRC/153; the sentence could be amended to read something like: "A strengthened safeguards system will respect the principles set out in paragraph 4 of document INFCIRC/153".

Excerpt from the record of the Board's 865th meeting

1. The CHAIRMAN suggested that, in the light of what had been said during the preceding meeting by the Governor from China and other Governors about the last sentence of the summing-up, that sentence be amended to read "It is understood that the strengthened safeguards system will respect the principles set out in paragraph 4 of document INFCIRC/153."

2. In the light of comments made by the Governor from Brazil and other Governors about the words "the Board endorses the general direction of Programme 93+2" in the penultimate paragraph of the summing-up, he suggested the addition of the words "for a strengthened and cost-effective safeguards system" after "Programme 93+2".

3. Mr. SABURIDO (Cuba), endorsing the Chairman's suggestions, said that the resulting text still did not take into account all the points to which his delegation attached importance. In particular, his delegation believed that the second sentence in the second paragraph ("To this end, the safeguards ... undeclared nuclear activities.") should be dropped. The ways and means of achieving the purpose of comprehensive safeguards agreements would be discussed at the Board's June session.

4. Mr. ARCILLA (Philippines), also endorsing the Chairman's suggestions, said that the resulting text still did not reflect his delegation's wish that the Secretariat submit, by June 1995, a paper on which of the measures ultimately proposed under Programme 93+2 could be applied in the case of item-specific and "voluntary offer" safeguards agreements. A sentence reflecting that wish could perhaps be included in the last paragraph of the summing-up.

5. The non-proliferation regime encompassed arrangements over and above those based on the NPT, and the Board of Governors, as a policy-making organ, had a statutory duty to decide on safeguards policy in its totality - in other words, on safeguards policy as it related to INFCIRC/66/Rev.2-type and "voluntary offer" safeguards agreements as well as to comprehensive safeguards agreements.

6. In the same way as the decision the Board was being asked to take on Programme 93+2 would not prejudice which specific measures were to be adopted in relation to comprehensive safeguards agreements, the paper his delegation wanted the Secretariat to submit need not prejudice which specific measures were to be adopted in relation to INFCIRC/66/Rev.2-type and "voluntary offer" safeguards agreements.

7. Mr. SIEVERING (United States of America) said that the debate under agenda sub-item 4(a) had been a wide-ranging one, involving all members of the Board, and that the Chairman had held private consultations in an effort to arrive at a summing-up on that debate which would command a consensus. The Chairman had found that a majority of Board members were in favour of the Board's taking the action recommended in document GOV/2784, and that had been adequately reflected in his summing-up, in which the reservations that some Governors had at the present stage about the need for greater access to sites were also noted. His delegation fully endorsed the summing-up with the amendments just suggested by the Chairman.

8. With regard to the request for a Secretariat paper made by the Governor from the Philippines, given what was stated in the last sentence in paragraph 1 of document GOV/2784 he had no difficulty with that request. He did, however, have difficulty with the idea of reflecting it in the Chairman's summing-up as it had not been discussed during the debate.

9. Mr. DOSHI (India) said that his country, like the Philippines, was interested in non-proliferation in its widest sense. At its current session, however, the Board had been discussing the question of strengthening Agency safeguards in those countries which had concluded comprehensive safeguards agreements with the Agency; there had been no discussion regarding safeguards in countries which had not concluded such agreements, and there was accordingly no need for the Secretariat to consider ways of applying measures proposed under Programme 93+2 in such countries.

10. Mr. AHMAD (Pakistan) associated himself with the views expressed by the Resident Representative of India.

11. Mr. DASQUE (France), having emphasized the importance which his delegation attached to the statement made by the Governor from Brazil, said that the wishes of the Governor from China regarding the principles set out in paragraph 4 of INFCIRC/153 should be accommodated in an appropriate manner.

12. The Chairman's summing-up distributed that morning was a faithful reflection of the Board's discussion, and his delegation favoured its acceptance by the Board.

13. Mr. WALKER (Australia) said that his delegation, which would have liked the Board to take the actions recommended in paragraphs 110 and 111 of document GOV/2784, believed that the Chairman's summing-up adequately covered the views - including reservations - expressed during the Board's debate. It could therefore accept that summing-up with the amendments suggested by the Chairman.

14. With regard to the request made by the Governor from the Philippines for the addition of a sentence to the summing-up, regardless of whether such a sentence was added his delegation hoped that the Secretariat would bear in mind the Governor's concerns when preparing proposals for examination by the Board in June.

15. Mr. WALKER (Canada) said that, in his view, the basic aim of the Board at its current session should be to prepare the ground for work in June and beyond and to send an encouraging signal from Vienna to New York in the run-up to the NPT Extension Conference. His delegation felt that the Chairman's summing-up, with the suggested amendments, was in line with that aim.

16. Ms. OK (Turkey), having commended the Chairman on his summing-up, said that she would like to see the request made by the Governor from the Philippines reflected in the summary record and that she too hoped the Secretariat would respond to the Governor's concerns.

17. Mr. BAER (Switzerland), having associated himself with the comments made by the Governor from the United States, thanked the Chairman for his summing-up, which his delegation could accept with the suggested amendments.

18. Mr. OJANEN (Finland), Mr. GROGAN (Ireland), Mr. BORCHARD (Germany), Mr. ROBALLO LOZANO (Colombia), Mr. GUZOWSKI (Poland) and Mr. PAVLINOV (Russian Federation) endorsed the Chairman's summing-up with the suggested amendments.

19. Mr. HELLER (Mexico), endorsing the summing-up with the amendments suggested by the Chairman, said that in June the Board would have to consider the question of the legal basis for implementation of the measures proposed by the Secretariat - both those being implemented within the framework of the safeguards system as it was at present and those on which further consultation was necessary. In doing so, the Board should take decisions by consensus; that was the only way of achieving a strong safeguards system.

20. In that connection, he hoped that strengthening of the safeguards system would be accompanied by specific nuclear disarmament measures.

21. Mr. ARCILLA (Philippines), recalling that in the summing-up on agenda item 3 there were three references to the views of "one Governor", suggested that in the last paragraph of the summing-up now under consideration there be added a sentence reading something like "One Governor requested the Secretariat to submit a paper on which of the

measures ultimately proposed under Programme 93+2 could be applied under item-specific and 'voluntary offer' safeguards agreements." He hoped that, with the reference to "one Governor", the suggested sentence would be acceptable to the Board as a whole.

22. Mr. AKAO (Japan) wondered whether the concerns of the Governor from the Philippines were not met by the first sentence in the last paragraph of the summing-up, and especially the phrase "taking into account the comments made during our discussions and any comments which may still be received from interested Member States".

23. Mr. ARCILLA (Philippines) said that he had taken that sentence into account when formulating the compromise suggestion which he had just made.

24. On the eve of the NPT Review Conference, the Board should demonstrate an unequivocal commitment not only to horizontal non-proliferation, but also to vertical non-proliferation, something which should be of concern to every Board member regardless of the type of safeguards agreement it had concluded with the Agency.

25. The CHAIRMAN said that it would have been impossible for him to cover in his summing-up all the points raised during the Board's long debate. Thanks to the readiness to compromise displayed by various Board members, he had succeeded in formulating a comparatively short summing-up that was acceptable to the majority, and he had misgivings about the idea of including a sentence along the lines suggested by the Governor from the Philippines. In the light of the first sentence in the last paragraph of the summing-up, he was sure the Secretariat would take the Governor's concerns into account.

26. Mr. ARCILLA (Philippines) said that he would like to hear further responses to his suggestion.

27. Mr. DOSHI (India) said his delegation fully understood the concerns of the Governor from the Philippines; universal non-proliferation on a non-discriminatory basis and worldwide nuclear disarmament had been a prime objective of his country since the dawn of the nuclear era.

28. India would accept any safeguards system that was truly universal and non-discriminatory. Difficulties expressed by the Governor from the Philippines and by others arose from the fact that the Board was trying to build a sound edifice on a shaky foundation, that of the division of the world into nuclear-weapon States and non-nuclear-weapon States. However, his delegation was prepared to go along with the Chairman's summing-up because, despite the inequalities that would remain under the envisaged system, it believed that the time had come to be realistic, in the hope that the objective which he had mentioned would ultimately be achieved. Moreover, the summing-up under consideration ought not to be compared to the summings-up already accepted by the Board during its current session. Regrettably, therefore, his delegation could not go along with the suggestion made by the Governor from the Philippines and could not accept the inclusion in the Chairman's summing-up of any point reflecting that suggestion.

29. Mr. ARCILLA (Philippines), having thanked the Resident Representative of India for his comments, said he still believed that a sentence on the lines suggested by him should be inserted into the summing-up, particularly as he had dropped the June 1995 deadline for the submission of the desired paper.

30. The CHAIRMAN said that, in his view, if a sentence like the one suggested by the Governor from the Philippines was inserted in the summing-up, the latter would also have to reflect the opinions of those Governors who had spoken out against the insertion of such a sentence.

31. Mr. WALKER (Australia) suggested that the two opposing sets of opinions be reflected in the summary record of the meeting, which should state his delegation's hope that the Secretariat would bear in mind the concerns of the Governor from the Philippines.

32. Mr. DOSHI (India) said his delegation hoped that the summary record would make clear the difference in opinions between, on one hand, Governors from countries which had concluded comprehensive safeguards agreements with the Agency and from nuclear-weapon States and, on the other, Governors from countries which were not parties to the NPT.

33. Mr. ARCILLA (Philippines), responding to the remarks of the Governor from Australia, said he assumed that the summary record would reflect the current discussion. What he was primarily interested in, however, was the insertion of an additional sentence into the Chairman's summing-up.

34. The DIRECTOR GENERAL, referring to the last two sentences in paragraph 1 of document GOV/2784, said that the main difference between, on one hand, item-specific safeguards agreements and "voluntary offer" safeguards agreements and, on the other, INFCIRC/153-type safeguards agreements was that under the latter all nuclear material had to be declared. Accordingly, the existence of non-declared material was a far more important matter in the case of a State with an INFCIRC/153-type agreement than in that of a nuclear-weapon State or a State not party to the NPT. It had been the existence of non-declared nuclear material in Iraq that had led to the difficulties experienced by the Agency in that country, and the Secretariat felt obliged to address the problem of possible non-declared material without delay as the eyes of the world were upon it.

35. With regard to the remarks made by the Resident Representative of India, the Secretariat was as eager as anyone that there should be effective and cost-efficient safeguards in nuclear-weapon States and in States not parties to the NPT, and that was an issue which would be tackled at a later stage.

36. Accordingly, he hoped that the Governor from the Philippines would accept the summing-up with the amendments suggested by the Chairman on the understanding that the Secretariat would tackle that issue in due course,

37. Mr. ARCILLA (Philippines), having stated that it had been the two last sentences in paragraph 1 of document GOV/2784 which had prompted him to compromise and drop the June 1995 deadline, said that most countries with comprehensive safeguards agreements considered themselves to be unfairly bound by the terms of those agreements as compared to countries with item-specific agreements and to the nuclear-weapon States. That was why he wanted the summing-up to include a sentence on the lines of the one suggested by him.

38. Mr. SABURIDO (Cuba), associating himself with the remarks of the Governor from India, said that, although the issue raised by the Governor from the Philippines was an important one, he believed that the discussion on it should be reflected in the summary record rather than in the summing-up.

39. Mr. GROGAN (Ireland) said that the carefully crafted summing-up clearly outlined the areas where the Board had reached agreement and the extent of the agreement reached. The discussion on the issue raised by the Governor from the Philippines should - if it was to be reflected in a summing-up at all - be reflected in a separate one, perhaps even under a separate agenda item.

40. Mr. BORCHARD (Germany), supporting the remarks of the representative of Ireland, said it would be incorrect to incorporate a summing-up on the discussion regarding the issue raised by the Governor from the Philippines into the summing-up now under consideration. That summing-up, with the amendments suggested by the Chairman, should be accepted and the discussion on the issue raised by the Governor from the Philippines should be reflected in the summary record.

41. Ms. OK (Turkey) and Mr. BAER (Switzerland) expressed support for what the Resident Representative of Germany had said.

42. Mr. ARCILLA (Philippines) said he could agree to the inclusion in the summary record of a summing-up dealing with the discussion on the issue raised by him - if that was what the Resident Representative of Germany had in mind.

43. Mr. BORCHARD (Germany) said he had not been thinking in terms of a second Chairman's summing-up.

44. Mr. PROČKA (Slovak Republic) said that the Chairman's summing-up appeared to be acceptable to the majority of Board members as a reflection of the debate under agenda sub-item 4(a). The purpose of summings-up was to encapsulate the essence of discussions - not to highlight statements made by individual speakers.

45. The CHAIRMAN asked whether he could take it that his summing-up, with the amendments suggested by him, was acceptable to the Board.

46. Mr. ARCILLA (Philippines) said that his delegation had reservations about the summing-up and that those reservations should be reflected in it.

47. The CHAIRMAN said - following procedural remarks by Mr. AKAO (Japan), Mr. HELLER (Mexico), Mr. YIMER (Ethiopia), Mr. WALKER (Canada) and Mr. GROGAN (Ireland) - that it was his impression that the Board as a whole would not wish those reservations to be reflected in the summing-up.

48. Mr. SIEVERING (United States of America) proposed that the matter be resolved through a vote, by a show of hands, on the summing-up with the amendments suggested by the Chairman.

49. Mr. ARCILLA (Philippines) said that, if the summing-up was to be voted on, he would request a roll-call vote.

50. The CHAIRMAN said that, if the Board was going to proceed to a vote, it should know exactly what it was voting on. His understanding was that the Board would be voting on an amendment to the summing-up (with the amendments suggested by him) - that amendment, moved by the Governor from the Philippines, being the insertion, in the last paragraph of the summing-up, of a sentence reading "One Governor requested the Secretariat to submit a paper on which of the measures ultimately proposed under Programme 93+2 could be applied under item-specific and 'voluntary offer' safeguards agreements."

51. Mr. AKAO (Japan), noting that the question of voting on amendments was dealt with in Rule 44 of the Board's Provisional Rules of Procedure, asked whether a Chairman's summing-up could be considered a "proposal" in the terms of Rules 43-45.

52. The CHAIRMAN suggested - following procedural remarks by Mr. WALKER (Canada) and Mr. YIMER (Ethiopia) - that there be a short suspension of the meeting.

The meeting was suspended at 4.55 p.m. and resumed at 5.35 p.m.

53. The CHAIRMAN said that a basis for agreement appeared to have been found during informal consultations. Accordingly, he took it that the Board wished to accept his summing-up with the two amendments suggested by him at the start of the meeting.

54. It was so decided.

55. All aspects of the debate under agenda sub-item 4(a) would be reflected in the summary records.

56. Mr. ARCILLA (Philippines) thanked delegations for agreeing on an amicable resolution of the matter and Mr. ElBaradei, Director of the Division of External Relations, for his help during the informal consultations.

57. His delegation - like others - believed that there was a need to strengthen Agency safeguards, but it would like to see all Agency safeguards strengthened. He assumed that its position would be reflected in the summary records.



ANNEX 4

B

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BOARD OF GOVERNORS

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Item 5(b) of the provisional agenda
(GOV/2799)

STRENGTHENING THE EFFECTIVENESS AND IMPROVING THE EFFICIENCY OF THE SAFEGUARDS SYSTEM

PROPOSALS FOR A STRENGTHENED AND MORE EFFICIENT SAFEGUARDS SYSTEM

A report by the Director General

INTRODUCTION

1. At its March 1995 meetings, the Board of Governors considered document GOV/2784^{1/} and reiterated that under comprehensive safeguards agreements verification by the Agency should be so designed as to cover the correctness and completeness of States' declarations, so that there is credible assurance of the non-diversion of nuclear material from declared activities and of the absence of any undeclared nuclear activities.

2. While not taking a decision at those meetings on the specific measures proposed in GOV/2784 or on their legal basis, the Board endorsed the general direction of "Programme 93+2" for a strengthened and cost-effective safeguards system. The Board noted that a strengthened safeguards system would benefit from technological developments and would call for greater access to relevant information and for greater physical access to relevant sites for the Agency, either on the basis of existing authority provided for in comprehensive safeguards agreements or on the basis of complementary authority to be conferred by the States involved. It also noted that some Governors had reservations at that stage about the need for greater access to sites. The Board further recognized that States party to such agreements and the Agency have an obligation to co-operate fully to facilitate the

^{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.

implementation of the safeguards provided for in comprehensive safeguards agreements and stated its understanding that a strengthened safeguards system will respect the principles set out in paragraph 4 (i.e. to avoid undue interference in a State's economic and safe use of peaceful nuclear activities) of INFCIRC/153 (Corrected).

3. The Board requested the Secretariat to take into account the comments made during the Board's discussion, and comments received subsequently from Member States, and to submit for the Board's consideration in June specific proposals for a strengthened and cost-effective safeguards system. In response to that request the Secretariat has prepared a document consisting of two parts. Part 1 consists of those measures which could be implemented under existing legal authority and which it would be practical and useful to implement at an early date. Part 2 consists of those measures which the Secretariat proposes for implementation on the basis of the granting of complementary authority.

4. Table 1 is a compendium that specifies those measures of Programme 93+2 that are proposed to be implemented on the basis of existing legal authority or on the basis of complementary authority. The Expanded Declaration referred to in that Table is the revised and annotated draft Expanded Declaration provided in the Annex to this paper. Those elements of the draft Expanded Declaration relevant to Part 1 and Part 2 are indicated therein.

5. A number of States have provided detailed comments on GOV/2784, most of which address the measures included in Part 2 and the complementary legal authority necessary to implement them. Finalization of the measures in Part 2 and the associated draft legal instrument would benefit from additional consultations with States and the further development of certain technical details. Thus, it has been judged prudent to limit the recommended actions at this time to the measures examined in Part 1. Recommendations for Board action with respect to the measures discussed in Part 2, along with a draft instrument for complementary legal authority, are planned for Board consideration in September.

RECOMMENDED ACTIONS

6. It is recommended that the Board take note of the Director General's plan to implement at an early date the measures described in Part 1 and that it urge States party to comprehensive safeguards agreements to co-operate with the Secretariat to facilitate such implementation.

TABLE 1

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

			Measures within existing legal authority	Measures requiring complementary authority
BROAD ACCESS TO INFORMATION	Expanded Declaration	1. Information on the SSAC	x	
		2a. Information on past nuclear activities (to the extent necessary to enable the Agency to verify the completeness and correctness of the State's declarations) through access to existing records on production of nuclear material and on related facilities	x	
		2b. Information presently provided routinely: (i) design information and modifications thereto, including closed-down and decommissioned facilities; (ii) accounting and operating records; (iii) accounting and special reports; (iv) operational programme	x	
		2c(i). Description of the nuclear fuel cycle, and of other activities involving nuclear material	x	

			Measures within existing legal authority	Measures requiring complementary authority
		2c(ii). Description of nuclear fuel cycle-related R&D (hereinafter referred to as nuclear R&D) activities	Nuclear R&D involving nuclear material at nuclear facilities and other locations containing nuclear material (LOFs)	Nuclear R&D not involving nuclear material at nuclear facilities, at LOFs, at nuclear training institutes, at R&D centers and elsewhere
		2c(iii). Information, to be agreed with the State, on operational activities additional to that required under INFCIRC/153 (see 2b(iv) above)		x
		2c(iv). Nature of each of the buildings on the sites on which are located nuclear facilities, LOFs or nuclear R&D activities	In limited cases, depending on the configuration of the facility or LOF	x
		2c(v). Nature of any other locations directly related to the operation of nuclear facilities, LOFs or nuclear R&D activities		x
		2c(vi). Location and status of known U and thorium ore deposits and mines		x
		2c(vii) Domestic manufacturers of major items of nuclear equipment or materials		x
		2c(viii). Information identified in GOV/2629 (voluntary reporting on nuclear material and specified equipment and non-nuclear material)		x
		3a. Early provision of design information	x	

			Measures within existing legal authority	Measures requiring complementary authority
		3b. Plans for the further development of the nuclear fuel cycle		x
		3c. Description of planned nuclear R&D activities		x
	Environmental Sampling ^{1/}	For ad hoc inspections, at locations where the initial report, or inspections carried out in connection with it, indicates that nuclear material is present	x	
		For routine inspections at strategic points	x	
		For special inspections, at the locations where these take place	x	
		For design information verification, at any location to which the Agency has access to carry out design information verification	x	
	Improved Analysis of Information	Improvements in the Agency's information analysis methods	x	
INCREASED PHYSICAL ACCESS	Broad Access ^{2/}	Access to locations beyond strategic points in nuclear facilities or LOFs, but within the sites containing such facilities or LOFs	During design information verification at nuclear facilities and during ad hoc inspections	During routine inspections
		Access to other locations identified in the Expanded Declaration		x
		Access to other locations which may be of interest to the Agency, under voluntary arrangements with the State	Comment: Arrangements of this kind have been helpful in the past. The Secretariat encourages all States to make standardized arrangements in this respect.	

			Measures within existing legal authority	Measures requiring complementary authority
	No-notice Inspections	Unannounced (no-notice) routine inspections	At strategic points	At locations beyond strategic points within the sites containing nuclear facilities or LOFs
		Unannounced (no-notice) inspections at other locations identified in the Expanded Declaration		x
OPTIMAL USE OF THE PRESENT SYSTEM	SG Technology Advances	Use of unattended equipment	x	
		Remote transmission of inspection data	x	
		Remote monitoring of safeguards equipment	x	
	Increased Co-operation with States and SSACs	The SSAC carries out activities that enable the Agency to conduct inspection activities	x	
		The Agency and the SSAC may carry out selected inspection activities jointly	x	
		The Agency and the SSAC may carry out selected support activities jointly	x	
		Use of simplified procedure for designation of inspectors		x
		Multiple-entry visa, long-term visa or visaless entry for inspectors on inspection	To permit unannounced inspections	

			Measures within existing legal authority	Measures requiring complementary authority
		Use of available systems for direct communication (including satellite systems) between inspectors and installations in the field and Headquarters	x	Where such systems are not available in the State
	SG Implementation Parameters	Significant quantities of nuclear material	x	
		Conversion/detection times	x	
		Starting point of safeguards	x	

- 1/ The Agency may implement environmental sampling at any location to which it has access. Accordingly, environmental sampling could be used as a matter of course at locations where access has been given under complementary authority.
- 2/ These proposals are not intended to affect the Agency's right to implement special inspections.

PART 1

PROPOSALS FOR A STRENGTHENED AND COST-EFFECTIVE SAFEGUARDS SYSTEM: MEASURES WHICH MAY BE IMPLEMENTED ON THE BASIS OF EXISTING LEGAL AUTHORITY

7. This Part presents measures described in GOV/2784 which the Secretariat believes may be implemented under existing legal authority and which will contribute to strengthening the Agency's capability to detect undeclared nuclear activities and to more effective and efficient safeguards on declared nuclear material. Most of the measures for optimizing the use of the present system identified in GOV/2784 are also included in this Part.

8. Some of these measures can be implemented immediately while the implementation of other measures will require time as they require a certain infrastructure which is not now in place or further technical development. More routine utilization of environmental sampling requires training of inspectors in sample collection and handling procedures and the completion of the Agency's clean room laboratory. Other measures involving additional information that may be obtained under existing authority, no-notice inspections and certain measures for optimizing the use of the present system require detailed consultations and arrangements between the Agency and States.

A. MEASURES INVOLVING BROADER ACCESS TO INFORMATION

1. Expanded Declaration

9. An Expanded Declaration is the proposed means for obtaining from the State additional information that would make its nuclear programme more "transparent", thereby enhancing the level of assurance as to the peaceful nature of the programme. The Expanded Declaration includes three categories of information: (i) information on the State or regional System of Accounting and Control (hereinafter referred to as SSAC); (ii) information on present nuclear activities; and (iii) information on planned nuclear activities. The Expanded Declaration, as explained in paragraphs 11 to 18 below (and further elaborated in the Annex), is not a single document but rather a combination of information about SSACs, nuclear material, facility operations and facility design, and broad descriptions of States' nuclear programmes. The remainder of this section relates to the additional information which may be requested under existing authority.

10. The experience from field trials helps only partially in estimating the total effort required of the Agency to process the considerable information that would result from the submission of an Expanded Declaration. This is partly due to the fact that the Expanded Declaration underwent numerous changes during the field trials, and that the way in which information would be presented requires further refinement. Assuming consistency of format of information provided and automation in handling it, no more than one specialist per Operations Division (three in total) would be needed to make all available information readily accessible and to keep it updated. These resources could initially be found through the re-assignment of current staff from Support Divisions. The cost to States is a function of the size of their respective nuclear programmes. During the field trials the States' effort in developing their initial versions of the Expanded Declaration varied from 3 person-weeks to 2 person-months. The experience with respect to maintenance of an Expanded Declaration through periodic updates is limited. However, the SSACs which participated in the field trials have indicated their view that continuing efforts are not substantial and will not result in any need for additional staff.

11. Information related to SSACs: The information requested as identified in paragraph 1 of the Expanded Declaration outline would consist of:

- (a) a completed SSAC questionnaire, providing a description of the technical and personnel resources, operational capability, legal authority, information holdings related to nuclear material and nuclear-related activities and administrative structure of the SSAC. The model SSAC questionnaire is included in the technical background documentation made available to Member States in February; and
- (b) a description of the scope and timing of SSAC inspection, if any, and related activities.

12. INFCIRC/153 (Corrected) provides adequate legal authority to require the requested information on SSACs (see analysis in paragraph 34 of GOV/2784). The information requested is designed to be used to develop, with the State, increased co-operation that will enable the Agency to make full use of SSACs, to take due account of their technical effectiveness and to avoid unnecessary duplication of the State's accounting and control activities, thereby improving efficiencies in the safeguarding of declared material.

13. The costs to the Agency of handling and using the SSAC information will be modest and can be accomplished using current staff. The costs to the State of providing this information are also expected to be modest.

14. Information related to present nuclear activities consists of information which is presently routinely provided (not further dealt with in this report) and the following information which is not presently routinely provided relevant to assessing the completeness and correctness of the State's declarations of present nuclear activities:

- (a) the nature, purpose, location and design of nuclear facilities and LOFs closed down or decommissioned prior to entry into force of the safeguards agreement;
- (b) existing historical accounting and operating records predating the entry into force of the safeguards agreement;
- (c) a description of the nuclear fuel cycle, and other activities involving nuclear material, with a list of the sites involved and nuclear material flow diagrams;
- (d) a description of nuclear fuel cycle-related research and development (nuclear R&D) activities involving nuclear material at nuclear facilities and LOFs.

15. States which have had nuclear programmes prior to the conclusion of a comprehensive safeguards agreement must be deemed to have an obligation to provide access to available information and records on nuclear material and related facilities to the extent necessary for the Agency to verify the completeness and correctness of the State's declarations. Information on facilities which were closed down or decommissioned prior to the State's becoming party to a comprehensive safeguards agreement, as well as certain historical accounting and operating records predating the entry into force of the agreement, are already requested by the Agency. The availability of this information strengthens the Agency's ability to reach credible conclusions regarding the correctness and completeness of States' initial reports and other declarations. The effort required of States is judged to be small.

16. Additional information on the nuclear fuel cycle, e.g., the design information and the accounting reports for all of the individual nuclear facilities and LOFs, may be requested within the scope of paragraph 81(c) of INFCIRC/153, which requires the Agency, in planning its routine inspections, to take into account the "characteristics of the State's nuclear

fuel cycle, in particular, the number and types of facilities containing nuclear material subject to safeguards."

17. Part of the basis for strengthened and more efficient safeguards is the timely availability of information of facility operations that is not presently routinely provided. Near-real-time reports on facility operational status, cask (spent fuel) movements, receipts and shipments of nuclear material and changes in the operations schedule as currently reported would increase verification coverage and improve the utility of no-notice inspections.

18. Information related to planned nuclear activities: The requested information consists of design information for planned nuclear facilities and LOFs and planned modifications of existing facilities, which the Board has confirmed falls within the scope of existing comprehensive safeguards agreements, as set forth in GOV/2554/Attachment 2/Rev.2.

2. Environmental Sampling

19. A review of the provisions of INFCIRC/153, in particular those regarding the use of surveillance measures (paragraph 74(d)) and other objective methods which have been demonstrated to be technically feasible (paragraph 74(e)) supports the conclusion that wherever and whenever the Agency has a right of access to conduct inspections or design information verification visits, it may take environmental samples. It is planned to use environmental sampling techniques as part of monitoring in design information verification, ad hoc inspections and routine inspections, as well as for special inspections. Sampling will facilitate the assessment of the completeness of initial reports and other declarations and provide increased assurance of the absence of undeclared nuclear activities in connection with safeguarded nuclear facilities and LOFs. Specific sampling locations will be selected from among the locations to which the Agency has access during these visits and inspections. Environmental samples will be collected, usually in conjunction with other inspection activities, with an initial emphasis on hot cells, reprocessing, enrichment and nuclear R&D facilities.

20. The planned sampling programme under existing authority will be initiated on a gradual basis. By the third year, an estimated 500 samples will be analyzed per year. (The 1000 samples per year estimated in GOV/2784 represent the combined sampling programmes of Part 1 and Part 2 and for planning purposes are divided equally between the two.) Implementation will begin by the end of 1995, but will be limited by the resources available.

Some samples collected at a site would be screened and then archived without further analysis, others would be submitted for inexpensive bulk sample measurements, some would be subjected to detailed analysis using highly accurate, sensitive and expensive methods and some would be analyzed with more than one method.

21. The estimated annual cost for environmental sampling under Part 1 at 500 samples/year is approximately 350 000 US dollars for operating the Seibersdorf clean room laboratory (for handling, archiving, screening and distribution of environmental samples); 500 000 US dollars for the additional work for sample collection and related data analysis; and 1.75 million US dollars for sample analyses. More details were given in paragraphs 48-50 of GOV/2784. The total estimated additional costs incurred by the Agency in implementing this environmental sampling programme of 500 samples would 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 of the collection of environmental samples would be negligible. Additional effort on their part may be required to help resolve any inconsistencies.

3. Improved Analysis of Information

22. The effective and efficient evaluation and use of information available to the Agency under its safeguards system is required by INFCIRC/153. Improved analysis of such information would better permit the Agency to identify at an early stage any instance where the available information might suggest the conduct of activities inconsistent with the State's declarations.

B. MEASURES RELATED TO PHYSICAL ACCESS: NO-NOTICE INSPECTIONS

23. Comprehensive safeguards agreements (paragraph 84 of INFCIRC/153) provide a basis for the conduct of a portion of routine inspections without advance notification. This provision also includes an obligation on States to make every effort to facilitate such no-notice inspections. As such inspections cannot, as a practical matter, be conducted unless the State grants multiple-entry visas, long-term visas or visaless entry for Agency inspectors, an obligation on the part of the State to do so must be implied.

24. No-notice inspections may usefully be carried out under existing authority to:
- (a) improve the effectiveness of the verification of feed and product flows at selected facilities, such as LEU fuel fabrication facilities. In such cases, advance reporting arrangements will have to be made with the State to satisfy the necessary conditions for no-notice routine inspections and statistical inference;
 - (b) confirm information in the Expanded Declaration regarding the absence of nuclear material at decommissioned or closed-down nuclear facilities, facilities under construction and the non-operating status of nuclear facilities; and
 - (c) confirm that nuclear facilities are not used for undeclared purposes, e.g., undeclared irradiation at reactors and undeclared HEU production at enrichment plants.

25. No-notice Agency inspections would require that States and operators maintain an appropriate level of responsiveness (e.g., personnel on call, additional travel, etc.) which would entail additional costs. Once such procedures are in place, the continuing cost to the SSAC would depend upon the particular requirements of the State (e.g., that Agency inspectors be accompanied).

26. The no-notice feature in combination with random sampling and statistical inference is a tested, cost-effective way to verify large material flows. It is also an efficient mechanism for verifying the operating conditions and the absence of undeclared nuclear activities at large numbers of nuclear facilities over extended periods of time. The combination permits effective verification at considerably lower costs than would be incurred for the same level of effectiveness using scheduled inspections and is, consequently, both an important strengthening and efficiency measure.

27. Field tests have demonstrated the feasibility of safeguards approaches utilizing no-notice inspections for flow verification at LEU fuel fabrication facilities. The Agency is prepared to implement these approaches at all such facilities where the necessary arrangements can be made with the State. The cost to the Agency would be minimal since the no-notice inspections would replace, rather than add to, the currently scheduled interim inspections. However, the rate at which such approaches can be introduced and the ultimate extent of their use is dependent on the readiness of States to make the necessary

arrangements. Such arrangements would have to include the availability of nuclear material declarations updated daily.

28. The use of no-notice routine inspections at nuclear facilities to confirm the operational status and the absence of undeclared nuclear activities will generally be limited to those situations where environmental sampling techniques or unattended surveillance devices could not be effectively used. Hence, the costs to the Agency for implementing this access are estimated to be small.

C. MEASURES FOR OPTIMIZING THE USE OF THE PRESENT SYSTEM

1. Safeguards Technology Advances

29. As stated in GOV/2784, the Agency will continue to introduce, in co-operation with States and as safeguards technology developments permit, new safeguards measurement and surveillance systems that can operate in an unattended mode and transmit safeguards-relevant data remotely. Such developments are relevant to improving the cost-effectiveness of routine inspections for the verification of declared nuclear material. The use of non-destructive assay (NDA) and containment-surveillance (C/S) equipment capable of operating in an unattended mode, particularly coupled with an additional capability for remote interrogation and/or transmission, offers the possibility of reductions in the number and duration of inspections, resultant reductions in radiation exposure for inspectors and operator personnel and less intrusiveness in facility operations. The use of such equipment, particularly in "difficult-to-access" areas, can also lead to more effective safeguards. The extent to which such equipment can be used in a facility depends on facility design and operating practices and on the co-operation of States in developing and installing the equipment and in its use by the Agency. A number of systems have been implemented, and others are under development.

2. Increased Co-operation with States and SSACs

30. Under existing authority the Agency will seek increased co-operation with States and SSACs whereby:

- (a) States accept simplified procedures for designation of Agency inspectors, grant multiple-entry visas, long-term visas or visaless entry for designated Agency inspectors on inspection, and accept Agency use of available systems

(including satellite systems) for direct communication between inspectors and installations in the field and Headquarters;

- (b) SSACs carry out activities that enable the Agency to conduct its inspection activities with less effort or cost, or more effectively, or both;
- (c) the Agency and the SSAC may jointly carry out selected inspection activities in a manner that enables the Agency to acquire all of the needed inspection data while ensuring the validity of the data and maintaining the requirement for the Agency to draw its own independent conclusions, but with less effort or cost; and
- (d) the Agency and the SSAC may jointly carry out selected safeguards support activities, such as inspector training, development of safeguards equipment, procedures and approaches, and equipment procurement.

31. The Agency does not have the specific authority to require all of the above measures. States are not required under their general obligation to co-operate to accept simplified designation procedures, to carry out joint inspections or to carry out jointly selected safeguards support activities. However, comprehensive safeguards agreements oblige States and the Agency to co-operate fully to facilitate the implementation of safeguards and States party to such agreements have an obligation to:

- (a) ensure that the number of inspectors designated for the State is sufficient to enable the Agency to implement the ad hoc, routine (including unannounced routine) and special inspections authorized by INFCIRC/153;
- (b) to grant appropriate visas, or visaless entry, to designated inspectors. Such visas must be sufficient for the Agency to carry out no-notice inspections, for example, multiple-entry visas or long-term single-entry visas issued so that a designated inspector has at all times, at least, a valid single-entry visa, or alternatively, visaless entry;
- (c) accept the Agency to use available systems (including satellite systems) for direct communication between inspectors and installations in the field and Headquarters.

The Secretariat will seek complementary authority with respect to simplified designation procedures and to the use of systems for direct communications that are not available in the State.

32. The broad political, security and commercial benefits deriving from the higher level of assurance that will result from a strengthened safeguards system presuppose increased levels of co-operation between the Agency and SSACs. It should be noted that many of the measures which would increase Agency safeguards effectiveness and efficiency would not require increased State effort or costs, but only greater openness, such as more information, greater freedom of movement for IAEA inspectors, multiple-entry visas and the acceptance of new techniques and equipment.

33. The implementation of the New Partnership Approach (NPA) with EURATOM has resulted in a sizeable reduction (about 50%) in Agency person-days of inspection (PDIs) in States belonging to the European Union without any relaxation of the requirement that the Agency draw its own independent conclusions. It should be kept in mind that the NPA is based upon many years of experience with EURATOM. The level of co-operation with other regional or national systems of accounting and control is dependent on the capabilities and functions of the respective systems and their transparency. Thus, the extent to which savings can be made in practice will depend on the technical capabilities of individual SSACs and on the interest and willingness of qualified SSACs to participate in the various forms of co-operation. For SSACs generally, a higher level of co-operation would imply, *prima facie*, more effort and thus higher costs, but the extent to which this would be so is dependent upon the nature of the SSAC and the activities it is already carrying out.

3. Safeguards Implementation Parameters

34. The Secretariat is not at this time planning to introduce any changes in the basic safeguards parameters of significant quantities or timeliness goals, except that a shortening of the timeliness goal for plutonium and highly enriched uranium in metallic form to two weeks from the current value of one month is being considered to reflect the shorter conversion time. However, technical analyses under "Programme 93+2" indicate that some of the other values may have been overtaken by progress in nuclear technology (these analyses are included in the technical background documentation for Task 1). The matter is being referred to SAGSI. Any change in the values would have to be evaluated in terms of the need for maintaining the effectiveness of safeguards in the broader context of all of the measures undertaken toward a strengthened and more cost-effective safeguards system.

D. CONCLUSIONS

35. The Secretariat is prepared to proceed without delay with the implementation of the measures indicated in Table 1 as being within existing legal authority. To this end the actions described below could be initiated during the remainder of 1995:

(a) measures involving broader access to information

- (i) obtain a completed SSAC questionnaire from each State with a comprehensive safeguards agreement;
- (ii) obtain a list of all closed-down and decommissioned facilities from each State with a comprehensive safeguards agreement and request a completed design information questionnaire for each facility with respect to which this information has not already been provided;
- (iii) distribute to States parties to comprehensive safeguards agreements a model description of a nuclear fuel cycle and other activities involving nuclear material (i.e., element 2c(i) of the Expanded Declaration) as a first step toward obtaining this general declaration from each State party;
- (iv) the training of safeguards inspectors on environmental sample collection and handling procedures and complete the clean room laboratory at Seibersdorf. A consultants' meeting to review sampling procedures, the planned operation of the clean room laboratory and the extended network of laboratories certification protocol is planned for October 1995;
- (v) further work on the improved analysis of information.

(b) measures related to physical access: no-notice inspections -- further consultations with States on the establishment of procedures for no-notice inspections at locations where the Agency currently has access for routine inspections. This must include arrangements for visaless entry, multiple-entry visa or long-term visa for inspectors on inspection. The procedures should

also include arrangements for more timely reporting of certain operational and material accountancy data.

(c) measures involving optimizing the use of the present system

- (i) the demonstration of remote monitoring possibilities, particularly video surveillance;
- (ii) begin consultations with States, based on completed SSAC questionnaires, to identify areas of possible increased co-operation;
- (iii) establish arrangements for independent and direct communications between inspectors in the field and Headquarters.

As is the case with the current system, the implementation of the various measures will require concerted actions by both the State and the Secretariat.

36. As pointed out in GOV/2784, the cost implications are difficult to assess. The work of "Programme 93+2" has proceeded on the basis that a strengthened and more efficient safeguards system would evolve through a redistribution of resources, rather than through the acquisition of additional resources. However, the timing associated with the implementation of the various measures has short-term cost implications and any quantification thereof requires that certain assumptions be made. The safeguards budget proposed for 1996 includes 1 million US dollars for initial implementation of environmental monitoring. An assumption is made that costs to be incurred through implementation of other measures during this timeframe can be covered through re-assignment of staff, cost savings and extrabudgetary contributions. Substantial reductions in costs associated with the safeguarding of declared material is dependent on progress in reducing the requirement for Agency inspectors to go to facilities to meet timeliness goals - through advanced technology and increased co-operation with SSACs or through a relaxation in timeliness goals through accumulating assurance regarding the absence of undeclared activities. Savings in operating costs through advanced technology and increased co-operation with SSACs can begin to accrue through implementation of Part 1 measures. Cost savings through trade-offs, whereby certain inspection requirements on declared material may be relaxed as increased assurance as to the absence of undeclared activities is achieved, are only possible with experience in implementing the measures proposed in Parts 1 and 2.

PART 2

PROPOSALS FOR A STRENGTHENED AND COST-EFFECTIVE SAFEGUARDS SYSTEM: ADDITIONAL MEASURES WHICH MAY BE IMPLEMENTED UNDER COMPLEMENTARY LEGAL AUTHORITY

37. Part 2 identifies those measures with respect to which the Secretariat considers that complementary legal authority is required for their implementation. It presents the individual measures, redefined and clarified taking into account some of the comments and questions received on GOV/2784 (see paragraph 5 above), together with some additional material on the rationale for the measures, their expected contributions to the strengthening of safeguards and their projected costs. The Board should have the opportunity to consider and decide on these measures before they are submitted to individual States for their consent and for implementation other than on trial and voluntary bases. Therefore this Part, and the associated draft legal instrument, should be finalized on the basis of the Board discussion in June and further comments from Member States.

38. In the view of the Secretariat, the complementary authority should be on a firm legal basis, but the form of this basis -- an extension of the subsidiary arrangements, an exchange of letters, or a protocol to the safeguards agreement -- should be left to the discretion of each State in order to take into account the legal situation of the State and its interpretation of the existing legal authority of the Agency under its safeguards agreement. However, the substance of the rights and obligations contained in such instruments should be the same for all States with comprehensive safeguards agreements.

39. Following approval by the Board of the measures, the endorsement by the Board of an instrument through which the complementary authority may be accepted by States, and the acceptance by individual States of the measures listed in the instrument, the measures identified in Part 2 will be integrated into the current system. The measures listed are not a menu from which particular items may be chosen; they are designed as a complementary set of measures. The greatest benefit will derive from implementation of the full set.

A. MEASURES INVOLVING BROADER ACCESS TO INFORMATION

1. Expanded Declaration

40. The Expanded Declaration includes three categories of information: information on the State's System of Accounting and Control (SSAC), on present nuclear activities and on

planned nuclear activities of the State. All of the information concerning SSACs and most of the information involving safeguarded facilities are being requested under existing legal authority. The remaining information in the Expanded Declaration is addressed below for provision under complementary legal authority.

41. Information related to present nuclear activities consists of:

- (a) descriptions of nuclear fuel cycle-related research and development (nuclear R&D) activities not involving nuclear material carried out at nuclear training institutes, at R&D centers, at nuclear facilities, at LOFs and elsewhere, with a list of the sites involved;
- (b) information not presently routinely provided, to be agreed with the State, on operational activities at nuclear facilities and LOFs additional to that referred to in paragraph 2.b. of the Expanded Declaration;
- (c) the nature of each building and of the activities therein on sites on which are located nuclear facilities, LOFs or nuclear R&D activities (site layout, including drawings and maps are a current requirement of the Design Information Questionnaire.);
- (d) the identity, nature and location of any other activities not involving nuclear material but directly related to the operation of nuclear facilities, LOFs or nuclear R&D activities;
- (e) the location and status of known uranium and thorium ore deposits and mines;
- (f) the identity, location and products of domestic manufacturers of major items of nuclear equipment and materials for the nuclear fuel cycle and other activities involving nuclear material in the State;
- (g) the information identified in GOV/2629, "Strengthening the Effectiveness and Improving the Efficiency of the Safeguards System: Universal reporting system on nuclear material and specified equipment and non-nuclear material," and GOV/2767 amending the equipment and non-nuclear material list.

42. Information related to planned nuclear activities consists of:

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

43. The geographical area that constitutes a site (see annotation on paragraph 2.c.(iv) of the Expanded Declaration) would be identified by the State in the Expanded Declaration. In most cases, this would be the area within a perimeter fence or a building. Such identification is routinely provided at present as part of the information regarding the location of a nuclear facility requested in the Design Information Questionnaire.

44. Information of the sort requested here serves three important purposes. First, because of its scope and comprehensiveness, the internal consistency of the information in the Expanded Declaration could 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, it would provide an indispensable data base on a State's nuclear activities against which information obtained from other sources (e.g., procurement activities or environmental sampling) could be compared for consistency and follow-up. Third, the requested information would provide a basis for the efficient planning and conduct of Agency activities relevant to providing assurance about the absence of undeclared activities at declared locations.

45. Overall, the benefit to the State and to the Agency of an Expanded Declaration and associated inspection activities would be the cost-effective strengthening of the safeguards system through greater nuclear transparency and, with that, the political, commercial and security benefits that would derive from the increased assurance offered by such a system.

2. Environmental Sampling

46. To the extent that access is granted to sites identified in Section B of this Part the Secretariat intends to use environmental sampling techniques. This will involve sampling to confirm the absence of nuclear activities at these sites or, where there is such activity, to identify and characterize it. Sampling at the sites will be at locations selected to minimize intrusiveness and will involve vegetation, soil, water and smears.

47. The environmental sampling programme initiated under existing authority should be well established by the end of 1996. Environmental sampling at sites identified in Part 2 will be integrated into this programme so that altogether, for planning purposes, an estimate 1 000 samples will be collected and analyzed annually by 1998. It is further estimated, for planning purposes, that one-half of these samples, or 500 per year, would be collected at Part 2 sites. Efficient analysis of environmental samples requires a sample analysis strategy for each site based on site features. Some samples collected at a site would be screened and then archived without further analysis, others would be submitted for inexpensive bulk measurements, and still others would be subjected to detailed analysis using highly accurate, sensitive and expensive methods and some would be analyzed with more than one method.

48. The incremental annual cost for sampling at locations identified in Part 2 is 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

1. Broad Access

49. The physical access (other than access for special inspections, which are not addressed in this report) proposed to be conferred under complementary legal authority consists of:

- (a) access during routine inspections beyond strategic points to any location on the sites of nuclear facilities and LOFs;
- (b) access to other locations identified in the Expanded Declaration;

Access to other locations which may be of interest to the Agency will be sought under voluntary arrangements with the State. Such arrangements have proven useful in the past.

50. The methods used in connection with such access would include those available to the Agency under paragraphs 74 and 75 of INFCIRC/153, in particular, visual observation and the collection of environmental samples. Any limitations to access or need for managed access (e.g., through shrouding) due to commercial or other sensitivities need to be identified

in the Expanded Declaration. Such managed access could also be used in connection with the voluntary arrangements referred to above.

51. This broad access would be used primarily in two ways: (1) to confirm information at locations identified in the Expanded Declaration and (2) to help resolve inconsistencies or questions involving other sites and arising from information in the Expanded Declaration and other information available to the Agency. This access is expected to contribute significantly to the assurance provided by Agency safeguards of the absence of undeclared nuclear material and activities at locations identified in the Expanded Declaration and to other locations which may be of interest to the Agency.

52. The inspections involved in making use of this broad access would normally be carried out in conjunction with travel for routine inspections and visits to nuclear facilities. Each such broad-access inspection is estimated to require two person-days of inspection and some local travel. Few additional trips from Vienna would be required. During the first 12 months of implementing this broad access, approximately 600 additional person-days of inspection effort are anticipated. The cost of this additional inspection effort will be at least partially offset by savings from the use of unattended safeguards equipment, increased co-operation with SSAC and trade-offs. The level of effort will be adjusted to take into account the initial implementation experiences and, as necessary, will be reflected in future budget proposals. The cost to the State is dependent upon its own requirements with respect to SSAC escort for inspections.

2. No-notice Inspections

53. As indicated in Part 1, no-notice inspections are intended largely for inspections at nuclear facilities and would be used under complementary legal authority at other locations identified in the Expanded Declaration. It is anticipated that such use at the other locations would be infrequent and result in small additional costs for the Agency. For States and operators, no-notice Agency inspections would require that they maintain an appropriate level of responsiveness (e.g., personnel on call, additional travel, etc.), which would entail some additional cost.

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

54. Of the types of increased co-operation between the Agency and States and SSACs addressed in Part 1, the adoption of simplified inspector designation procedures and the use of systems for direct communications (including satellite systems) that are not available in the State are proposed as requiring complementary legal authority. The benefits of simplified designation procedures have been discussed by the Board of Governors on numerous occasions. Direct communications between Headquarters and inspectors and installations in the field will improve the effectiveness and efficiency of safeguards through more timely exchange of information, data and instructions.

D. CONCLUSIONS

55. The implementation under complementary legal authority of the measures discussed in Part 2 would represent a further major step in the continuing process of strengthening safeguards and improving their cost-effectiveness. The measures would be integrated with and complement the measures introduced under existing legal authority resulting from "Programme 93+2" and from earlier actions. The most significant result of the measures proposed in Part 2 would be the increased capability of the Agency to detect undeclared nuclear activities, thereby enhancing the level of assurance that the safeguards system can provide regarding the absence of undeclared nuclear activities.

56. For planning purposes, the Secretariat has based its estimates of the net costs to the Agency on initiation of Part 2 measures by the end of 1996. Implementation of the measures through 1997 would be within the existing budgets for these years and any extrabudgetary resources made available by Member States for this purpose. The Secretariat hopes that States would invite further field trials and experimentation on a voluntary basis until the complementary legal authority is established for them.

57. Implementation criteria that fully integrate the new measures with elements of the current system would need to be available by the end of 1996. Advice from SAGSI and experience gained through initial efforts to implement Part 1 measures, further field trials and other voluntary arrangements with States will be important inputs.

ANNEX

D R A F T
Expanded Declaration^{1/} - Outline

1. Information on the State or regional system of accounting and control (hereinafter referred to as SSAC^{2/}):
 - a. A completed SSAC questionnaire concerning administrative, legal and technical aspects of the SSAC;
 - b. The scope and timing of SSAC inspections and other related activities.
2. Present nuclear activities:
 - a. Information on past nuclear activities^{3/} relevant to assessing the completeness and correctness of the State's declarations of present nuclear activities^{2/}:
 - (i) Information on the nature, purpose and design of nuclear facilities and LOFs which had been closed down or decommissioned prior to entry into force of the Safeguards Agreement;
 - (ii) Existing historical accounting and operating records predating the entry into force of the Safeguards Agreement.
 - b. Information presently routinely provided^{2/}:
 - (i) Design information and modifications thereto, including information on closed-down and decommissioned facilities;
 - (ii) Access to accounting and operating records;
 - (iii) Accounting and special reports;
 - (iv) Operational programme.
 - c. Information not presently routinely provided:
 - (i) A description of the nuclear fuel cycle, and of other activities involving nuclear material, with a list of the locations involved^{2/};
 - (ii) A description of nuclear fuel cycle-related research and development (nuclear R&D) activities at nuclear facilities, at other locations

containing nuclear material (LOFs), at nuclear training institutes, at R&D centers and elsewhere^{4/};

- (iii) Information, to be agreed with the State, on operational activities additional to that provided under 2.b.(iv) above^{5/};
- (iv) Information on the nature of each of the buildings on the sites on which are located nuclear facilities, LOFs or nuclear R&D activities, including maps of sites^{4/};
- (v) Information on the nature of any other locations directly related to the operation of nuclear facilities, LOFs or nuclear R&D activities^{4/};
- (vi) Location and status of known uranium and thorium ore deposits and mines^{5/};
- (vii) Domestic manufacturers of major items of nuclear equipment or materials for the nuclear activities specified in 2.c.(i) above^{5/};
- (viii) Information identified in GOV/2629 ("Strengthening the Effectiveness and Improving the Efficiency of the Safeguards System (GC(XXXVI)/RES/586): Universal reporting system on nuclear material and specified equipment and non-nuclear material"), and modifications thereto^{5/}.

3. Planned nuclear activities:

- a. Early provision of design information (GOV/2554/Attachment 2/Rev.2)^{2/};
- b. Plans for the further development of the nuclear fuel cycle^{5/};
- c. A description of planned nuclear R&D activities^{5/}.

^{1/} The Expanded Declaration is not intended to identify categories of information to which the Agency may require access under the provisions for special inspections.

^{2/} Information relevant to Part 1.

^{3/} Activities prior to the entry into force of the Safeguards Agreement.

^{4/} Information relevant to Part 1 and Part 2 (see Table 1 for clarification).

^{5/} Information relevant to Part 2.

Annotated Outline of Draft Expanded Declaration

Conventional nuclear material safeguards is a complex control 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. Verifications (i) that facility design is in accordance with the design declared and the corresponding safeguards approach, (ii) that facility operations are as declared (e.g., through surveillance records review), (iii) that facility material accountancy systems conform to prescribed standards, (iv) that facility operator's measurement systems perform according to international standards, (v) that 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, and so on. The safeguards conclusions, and related levels of assurance for a given period of time, derive from an integration of the results obtained through the various verifications and analyses.

The overall rationale for the expanded declaration is directly related to greater nuclear transparency and the need to establish a basis for a wider range of verifications. A range that includes nuclear and nuclear-related activities in addition to nuclear material. In a manner analogous to the examples given above, accumulating assurances regarding the absence of undeclared activities and thus undeclared nuclear material derive from verifications that include (i) that the declared present and planned nuclear programme is internally consistent, (ii) that the nuclear activities and types of nuclear material utilized at declared locations are in accordance (e.g. through the collection and analysis of environmental samples) with those declared, (iii) that imports or internal manufacture of specified equipment and non-nuclear materials are consistent with the declared programme, (iv) that the operational status of closed down or decommissioned facilities and LOFs are in conformity with the State's declaration, and (v) that nuclear fuel-cycle related research and development (nuclear R&D) is generally consistent with declared plans for future development of the fuel cycle. Clarification would be sought from the State to resolve any apparent inconsistency among information provided by the State through an expanded declaration, information obtained by the Agency through other means and information generated through verification activities (including on-site activities). As above, assurances regarding the correctness and completeness of State's declarations derive from an integration of results obtained across this broad range of evaluations.

Some terms used in the Expanded Declaration need further clarification. By the expression "nuclear fuel cycle" is meant a system of nuclear installations interconnected by a flow of nuclear material. Such a system may consist of uranium mines, ore-processing plants, conversion plants, enrichment plants, fuel fabrication plants, reactors, spent fuel storages, reprocessing, associated storages, waste treatment and storage and a variety of possibilities for recycling recovered uranium and plutonium. Nuclear fuel cycle-related activities are those activities that are directly related to the operation of the nuclear fuel cycle (e.g., heavy water production and centrifuge manufacture) or to the continuing development of the fuel cycle (e.g., research reactor and associated laboratories and R&D on enrichment and reprocessing processes). The terms site, site perimeter and site layout are commonly used in the Agency's Design Information Questionnaire 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 Expanded Declaration has been the subject of numerous consultations with Member States participating in the field trials and, recently, review by SAGSI. The organization and specificity of the declaration will continue to evolve, particularly as the work under Task 5 (Programme 93+2) progresses. The annotated outline of the Expanded Declaration that follows is an attempt to better communicate what information is requested and why.

D R A F T

Expanded Declaration^{6/} - Outline

1. Information on the State or regional system of accounting and control (hereafter referred to as SSAC) :
 - a. A completed SSAC questionnaire concerning administrative, legal and technical aspects of the SSAC;
 - b. The scope and timing of SSAC inspections and other related activities.

Increased cooperation with SSACs can lead to more efficient control of declared material for both the SSAC and the Agency. Greater transparency regarding the activities of both the SSAC and the Agency is a precondition. The SSAC questionnaire seeks broad information regarding the organization, authority and technical capabilities of the SSAC. This information will serve as a basis for consultations with individual States with a view to increased co-operation. The SSAC questionnaire, in its present form, was contained in the technical background documentation provided along with GOV/2784 in February 1995.

The requested information will be used to make full use of SSACs, take due account of their technical effectiveness and avoid unnecessary duplication of the State's accounting and control activities, thereby improving efficiency.

^{6/} The Expanded Declaration is not intended to identify categories of information to which the Agency may require access under the provisions for special inspections.

2. Present nuclear activities :

a. Information on past nuclear activities^{2/} relevant to assessing the completeness and correctness of the State's declarations of present nuclear activities :

- (i) Information on the nature, purpose and design of nuclear facilities and LOFs which had been closed down or decommissioned prior to entry into force of the Safeguards Agreement;
- (ii) Existing historical accounting and operating records, predating the entry into force of the Safeguards Agreement.

The purpose of these requirements is to ensure that the Agency receives a completed design information questionnaire on every facility and LOF, regardless of its operational status, in a State. Access to existing historical records would 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 monitoring field trials was 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 :

- (i) Design information and modifications thereto, including information on closed-down and decommissioned facilities;
- (ii) Access to accounting and operating records;
- (iii) Accounting and special reports;
- (iv) Operational programme.

^{2/} Activities prior to the entry into force of the Safeguards Agreement.

Information presently routinely provided relates to nuclear facilities and LOFs where nuclear material is used, processed or stored. Sites layout (i.e., a site plan showing in sufficient detail location, premises and perimeter of facility, other buildings, roads, railways, rivers, etc.), for sites containing nuclear facilities, are defined by the State when the Agency design information questionnaire is being prepared.

The provision of up-to-date and complete design information on existing facilities is an important confidence-building measure, required in order to ensure that the safeguards applied to them continue to be appropriate. The reporting to the Agency of significant modifications to facilities and the provision and verification of design information during their modification are other important confidence-building measures. The verification of design information provides assurance that no undeclared activities are taking place at the facilities.

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; nor does this continuing right expire with the closing-down of a facility. Visits by Agency inspectors to verify that facilities which have been closed down 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.

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 is the basis on which material accountancy is established. The examination of records for correctness and consistency, comparison of records and reports are important components of inspector's activities during an inspection.

The provision of an anticipated operational programme for a facility or LOF 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 item 2.c. (iii)) would provide the basis for performing no-notice inspections.

c. Information not presently routinely provided :

- (i) A description of nuclear fuel cycle, and of other activities involving nuclear material, with a list of the locations involved;
- (ii) A description of nuclear fuel cycle-related research and development (nuclear R&D) activities at nuclear facilities and other locations containing nuclear material (LOFs), at nuclear training institutes, at R&D centers and elsewhere;

Information relevant to assessing the completeness and correctness of the State's declarations of current nuclear activities includes a description of the State's nuclear fuel cycle and other nuclear activities involving nuclear material, including those not covered by the comprehensive safeguards agreements (e.g., mining and ore processing, or non-nuclear use of nuclear material). Additional information on the nuclear fuel cycle, e.g., the design information and the accounting reports for all of the individual nuclear facilities and information on nuclear material to be used in non-nuclear activities, is within the scope of paragraph 81(c) of INFCIRC/153.

Nuclear fuel cycle-related research and development (nuclear R&D) is taken to be R&D directly related to the present or planned nuclear fuel cycle. For example, R&D related to any aspect of enrichment or reprocessing, whether or not it involves nuclear material, would be declared while R&D on medical or agricultural applications of radioisotopes would not be.

- (iii) Information to be agreed with the State, on operational activities additional to that provided under 2.b.(iv) above (i.e., additional to that required under INFCIRC/153);

Information, not presently routinely provided, on operational activities at nuclear facilities and LOFs additional to that provided under paragraph 64(b) of INFCIRC/153, should be agreed with the State and, depending on the nature of a facility or LOF, may include timely

information on nuclear material transfers and inventories, empty casks transfers, crane movement records, isotope production programmes and maintenance activities. This information, in general terms, could be used to increase the inspection coverage of nuclear material and safeguards relevant operations through no-notice inspections.

- (iv) Information on the nature of each of the buildings on the sites on which are located nuclear facilities, LOFs or nuclear R&D activities, including maps of sites;

The geographical area that constitutes a site would be identified by the State in the Expanded Declaration. In most cases this would be straightforward and be the area within a perimeter fence or a building. This is routinely done now in providing the information regarding the location of a nuclear facility requested in the Design Information Questionnaire. The information requested here pertains to the purpose of other buildings or installations on the site containing nuclear facilities, LOFs or nuclear R&D activities. During visits for design information verification, the nature of other buildings shown on the plan will be verified to confirm their declared use and the absence of undeclared nuclear or nuclear-related activities there.

- (v) Information on the nature of any other locations directly related to the operation of nuclear facilities, LOFs or nuclear R&D activities;

Such locations may include auxiliary undertakings which would not contain nuclear material subject to safeguards, but provide certain services functionally required for operation of nuclear facilities, LOFs or nuclear R&D activities. Examples are heavy water production, storages of nuclear-related equipment and non-nuclear materials, radioactive waste storages, workshops for maintenance and repair. Information on the nature of such kinds of locations will provide more transparency of the State's nuclear and nuclear-related activities.

- (vi) Location and status of known uranium and thorium ore deposits and mines;

The information on the locations and status of known uranium and thorium ore deposits and mines will complement the State's declaration on the domestic capability to produce nuclear material.

- (vii) Domestic manufacturers of major items of nuclear equipment or materials for the nuclear activities specified in 2.c.(i) above;

The identity, location and products of domestic manufacturers of major items of nuclear equipment and materials for the State's nuclear fuel cycle in combination with acceptance of the universal reporting scheme on nuclear material and specified equipment and non-nuclear material will provide self-contained set of information on the State's capability to produce and to export or the need to import certain nuclear-relevant equipment and nuclear and non-nuclear materials. A list of specific equipment and non-nuclear materials included here will derive from the ongoing work under Task 5 ("Programme 93+2"). This information will need to be consistent with 2.c. (viii).

- (viii) Information identified in GOV/2629 ("Strengthening the Effectiveness and Improving the Efficiency of the Safeguards System (GC(XXXVI)/RES/586): Universal reporting system on nuclear material and specified equipment and non-nuclear material").

Providing the Agency with comprehensive information about the export, import, production and location of all nuclear material in peaceful activities and with information about exports and imports of specified equipment and non-nuclear material commonly used in the nuclear industry would be an additional measure for increasing transparency and would also increase confidence that such items were being used only for peaceful purposes.

3. Planned nuclear activities :

- a. Early provision of design information (GOV/2554/Attachment 2/Rev.2);
- b. Plans for the further development of the nuclear fuel cycle;

- c. A description of planned nuclear R&D activities, including their planned locations when known.

With respect to 3.a., the requested information is detailed in GOV/2554/Attachment 2/(Rev.2).

A declaration of plans for the further development of the national fuel cycle would assist the Agency in its long-term planning and would also augur well for increased transparency and assurance. Information about R&D planned to support such development would have similar value.

ANNEX 5

STATEMENT REGARDING "STRENGTHENING THE EFFECTIVENESS AND IMPROVING THE EFFICIENCY OF THE SAFEGUARDS SYSTEM" MADE BY THE DIRECTOR GENERAL IN HIS INTRODUCTORY STATEMENT AT THE JUNE 1995 SESSION OF THE BOARD OF GOVERNORS

Excerpt from the record of the Board's 866th meeting

21. He had mentioned earlier in his introductory statement that the work of the Agency in further strengthening the effectiveness of safeguards had been strongly endorsed by the NPT Review and Extension Conference. The Conference had declared that the decisions of the Board in that regard should be supported and implemented and that the Agency's capability for detecting undeclared nuclear activities should be increased. The Conference had thus looked to the Board to continue along the path on which it had already travelled some way. Where did the Agency now stand? In March the Board had reviewed document GOV/2784, in which measures for strengthening the effectiveness and improving the efficiency of the safeguards system had been presented. After discussing that document, which remained relevant, the Board had requested the Secretariat to work out specific proposals, taking into account the comments made during and after its meetings. Since March many comments had been received from Member States, and that had led the Secretariat to give further precision to some of the material presented in document GOV/2784 - for example, to the description of some elements of the Expanded Declaration and its relationship to expanded access.

22. Document GOV/2807, submitted in response to the Board's request, presented the proposed measures in two groups: Part I of the document covered those measures for which the Secretariat believed that authority already existed; Part II covered those measures for which - in the view of the Secretariat - complementary authority was required. Following consideration of the measures in the Board, the Secretariat would propose to start

implementing routinely the measures deemed to fall within existing authority - those in Part I - at an early date. The modalities for implementing Part I measures would be specified in a letter from the Agency to States with comprehensive safeguards agreements. The letter would indicate *inter alia* that the measures were to be applied in a standard and non-discriminatory manner.

23. In addition to the helpful comments received from many Board members, consulted individually or in groups, the Secretariat had had the advice of SAGSI, which had devoted considerable effort to assessing Programme 93+2. Since April 1993, when a SAGSI report had led to the launching of Programme 93+2, SAGSI had provided much valuable advice on the technical elements of that programme. Recently, SAGSI had endorsed the separation of the proposed measures into two groups and expressed the hope - and the expectation - that the Part I measures would be implemented soon. Also, SAGSI had recommended the continuation of field trials, *inter alia* so as to ascertain the benefits to be derived from closer co-operation between the Agency and SSACs. In addition, SAGSI had provided advice which would help the Secretariat prepare for the implementation of the measures described in Part II of the document.

24. The comments and questions received by the Secretariat from Member States had focused primarily on the Part II measures and on the preparation of an appropriate legal instrument. Work should now proceed in the light of the discussion at the Board's current session and with the benefit of further consultations with Member States which had comprehensive safeguards agreements. The Secretariat did not think that the Board's brief September session would be the appropriate occasion for the presentation of proposals on those measures and of a draft legal instrument; it would be more appropriate to submit them in time for consideration by the Board in December. That would allow the Secretariat to listen to the discussion under the item "Strengthening the effectiveness and improving the efficiency of the safeguards system" at the General Conference's forthcoming session and to have further informal consultations before finalizing the papers in question.

25. Some Board members had expressed the view that the Programme 93+2 proposals should be presented as a package rather than piecemeal. He was of the opinion that the comprehensive analyses performed by the Secretariat gave a clear view of the full package - even though some of the details had still to be finalized. The proposed measures were not a menu to choose from. They were grouped according to the authority on the basis of which they would be implemented only in order to facilitate their early introduction. The full benefits in terms of strengthened effectiveness and improved efficiency would flow only from full implementation of all the measures described in Part I and Part II of document GOV/2807. However, the measures described in Part I would, when introduced, lead to a substantial increase in the effectiveness of current safeguards, and there was no reason why their introduction should await implementation of the Part II measures.

26. As he had said earlier in the Board, once the start-up costs had been met the efficiencies which would be expected to flow from full implementation of the envisaged measures should lead to cost neutrality.

27. Document GOV/2807 also contained a revised outline of the Expanded Declaration, with annotations explaining the purpose of and benefit to be derived from the information requested. Further refinement would be pursued in the light of the comments and guidance received from the Board.

28. As the NPT Conference had shown, there was considerable international interest in the efforts of the Agency to strengthen its safeguards performance and an expectation that the Board would maintain the momentum - which it had created - towards a more credible and cost-effective safeguards system. It was true that the current work would not mark the end of efforts to strengthen the system, which would have to evolve as new needs arose and new techniques and measures emerged. However, the Agency should not fail to do now what could and needed to be done now.

ANNEX 6

DISCUSSION INCLUDING DECISION ON "THE SAFEGUARDS IMPLEMENTATION REPORT FOR 1994" AND "STRENGTHENING THE EFFECTIVENESS AND IMPROVING THE EFFICIENCY OF THE SAFEGUARDS SYSTEM: PROGRAMME 93 + 2" AT THE JUNE 1995 SESSION OF THE BOARD OF GOVERNORS

Excerpt from the record of the Board's 869th meeting

40. Mr. PELLAUD (Deputy Director General for Safeguards): Turning to agenda item 5(b) on strengthening the effectiveness and improving the efficiency of the safeguards system, he said that several points had been raised during recent consultations with Member States. The first concerned the Secretariat's right to request information on a State's past nuclear activities. The Secretariat was of the view that the Agency was required to draw firm conclusions with respect to the completeness and correctness of a State's declarations concerning its present inventory of nuclear material and nuclear facilities. That view had been confirmed by the Board of Governors, in its resolutions on the DPRK and South Africa, and by the General Conference in its call for Agency verification of the completeness and correctness of South Africa's initial report of nuclear material and installations. The Agency therefore had to seek and receive information on a State's past nuclear activities, but only when and to the extent necessary in order to reach those conclusions.

41. With respect to the question of visas, the Secretariat believed that in order to implement the provisions of document INFCIRC/153 that authorized the Agency to carry out unannounced inspections, Agency inspectors had to be able to enter a country without providing advance notification to that State. That could only be achieved in practice if States with comprehensive safeguards agreements made arrangements so that designated inspectors were granted either multiple-entry visas, or long-term single entry visas, or if States waived their right to require visas of inspectors. It was worth noting that many States already extended such arrangements to Agency inspectors.

42. In its reference to advanced communications technologies, such as satellite links, the Secretariat was not proposing that States should be required to provide equipment, but that where such means of communication were granted to other diplomatic missions and international organizations, they should also be granted to the Agency.

43. The level of assurance provided by a safeguards system depended ultimately upon two fundamentally important attributes of the system - coverage and continuity. Coverage was the extent to which safeguards-relevant materials and events were effectively subject to verification. Continuity was the extent to which the status of the whole continuum of relevant materials and events could be inferred at any given moment from verification of single parts carried out at points of time or space selected according to random sampling procedures.

44. The objective of the measures put forward under Programme 93+2 - the expanded declaration, broader physical access, no-notice inspection, increased co-operation with SSACs and advanced technology - and of the elements of the current system was to improve coverage, continuity and cost-effectiveness. Each of the proposed measures was of value in its own right. Document GOV/2807 contained a legal evaluation of the proposed measures. The proposal to proceed immediately with the implementation of those measures that the Secretariat believed were within its existing legal authority was made for pragmatic reasons and should not lead to the conclusion that such a mode of implementation in any way diminished the integrated nature of the package.

45. The overall objective of the expanded declaration was two-fold: firstly, to secure a consistent picture of the whole of a State's nuclear programme and, secondly, to provide an effective audit basis that, together with broader access, increased verification coverage of safeguards-relevant materials and events. There was no intention to implement a mechanical, automatic, bureaucratic, criteria-driven verification of all elements of the expanded declaration, but rather to verify the elements only if the need arose.

46. The frequent use of the words "nuclear activities" had led some delegations to think that the focus of safeguards in the future would be on nuclear activities, rather than nuclear material. However, that was not the case. The expanded declaration was continuing to evolve. It was a much more specific instrument now than it had been even a month ago when document GOV/2807 was being finalized. The information sought regarding activities and equipment that were functionally related to the operation of the fuel cycle had been singled out primarily because they were indicators of the presence of nuclear material and, secondarily, because they constituted important elements in the nuclear fuel cycle infrastructure. That was a relatively fine distinction, but an important one in understanding the overall rationale for the expanded declaration and how the Secretariat would use that additional information in a strengthened safeguards system.

47. The collection and analysis of environmental samples was a key technical measure in a strengthened safeguards system. Considerable effort had been devoted to demonstrating the integrity and anonymity of the protocol for the distribution of samples to the extended network of laboratories for analysis. That protocol included the requirement that all sampling locations be protected through coding, that some samples would be split up and distributed simultaneously to several laboratories and that all samples distributed would include control samples. The Secretariat was convinced that the protocol for the distribution of samples would provide adequate protection against unauthorized disclosure of results or any misuse of the samples themselves. The Secretariat would exercise due care in the matter and keep its own laboratory in Seibersdorf and other laboratories elsewhere under strict scrutiny.

48. As to the cost of implementation of the proposed measures, he emphasized again that it was in fact possible for full implementation of those measures to result in cost neutrality, as stated by the Director General in his introductory statement. In other words, a newly optimized safeguards system could ultimately cost about the same as the current system. However, during a transition period of a few years, the implementation of the new safeguards measures would probably lead to cost increases. The safeguards budget for 1996 foresaw an additional cost of \$1 million. Half of that amount covered the fixed costs of running the new clean laboratory that would begin operation at the end of 1995. The other

half represented variable costs related to sample analysis. The decisions taken by the Board at the present meeting and the positions expressed by Member States prior to and during the 1995 regular session of the General Conference would help the Secretariat to determine the proper estimates for the 1997-1998 budget.

49. Finally, several Member States had referred in earlier Board discussions to SAGSI's role in the initiation of the Secretariats's Programme 93+2 and its continuing review of it. The Director General had already referred in his introductory statement to the conclusions on Programme 93+2 reached by SAGSI at its meeting in May 1995. The highlights of that meeting were available to delegations upon request.

Excerpt from the record of the Board's 870th meeting

3. The CHAIRMAN recalled that in March the Board had endorsed the general direction of Programme 93+2 but had not taken a decision on any of the specific measures proposed under the programme, or on what the legal basis for them would be. It had requested the Secretariat to submit for its consideration in June specific proposals, together with an analysis of their legal and financial implications, taking into account comments made during the Board's discussions and comments received subsequently from Member States. The Secretariat had prepared document GOV/2807 in response to that request.

4. He invited Governors to comment in particular on paragraphs 35 and 36 of document GOV/2807 and clearly indicate their views on the actions recommended in paragraph 6.

5. Mr. PRETTRE (France), speaking on behalf of the European Union, said that the indefinite extension of the NPT had been essential for the non-proliferation regime and that strengthening the effectiveness and improving the efficiency of Agency safeguards constituted the next major step.

6. As the Secretariat had had very little time in which to prepare a new Board document on Programme 93+2, it was perfectly understandable that priority should have been given to those measures which could be put into effect speedily and that the Secretariat should have divided the overall set of envisaged measures into two groups, although as a result it was less apparent that the envisaged measures would constitute an integrated whole.

7. The European Union, which approved of the Director General's intention to implement at an early date the measures described in Part 1 of document GOV/2807, recognized that the development of implementation procedures would require further discussions between the Secretariat and the States and other entities party to comprehensive safeguards agreements.

8. In that connection, it was important to bear in mind the safeguards role played by EURATOM for all its member countries. To have full information on nuclear material accounting and control throughout the territory of the Union, the Agency should continue to receive details regarding the organization, resources and working methods of EURATOM's

Safeguards Directorate. In addition, a distinction should be made between national systems and regional systems: it was with the latter that the Agency would probably achieve more extensive collaboration.

9. Before the installation of new equipment (for example, equipment for the remote transmission of inspection data), the cost-effectiveness and reliability of such equipment should be ascertained, and strict rules would have to be introduced in order to preserve the confidentiality of the transmitted data.

10. With regard to the measures described in Part 2 of the document, whose introduction would require the signing by each State with a comprehensive safeguards agreement of an additional legal instrument laying down how those measures were to be implemented, the European Union believed that the terms of the additional legal instruments should be identical for all States concerned, that the instruments should be legally binding and that they should have the same authority as the corresponding comprehensive safeguards agreements at both the international and the national level. It would therefore be best if, for each country, the envisaged measures were the subject of a legally binding instrument drawn up in accordance with the relevant procedures in force in that country. Before submitting a draft model legal instrument to the Board, the Secretariat should carry out extensive consultations and make clear to Member States the logic underlying the envisaged system and what was expected of each State.

11. From the document submitted to the Board in March (GOV/2784), it appeared that the object of the exercise under consideration was to enable the Agency to compare information from different sources on a country's nuclear programme (so as to ensure not that the information was complete, but that it was consistent) and to reveal any anomalies, in order that the Agency might satisfy itself that they were not evidence of undeclared activities. The Secretariat should now explain how that approach was consistent with the kind of additional information to be requested of each State. Also, efforts to define the boundary between what was necessary for the Agency and what would be difficult for States to accept, and to define more clearly certain terms used in the Expanded Declaration, should continue. In that connection, he thanked the Deputy Director General for Safeguards, Mr. Pellaud, for the clarifications which he had provided the previous day.

12. Similar comments could be made on inspectors' rights of access. Recent experience had shown that inspectors should not be confined in their activities to checking on declared nuclear material, but rather that they should be given the latitude necessary in order to determine whether the information reaching them from different sources was consistent. It was not the job of inspectors to verify systematically the accuracy of all the information provided to them, and the exercise of their rights of access should continue to be in conformity with each country's regulations concerning the rights of individuals.

13. The main purpose of the comments which he had just made was to serve as guidance in the next stages of Programme 93+2. The European Union hoped that the Secretariat would take account of them and of the other comments made during the current Board session and also of the written comments submitted by Member States on document GOV/2784.

14. The European Union could agree to early implementation of the measures described in Part 1 of document GOV/2807 once the implementation modalities had been determined. In particular, it could agree to the early introduction of environmental sampling in parts of nuclear facilities to which inspectors had access - in order to verify the purpose of the facility. Regarding the measures described in Part 2 of the document, the European Union approved of the Director General's intention to define precisely the nature and extent of the additional information to be requested of States, the extent to which inspectors' access rights were to be expanded, the modalities for exercising the expanded rights and - above all - the logic underlying the envisaged new safeguards system. The nature, scope and limitations of the new measures should be clarified through consultations - either oral or in writing - with Member States. In the light of those consultations, the Secretariat should submit a document to the Board for comment, possibly at an informal meeting. Only after that should a text - sufficiently developed to constitute a model for the additional agreements to be concluded with each State and commanding a broad consensus - be submitted to the Board.

15. Mr. EL HUSSEIN (Sudan)*, speaking on behalf of the Group of 77, suggested that in Table 1 in document GOV/2807 the column headed "Measures within existing legal authority" be expanded to indicate the paragraphs of document INFCIRC/153 deemed to confer the legal authority in question, the revised version of Table 1 being issued in an Addendum to document GOV/2807.

16. Referring to paragraph 15 (which contained the sentence "The effort required of States is judged to be small.") and paragraph 36 (which contained the sentence "The work of Programme 93+2 has proceeded on the basis that a strengthened and more efficient safeguards system would evolve through a redistribution of resources, rather than through the acquisition of additional resources."), he said that the Group of 77 would like to be assured that the redistribution of resources would not prove detrimental to the work of the Department of Technical Co-operation or to the promotional activities of other Departments.

17. Recalling that at the Board's March meetings the Group of 77 had requested the presentation of an integrated, comprehensive package of proposals, he said that the Group would have liked to see the proposals in their totality at the current Board session so that their overall financial implications could be better ascertained.

18. Mr. ESTEVES DOS SANTOS (Brazil), having expressed thanks for a well-structured and clear document, said that Brazil was strongly committed to the cause of non-proliferation and would like the Agency's safeguards system to be more effective and efficient and better able to detect undeclared nuclear material and activities.

19. While his delegation still had reservations about the need for greater access to sites, it was prepared to engage in a debate on the measures proposed in document GOV/2807 and hoped that the action eventually taken by the Board would be the result of efforts to reconcile all the views expressed.

20. Commending the distinction made between measures for which it was deemed that the Agency already had legal authority and measures for which it was deemed that additional legal authority would be required, and referring to Table 1 in Part 1 of document GOV/2807, he said that item 2a caused some problems for his delegation, in that some of the methods for verifying the completeness of declarations seemed unnecessarily intrusive; in general,

inspections should be as intrusive as necessary and as non-intrusive as possible. Also, his delegation doubted whether access to past records had a legal basis in existing comprehensive safeguards agreements; there was nothing in such agreements (or in document INFCIRC/153) to indicate that they were effective retroactively. If the idea of authorizing the Agency to look into old records had been present in the minds of those who drafted document INFCIRC/153, paragraph 53 - which stated that "The Agreement should provide that the records shall be retained for at least five years." - would simply not have been included in that document. Moreover, a country which had only recently concluded a comprehensive safeguards agreement could not be expected to have old records available for presentation to the Agency, particularly if it had been engaged in nuclear activities for some decades without realizing that one day records would be required for safeguards purposes.

21. His delegation had no problems with item 2b, but a clear definition of "operating records" was needed. Also, as regards information on closed down and decommissioned facilities, it would be helpful to have generally agreed criteria for each facility type.

22. His delegation had no problems with item 2c(i) either, provided that the term "nuclear fuel cycle" covered only the handling of nuclear material; too broad a definition might jeopardize legitimate commercial interests. Also, although the Agency already received the information concerned through Design Information Questionnaires and Inventory Change Reports, his delegation would not oppose item 2c(i) if the degree of detail to be required was reasonable; the questionnaires and other forms used should be such that it was so.

23. Similarly, his delegation had no problems regarding the provision of information on R&D involving nuclear material, provided that information of potential commercial value was not sought; again, it was a question of the degree of detail. Furthermore, some countries might have to establish and maintain extensive and sophisticated databases and might thus be faced with financial and human resource problems.

24. Environmental sampling could be one of the most useful tools for detecting undeclared activities; if applied strictly in the manner foreseen in Part 1 of document GOV/2807, it would be a non-intrusive measure fully consistent with present comprehensive safeguards agreements. However, the sampling procedures should be precisely defined so as to avoid future misunderstandings. Also, it should be borne in mind that environmental sampling data could not be regarded as indisputable proof of undeclared activities.

25. On the matter of broad access, he said that present comprehensive safeguards agreements did not address the question of access beyond strategic points either during design information verification or during ad hoc inspections. The modalities and procedures should be negotiated with the State in order to ensure predictability.

26. No-notice inspections should be dealt with on a case-by-case basis. If such inspections were justified by the safeguards strategy for a given installation, they should be provided for in the facility attachment.

27. With regard to increased co-operation with States and SSACs, Brazil was ready to intensify its existing co-operation with the Agency and looked forward to mutually beneficial joint activities.

28. With regard to advanced techniques, and especially the remote transmission of inspection data and the remote monitoring of safeguards equipment, it should be borne in mind that the high-frequency equipment often involved could affect electronic devices within a facility. That question needed further examination, as did that of direct communication between inspectors inside facilities and the Agency's Headquarters.

29. While Brazil agreed with most of the proposals made in Part 1 of the document, many questions remained, and further work would be needed in order to achieve an agreed enhanced safeguards system within existing legal authority. The best way of achieving one, and avoiding opposing interpretations when the time came to implement the envisaged measures, would be to set up a group of governmental experts with the task of defining clear guidelines for their implementation. In any event, the Agency should take his delegation's views fully into account when conducting negotiations on the implementation of those measures with individual States and with regional and bilateral organizations.

30. As to the measures proposed in Part 2 of the document, there seemed to be two major categories of problem. The first concerned the degree of detail and the comprehensiveness of some of the information to be included in the Expanded Declaration. The second concerned the relationship between greater access to information - provided in the Expanded Declaration - and broader physical access.

31. With regard to the first category, in the case of - say - R&D not involving nuclear material, compliance with the requirement could - depending on the degree of detail and the comprehensiveness of the information called for - be relatively simple or (and that would create difficulties for developing countries such as his own) involve an enormous amount of time and resources.

32. With regard to the second category, it might be helpful to consider - by way of example - the requirement relating to the provision of information on domestic manufacturers of major items of nuclear equipment or materials. There was one installation in Brazil which purchased equipment from at least a hundred private companies engaged also in many non-nuclear areas of industrial activity and, if it was agreed that the Agency should have access to all locations identified in Expanded Declarations, all those companies would be liable to inspection. Such a situation would obviously not be acceptable to any country.

33. He had cited only two examples, but the two major categories of problem existed in respect of most of the Part 2 measures, such as the provision of information on buildings within sites and on locations related to the operation of nuclear facilities.

34. Calling for further clarification based on consensus, he said that, if the establishment of a group of governmental experts would be highly desirable with regard to the Part 1 measures, it would be essential where the Part 2 measures were concerned. His country would not appreciate being confronted in the near future with "take it or leave it" proposals and therefore wished to participate in the development of the proposals to be ultimately submitted for approval. The involvement of Member States in the preparation of measures which would affect them directly was indispensable for smooth implementation.

35. The Agency had in the past set up groups of governmental experts like the one envisaged by his delegation on a variety of subjects, and there was no reason why the questions relating to safeguards, a subject with a very direct - daily - bearing on countries' nuclear activities, should be decided on without negotiations among the interested parties.

36. Mr. DOSHI (India) said that, although the Secretariat had made a commendable effort to respond to the request made by the Board in March, his delegation had a number of concerns and even reservations.

37. On the question of cost, the Secretariat asserted that the additional financial burden on the Agency would be marginal, at least in the initial and ultimate stages, and that the additional financial burden on States with comprehensive safeguards agreements would be negligible. His delegation doubted whether that would be the case, and it did not think that a start should be made with the implementation of measures in isolation until the cost of the entire package was known. Owing to non-availability of funds, it had not been possible to implement in full even the "unstrengthened" 1994 safeguards programme, even though substantial sums had been diverted from elsewhere, internal adjustments had been made and extrabudgetary sources had been tapped. In his delegation's view, a strengthened programme, when fully implemented, was bound to cost much more, particularly given the fact that expenditures on safeguards had increased 15-fold in the course of some 20 years.

38. Where would the additional money come from? It had become clear during discussions on the funding of the Agency's principal activity, technical co-operation, that the major developed countries were finding it difficult to increase their expenditures by even a few thousand dollars. That being so, perhaps further Board consideration of the strengthening of safeguards should be postponed until the current period of financial constraint was over and the Board had an idea of precisely what the total package would cost.

39. Then there was the legal aspect. Clearly, document INFCIRC/153 did not provide an adequate legal basis for all the proposed measures. One question that needed careful consideration - given the principle of national sovereignty, the force of legitimate national anxieties and differences in local circumstances - was what kind of legal authority Member States could confer on the Agency in order to enable it to implement the measures. In that

connection, it should be borne in mind that a start on implementing the Part 1 measures without any certainty that the Part 2 measures would be found legally feasible might not only impede implementation of the new scheme as a whole, but also do harm to the present scheme, which had served the international community well.

40. Perhaps the Secretariat could prepare a paper matching the Part 1 and Part 2 measures to the relevant paragraphs of document INFCIRC/153. That would enable legal experts in Member States to determine which of the measures were in fact covered by existing legal authority. In the view of legal experts in India, some of the measures - such as those associated with R&D activities, technology advances and environmental sampling - could be taken only on the basis of mutual consent. In that connection, his delegation believed that tampering with safeguards implementation parameters like the SQ could lead to complications.

41. India had serious reservations about environmental sampling. It doubted whether the technique would be effective at reasonable cost and whether there was a sound legal basis. Also, it suspected that there could be adverse - even if unintended - consequences for individual Member States; for example, samples might fall into the wrong hands and yield information about capabilities and activities quite unrelated to nuclear programmes.

42. It would be necessary to renegotiate facility attachments in order to provide for the proposed measures, and in that connection it should be borne in mind that there were still many agreements for which facility attachments had not been negotiated in the first place. Renegotiation would call for a great deal of work and involve much time and money, and his delegation believed that, rather than pursuing Programme 93+2, it would be better to reflect on whether the potential of the existing system had been fully exploited.

43. Over the past 25 years, only one country had failed to comply with the undertaking entered into by it under a comprehensive safeguards agreement. Moreover, the non-nuclear-weapon States which had recently agreed to extend the NPT and thus to forego nuclear weapons for all time had done so without demanding any matching obligations from anyone.

Should they continue to be regarded as potential nuclear sinners? Might one not do irreparable harm to international co-operation in the nuclear field by rushing headlong into making the Agency little more than a nuclear policeman.

44. Lastly, document INFCIRC/153 had come into being as a result of consensus arrived at after extensive discussions in an open-ended group of governmental representatives, and he considered it only right that the changes to that document which the proposed measures would represent should not be agreed until consensus had emerged in a similar group. India strongly recommended the convening of such a group.

45. Mr. SABURIDO (Cuba) said that in preparing document GOV/2807, which had important technical, legal and financial implications for the future of comprehensive Agency safeguards, the Secretariat had clearly taken into account, one way or the other, some of the comments made by Member States. In his delegation's view, however, it had not focused sufficiently on the cost/benefit aspects of the matter under consideration. Also, it was regrettable that the document had not been made available early enough.

46. His delegation believed that only those measures described in Part 1 could be approved which, in the view of the Secretariat and of the interested States with comprehensive safeguards agreements, definitely fitted into the existing legal framework and that they should be implemented only if the implementation procedures were sufficiently clear to be the subject of negotiations with each individual State.

47. On the question of environmental sampling, his delegation believed that the criteria and conditions for sample processing should be specified in advance.

48. His delegation could not accept unconditionally no-notice inspections at strategic points as such inspections presupposed the granting of long-term multiple-entry visas to inspectors or the entry of inspectors without visas - a matter for sovereign decision by each State.

49. In seeking increased co-operation with SSACs, it would be necessary to take into account the differing degrees of nuclear development in different States so that States were not burdened with unwarranted costs.

50. On the question of the analysis of information by the Agency, his country continued to believe that recourse to data from intelligence sources should be explicitly excluded. Also, the use of communications satellites should be authorized only where it could be reliably demonstrated that the necessary confidentiality of safeguards information was not affected.

51. His delegation did not agree with the Secretariat regarding the existence of legal authority for some of the measures which were the subject of Table 1 in document GOV/2807, and especially regarding items 2a and 2b(i) and information on nuclear activities antedating the conclusion of comprehensive agreements. Similarly, environmental sampling outside declared installations at sites to which the Agency did not have access within the existing legal framework should be subject to complementary authority. Nor was it clear from items 2c(iv) and 2c(v) in which "limited cases" the envisaged measures were covered by existing legal authority.

52. There was no indication in the document of the legal authority on which each measure envisaged by the Secretariat was based, and it would be useful to have an Addendum with the legal authority for each measure specified.

53. Overall, his delegation disagreed with the Secretariat that all the Part 1 measures were covered by the existing legal framework and would like an additional appraisal to be carried out with the participation of governmental representatives, as envisaged by the representative of Brazil. Alternatively, or in addition, it would like paragraph 6 of the document to be amended through the inclusion of a proviso that only those measures which were deemed both by the Agency and by the country in question to fall within the existing legal framework should be applied.

54. As regards Part 2 of the document, there should be further evaluation of the envisaged measures on the basis of technical, legal and financial criteria, it being borne in mind that the goal of comprehensive safeguards was the timely detection of the diversion of significant quantities of nuclear material for non-peaceful purposes. His delegation believed that the safeguards system should be based on mutual trust among States and hence that the means of achieving that goal should be the verification of States' declarations.

55. The detection of undeclared activities should not become the *raison d'être* of the Agency's safeguards system. The measures proposed for detecting such activities included some based on advanced but not infallible technologies, and there was no transparent, effective control mechanism to guarantee that they would be applied only in really justifiable cases. How were errors and other major problems to be avoided in their application, and who would finance their application, which could not be provided for in advance in the Regular Budget?

56. To answer such questions it would be necessary to re-examine the principles on which safeguards were based and to take a fresh look at the non-proliferation regime, which had not yet succeeded in doing away with nuclear weapons despite being in existence for 25 years and despite the recent decision to extend the NPT indefinitely. How could one possibly conceive of introducing measures which could not be applied uniformly to all States and which were thus discriminatory? For example, States should not be required to include in their Expanded Declarations information on the location of mines and of uranium and thorium deposits or on R&D nuclear-fuel-cycle-related activities which did not involve nuclear material.

57. With regard to costs, application of the measures described in document GOV/2807 would require significant additional resources. Because of the economic difficulties with which it was confronted, Cuba would not be in a position to increase its contributions for such purposes, and he was by no means sure that the Agency's usual major contributors would be prepared to cover the extra costs. At all events, in his delegation's view the "non-shielded" countries would have to assume the lion's share. Moreover, regardless of the financing arrangements, important promotional activities of the Agency must not be affected.

58. Mr. RITCH (United States of America) said that the measures spelled out in document GOV/2807 complemented - in no way replacing - the safeguards on declared activities which the Agency had long been implementing on the basis of document INFCIRC/153 and the measures relating to undeclared activities which had been endorsed

by the Board in 1992 and 1993. Far too many participants in the Board's March session had seemed to believe that the emphasis on declared activities was being replaced by an emphasis on undeclared ones. The Secretariat had chosen to present only new measures to the Board not because the old measures were of less importance, but merely to avoid repetition.

59. The United States liked the two-part approach adopted by the Secretariat in document GOV/2807, which should not only enable the Board to start responding to the wish of the NPT Review and Extension Conference that the Agency move quickly to strengthen its safeguards, but also provide the Secretariat with the benefit of an additional round of discussions on the Part 2 measures.

60. With regard to Part 1 of document GOV/2807, which contained no surprises, the United States endorsed the Secretariat's view that broad information about the nuclear programme of a State contributed significantly to the transparency of that State's nuclear activities. Expanded Declarations would provide the context which the Agency needed for the analysis of all available information.

61. Field trials had shown that environmental monitoring at any site to which the Agency had access could establish the existence and nature of significant activities involving nuclear material at that site. They had also shown that environmental monitoring was an objective and technically feasible method whose use at declared sites would provide assurance regarding the absence of undeclared activities.

62. Physical access for the purpose of checking on and confirming information available to the Agency was, under certain circumstances, essential if the Agency was to draw meaningful conclusions regarding such information. The measures identified as means of optimizing the present safeguards system represented approaches which his country could support in any case, and they should be pursued vigorously in order to maximize cost-effectiveness.

63. There was a desire that the envisaged safeguards enhancements be "cost-neutral" with time. However, savings due to technological advances would be realized only after an initial investment in equipment had been made and sufficient operational experience gained. In the 1996 budget document it was made clear that Programme 93+2 would be fully

implemented only if extrabudgetary funds were made available, but, given the severe national budget constraints being experienced by Member States, Programme 93+2 should not be regarded as a panacea for future safeguards funding problems.

64. His delegation, which would like the Secretariat to keep the Board informed about progress in implementing the measures described in Part 1 of document GOV/2807, was generally in favour of the Part 2 measures and looked forward to examining Secretariat recommendations relating to them.

65. It was nevertheless concerned about the Secretariat's proposals regarding no-notice access to non-nuclear facilities; such access would be of little value and difficult to reconcile with fundamental privacy rights. Moreover, his delegation considered the range of facilities and circumstances envisaged in that context to be inadequate from the point of view of providing assurance of the absence of undeclared activities. Firstly, there were no provisions permitting access for the implementation of a technically sound, cost-effective, wide-area environmental monitoring technique; at the present stage of work on the Part 2 measures, the possibility of such access must be kept open. Secondly, it was his delegation's view that States should commit themselves in advance to doing their best to arrange for access to non-nuclear activities of interest to the Agency, rather than treating the matter as a purely voluntary one.

66. With regard to Expanded Declarations, the Agency should seek and receive information on non-nuclear facilities in the vicinity of nuclear sites and selected information on States' activities - including exports - involving key equipment with the technical capability of producing or processing nuclear material.

67. With regard to the legal authority of the Agency to implement the Part 2 measures, a broad range of views existed, but his delegation saw no need for a continuation of the debate.

68. The NPT Review and Extension Conference had concluded that the Agency's capability for detecting undeclared nuclear activities should be increased and that Board decisions in that regard should be supported. Main Committee II had noted the need for NPT safeguards to provide credible assurance of the absence of undeclared nuclear activities.

Now that Argentina, Chile and Ukraine were NPT parties, all comprehensive safeguards agreements being implemented by the Agency involved NPT States. The Director General had said that the Agency needed complementary authority and that such authority could take different forms as long as its content was the same for all the States in question and legally binding. The United States would support the Director General's flexible approach, which, in his delegation's view, met the different needs of different States and obviated the need for a debate - which would be inconclusive - on the exact limits of existing powers.

69. Mr. BAER (Switzerland) said that the Agency had 25 years of successful experience in providing credible assurance of the non-diversion of nuclear material from declared activities but that events in Iraq and the DPRK had revealed the need also to prevent undeclared nuclear activities.

70. The system operated by the Department of Safeguards in providing credible assurance of non-diversion of nuclear material had a weak point which events in Iraq had clearly revealed: it was basically a system for honest people. The Agency could do little so far if a State decided to cheat, failed to declare its full inventory and ran a secret, parallel fuel cycle. That had led to severe criticism of the Agency and to suggestions that it lacked the tools necessary for really effective non-proliferation safeguards. It had also led to Board agreement on the need to strengthen the safeguards system and to the presentation by the Secretariat of innovative proposals. The credibility of the Department of Safeguards in the years to come would depend largely on how reliably it was able to verify the absence of undeclared nuclear activities; in fact, the credibility of the entire Agency might be involved.

71. The measures presented by the Secretariat were divided into two groups, those which could readily be applied under existing legal authority and those requiring additional legal justification. It was the task of the Board to determine which measures offered the optimum combination of characteristics. Measures based on technological advances, closer co-operation with SSACs, no-notice inspections and Expanded Declarations would probably be the best means of achieving more reliable assurance of non-diversion, while measures based on environmental monitoring, no-notice inspections and closer co-operation with SSACs would probably constitute the most efficient approach to confirming the absence of undeclared activities.

72. The experience of the previous 25 years with safeguards on declared activities had been positive; no cases of intended diversion of nuclear materials had been reported. Although improvements were certainly possible, the cost/benefit ratio was no longer favourable: to gain minor benefits, major costs in terms of staff time, money and equipment would be required. In particular, LWRs were among those installations making up the fuel cycle where diversion was least likely to go undetected, and Switzerland would not burden its LWR operators with further controls unless such controls were a substitute for existing ones and unless they led to greater efficiency.

73. In that respect, Expanded Declarations were not a miracle tool; they would do very little to improve the transparency of nuclear programmes without the co-operation of States and their SSACs. In other words, they would not catch the cheaters - only annoy honest States and make their task more complicated.

74. The collection of enormous amounts of information in the hope that some of it might at some time become relevant was not an efficient use of resources; there was no point in accumulating information simply to feed a hungry database.

75. It was a matter of concern to his country that information was to be requested not just on "source or special fissionable material and nuclear facilities relevant to safeguards", but also on - for example - "Domestic manufacturers of major items of nuclear equipment ...", their location and their products. Sweeping requests for extra information should not be made simply in the interests of strengthening safeguards; they involved much larger issues, including the role of the Zangger Committee and the future of export controls in general. Such issues might have to be discussed on their own merits, but not now in the context of Expanded Declarations for safeguards purposes.

76. Verifying an absence of undeclared nuclear activities was not only a new task for the Agency, but also a task that should have top priority. The world could not afford another situation like the one that had developed in Iraq, and the Agency might not survive if another such situation developed. The NPT Review and Extension Conference had re-emphasized the role of the Agency and insisted that its capability for detecting undeclared nuclear activities be increased. Now it was for the Board to show the way.

77. In his delegation's view, top priority should be given to those measures which would be the most useful in verifying the absence of undeclared activities - namely, environmental sampling and no-notice inspections. The latter clearly required close co-operation between States, their SSACs and the Agency. It was incumbent on Board members to impress upon their national authorities the need for such co-operation and the importance of issuing appropriate visas for Agency personnel.

78. In the opinion of the Swiss delegation, the Secretariat had been highly optimistic with regard to costs. Environmental sampling was not cheap, and it was extremely doubtful whether even 1000 analyses a year would be enough for establishing the absence of undeclared activities with reasonable certainty. At all events, a conscience-salving alibi exercise would not be acceptable.

79. His delegation did not believe that the savings achieved through greater efficiency elsewhere in the safeguards system would be enough to cover the costs of environmental sampling; a good safeguards programme would inevitably mean a larger safeguards budget. However, the safeguards programme was sufficiently important to Switzerland for his delegation to be prepared to consider a possible exception to zero-real-growth budgeting in respect of it.

80. With regard to the question of the existence or absence of the legal authority necessary for the implementation of measures, that criterion could be emphasized too much, and the absence of legal authority could even be used as an excuse for not acting. Adoption of some of the proposed measures would necessitate changes in the legislation of some countries, including Switzerland.

81. It was now for the Board to decide which measures were absolutely necessary for the creation of a credible programme capable of meeting the goals set by the Board in March, which ones might be useful but were not essential, which ones could be dispensed with (and why), and when each of the measures should take effect. If it failed to agree on answers to those four questions, the Board would be failing to recommend improvements to the Agency safeguards system while admitting that such improvements were needed. If - as he expected - an agreement was finally reached and confirmed by the General Conference,

however, the Agency would have defined a modern policy for the field of endeavour in question. Each Member State would still have to take corresponding measures at the national level, modifying its national legislation where necessary, but the length of time involved should not be used as an excuse for not beginning.

82. The Swiss delegation hoped that all States parties to comprehensive safeguards agreements would co-operate with the Secretariat in implementing the measures described in Part 1 of document GOV/2807 but realized that more time and effort would be required for fine-tuning those measures. It generally approved of them but was extremely sceptical about the possibility of their rapid and widespread implementation.

83. Mr. WALKER (Australia) said that, following the decision to extend the NPT for an indefinite period, the strengthening of safeguards through the implementation of Programme 93+2 had become a major priority. The lessons of recent history, and particularly events in Iraq, the DPRK and - to some extent - South Africa, had demonstrated the need for verification systems to have the capacity for detecting undeclared facilities.

84. The 175 States participating in the NPT Review and Extension Conference had unanimously called for the adherence to the NPT of the "threshold" States which had major unsafeguarded nuclear programmes and were widely believed to have developed the capability for producing nuclear explosive devices. The NPT's universality and the adherence of those States would be diminished in value, however, unless all States were confident that undeclared facilities could be detected. Similarly, a verification regime for a treaty prohibiting the production of fissile material for weapons purposes would need to provide assurance that no undeclared nuclear activities were being carried out.

85. Nuclear disarmament itself, to which the parties to the NPT had rededicated themselves in New York, required that States have full confidence that no one was engaging in clandestine nuclear weapons programmes, and any weakening of confidence would be highly inimical to international co-operation in the peaceful uses of nuclear energy.

86. Against that background, Australia believed that the Secretariat proposals contained in document GOV/2807 were fully consistent with the decision taken by the NPT Review and Extension Conference, which had provided the political authority for proceeding

expeditiously to strengthen Agency safeguards. The proposals represented minimal practicable measures which would complement existing safeguards obligations and measures, enabling the NPT safeguards system to adapt continually to the demands of effective verification.

87. Australia also believed that the Board should focus on the measures required in order to strengthen safeguards; while legal issues were important, they should not distract it from them.

88. With regard to the measures proposed in Part 1 of document GOV/2807, his delegation would like to see implementation beginning before the end of 1995. As to the Part 2 measures, the Secretariat - rather than a committee of the Board - should prepare a document on the measures which, in its opinion, required complementary legal authority.

89. The proposed two-phase approach could lead to an undesirable two-tier legal regime. However, States with safeguards agreements based on document INFCIRC/153 had a common duty to participate in strengthening the safeguards package adopted by the Board. That duty could be expressed in different types of legal instrument concluded between the Agency and individual States, which should meet the concerns of States wishing to negotiate directly with the Agency any changes to their comprehensive safeguards agreements required in order to implement the new measures. The important thing was that the rights and obligations spelled out in the legal instrument should be the same for all States with comprehensive safeguards agreements and be clear to the Board.

90. Safeguards development was a dynamic process, and neither document GOV/2807 nor the further elaboration of the Part 2 measures should be regarded as representing a final stage. It was important that States accept the scope for innovation inherent in document INFCIRC/153 and that the Board develop proposals sufficiently flexible to accommodate further refinements, which might include - for example - the use of wide-area environmental monitoring.

91. Greater access to information and greater physical access were the keys to a strengthened safeguards system. The Expanded Declaration was important in that regard, and his delegation would like to see it evolve through an iterative process involving the

Secretariat and Member States. The draft Expanded Declaration in document GOV/2807 marked a stage in that process, but his delegation was concerned that non-nuclear commercial and military facilities in the vicinity of nuclear facilities had been omitted; they should be reinstated.

92. The Secretariat should continue to develop its explanations of the reasons for particular entries in the Expanded Declaration and the inspection mode and frequency proposed for declared sites, indicating what effect the use of environmental monitoring would have on the inspection requirements. Clarity about objectives and means should make it easier for States to accept additional inspection procedures.

93. The Secretariat should also continue discussing with Member States the rationale of no-notice inspections and the necessary associated reporting and visa arrangements. In that connection, the Board might be interested to learn that a no-notice inspection at Lucas Heights had been successfully completed during field trials conducted by the Agency in Australia. The results had been positive, pointing to the effectiveness and efficiency of no-notice inspections as a safeguards measure, and Australia had offered the Secretariat extended access for all future inspections at Lucas Heights and at all locations on the Expanded Declaration.

94. As regards costs, his delegation believed that savings could be achieved through improvements in the present safeguards system, but that greater assurance about the absence of undeclared activities in a State could be obtained only through additional measures whose exact costs were still unknown. It was necessary to be realistic about the likelihood of an increase in the safeguards budget in the short or medium term, but the extra costs should be viewed in the light of the undeniable fact that all countries benefited from safeguards - not just those whose facilities were safeguarded.

95. Briefly, Australia favoured immediate implementation of the measures proposed in Part 1 of document GOV/2807, but recognized that further consultations and demonstrations were necessary in connection with those proposed in Part 2. His delegation agreed that there might not be sufficient time before September 1995 to finalize Part 2 and that it might be wiser to defer consideration of the text in question to the Board's December meetings.

96. In conclusion, he wished to use the opportunity in order to express his Government's opposition to the decisions taken by the Governments of China and France to resume nuclear testing. Those decisions were in contradiction to the political commitment, entered into recently in New York, to exercise the utmost restraint during the final phase of negotiation of a comprehensive test ban treaty. A statement made by the Australian Prime Minister on the French decision was to be circulated to Board members.

97. Mr. BENATTALLAH (Algeria), recalling that his country had acceded to the NPT in January 1995, said that it had participated in the NPT Review and Extension Conference, thereby demonstrating its commitment to nuclear non-proliferation.

98. Algeria appreciated the Director General's efforts to institute, in consultation with Member States, new measures which would be practicable and effective and also in keeping with the Agency's promotional role. Those measures must not create new constraints as regards access to nuclear technologies and the conduct of peaceful nuclear research programmes, and they should therefore be grounded in the Agency's Statute and the provisions of document INFCIRC/153.

99. Accordingly, his delegation, which associated itself with the statement made on behalf of the Group of 77, believed that, of the measures proposed in Part 1 of document GOV/2807 with a view to greater Agency access to information, those aiming at improved co-operation with SSACs should be encouraged and that the Agency should provide technical and financial assistance to States wishing to establish SSACs.

100. As regards the information on nuclear activities which States would be required to provide in the Expanded Declaration, some States might have difficulty in providing detailed and accurate information on past nuclear activities because they had not had an accounting system conforming to Agency standards before the conclusion of their comprehensive safeguards agreement with the Agency. There might therefore be gaps and inconsistencies in the information provided. That objective constraint was compounded by persisting uncertainties about legal authority.

101. His delegation was not convinced about the usefulness of information on R&D activities not involving nuclear materials and on the location and status of known uranium and thorium ore deposits and mines. The right of access to such sites might raise problems of confidentiality, and his delegation would have difficulty in granting that right, which had no foundation in document INFCIRC/153.

102. The Secretariat's proposals relating to no-notice inspections, and particularly to simplified procedures for the granting of visas, might be at variance with national legislation. In that connection, his delegation did not think that paragraph 84 of INFCIRC/153 implied obligations like those referred to by the Secretariat in paragraph 23 of document GOV/2807.

103. The Secretariat's proposals placed no limit on the extent of the envisaged greater physical access to sites, facilities and installations. Such access would be not only to locations beyond strategic points in nuclear facilities or LOFs and other locations identified in the Expanded Declaration, but also to any locations that might be of interest to the Agency. Without prejudice to the purpose of extending the domain of inspector intervention, very clear geographical delimitation was essential in order to preclude deviations from the safeguards scope stipulated in the basic legal instruments. Also, it had not been demonstrated that strengthening of the safeguards system depended on the granting of access to all locations, even if they were unconnected with the nuclear activities of States.

104. On those and many other matters, particularly the reliability of the equipment which the Agency would be using, additional studies should be carried out in order to obtain conclusive results.

105. Having reiterated the request made on behalf of the Group of 77 for an Addendum to document GOV/2807 stipulating the legal basis for each of the proposed measures, he said that implementation of the proposed measures would undoubtedly entail additional costs, including additional burdens on national budgets, which was a source of concern to his authorities.

106. In the light of what he had said, his delegation believed that implementation in the near future of just some of the proposed measures would be counter-productive and would jeopardize the entire initiative, which was based on a package of measures meant to

constitute an integral whole. The package should be defined more clearly through extensive consultations with Member States before a start was made with the implementation of its component measures, including the measures proposed in Part 1 of document GOV/2807. Accordingly, he supported the proposal made by the representative of Brazil regarding the establishment of a group of governmental experts.

107. Algeria continued to believe that the objectives of strengthening the effectiveness and improving the efficiency of the safeguards system should be pursued on the basis of a presumption of States' innocence and not a presumption that each State was a potential wrongdoer.

108. Mr. BENMOUSSA (Morocco) said that the consultative meetings held by the Secretariat with Member States had helped his delegation in its examination of the proposals contained in document GOV/2807 - proposals which touched on the Agency's very *raison d'être*, or at least its credibility.

109. Agency safeguards could, given the full co-operation of Member States, promote international confidence and strengthen collective security, and an effective and efficient safeguards system for preventing the misuse of nuclear energy, especially misuse through undeclared nuclear activities, could promote co-operation in its peaceful uses. The extension of the NPT for an indefinite period had confirmed the commitment of the States party to the NPT to work for a nuclear-weapon-free world and their resolve to strengthen the effectiveness and improve the efficiency of the safeguards system in conformity with the Agency's Statute.

110. In parallel with the efforts being made to strengthen the safeguards system, efforts should be made to induce States not party to the NPT that were operating unsafeguarded nuclear facilities to accept full-scope Agency safeguards. In that connection, his delegation would like all Member States in the Middle East to take practical steps towards the establishment of an effectively verifiable zone free of all weapons of mass destruction - nuclear, chemical and biological.

111. While recognizing the growing importance of Agency safeguards, Morocco felt strongly that strengthening of the safeguards system must not result in a decrease in the resources available for technical co-operation; strengthening the safeguards system must be consistent with the Agency's role in promoting the practical application of atomic energy for peaceful purposes and the corresponding transfer of technology.

112. His delegation, which endorsed the statement made on behalf of the Group of 77, hoped that the Board would take the action recommended in paragraph 6 of document GOV/2807 and believed that the full benefits of that action would derive from early implementation of those measures proposed in Part 1 of that document which fell within the scope of document INFCIRC/153. Also, it favoured the idea of consideration of the Part 2 measures - along with a draft instrument giving complementary legal authority - at the Board's December 1995 session.

113. In the view of his delegation, Parts 1 and 2 of document GOV/2807 were closely linked; the safeguards system was indivisible, representing a responsibility shared by the entire international community.

114. Mr. MEADWAY (United Kingdom), having endorsed the statement made by the Governor from France on behalf of the European Union, said that for the United Kingdom the political basis for the Board's present discussion was the statement that "the IAEA's capability to detect undeclared nuclear activities should be increased" appearing in the NPT Review and Extension Conference's decision on "Principles and Objectives for Nuclear Non-Proliferation and Disarmament".

115. His delegation would like the Secretariat to press ahead with the measures described in Part 1 of document GOV/2807, although it realized that the elaboration of detailed implementation arrangements would involve further - perhaps considerable further - discussion between the Secretariat and individual Member States.

116. From the Secretariat's legal analysis regarding the use of environmental monitoring techniques, it appeared that such techniques could be regarded as (in the words of sub-paragraph 74(e) of document INFCIRC/153) "other objective methods which have been demonstrated to be technically feasible". His delegation therefore considered it quite proper

that the Agency use them, together with other safeguards techniques, during inspections and safeguards-related visits at the locations and for the purposes specified in paragraph 48 and paragraphs 70-82 of document INFCIRC/153.

117. As regards those strengthening measures for which complementary authority was required, his delegation considered it essential that the complementary authority be obtained through a new legal instrument - perhaps an additional protocol to agreements based on document INFCIRC/153. Whatever its form, the instrument should have a status equal, both in international law and in the domestic law of individual Member States, to that of existing INFCIRC/153-type agreements.

118. While fully understanding the reasoning behind the division of the Programme 93+2 measures into two parts, the United Kingdom believed that, as stated in paragraph 39 of document GOV/2807, the greatest benefit "will derive from implementation of the full set", and in that connection he was unable to agree with the Governor from Switzerland, who appeared to believe that it would be possible to pick and choose from a menu; the United Kingdom delegation was of the opinion that virtually all of the courses on the menu were essential.

119. In considering document GOV/2807, the Board should not forget document GOV/2787, which would be relevant to its consideration of the extent to which the package of measures ultimately adopted for application in connection with comprehensive safeguards agreements could be applied to item-specific and voluntary-offer safeguards agreements.

120. His delegation appreciated the information provided in document GOV/2807 on the rationale for the expanded-access approach and welcomed the comments - in the Annex to that document - to the effect that the primary focus of the approach continued to be nuclear-fuel-cycle-related activities. In that context, it considered that the Expanded Declaration would be important primarily as a means by which a State could provide information about nuclear-fuel-cycle-related activities at specific locations - information on the basis of which the Agency could perform consistency checks and, in consultation with the Member State concerned, investigate any anomalies. The purpose of the exercise would not be to collect vast amounts of information on activities for which States would have to account in detail,

but to establish a co-operative process involving the Agency and States and designed to raise levels of assurance. There should nevertheless be further explanation of the rationale and of the justification for including specific items in the Expanded Declaration. Similarly, further work was needed on defining some important terms in the draft Expanded Declaration.

121. The issues which he had mentioned were being examined in detail, and it was in everyone's interest that their examination be completed before the detailed drafting of a legal instrument relating to complementary authority was undertaken. Even then, the reaching of an agreement on the content of such a legal instrument would be an iterative process, during which the Secretariat could shape the draft text so as to reflect advice and other inputs received from Member States. He hoped that the Secretariat would be able to submit a reasonably well-developed draft to the Board for consideration in December 1995.

122. Many of the concerns expressed in the course of the Board discussion were understandable, but they should not be allowed to get out of proportion. Most of them could be effectively addressed through discussions between the Secretariat and Member States during the envisaged process. In particular, there was no reason to think that the financial consequences of the proposed measures would be detrimental to other Agency programmes and hence no reason for decisions to be postponed on financial grounds. The Board should take the action recommended in paragraph 6 of document GOV/2807 on the understanding that the concerns of individual Member States regarding the measures described in Part 1 would be addressed through discussions between those Member States and the Secretariat.

123. Mr. GOESELE (Germany), having endorsed the statement made on behalf of the European Union, said that document GOV/2807 represented an important step forward and that his delegation was confident that the Secretariat would ensure that the envisaged stepwise implementation of the proposed measures did not endanger the synergetic effects which should result from implementation of the entire package of measures as a whole. The Secretariat had clearly taken account of many of the remarks and suggestions made during formal and informal discussions in recent months, and his delegation believed that successful completion of both parts of the current exercise would depend on a continuation of that constructive, co-operative approach.

124. As far as Part 1 of document GOV/2807 was concerned, the Secretariat should push ahead, although the precise scope and the modalities for implementing them had still to be determined. With regard to implementation in States belonging to the European Union, particular attention should be paid to the involvement of EURATOM, advantage being taken of the close relationship developed through the New Partnership Approach. His Government was prepared to co-operate closely with the Agency and EURATOM in the interests of rapid implementation.

125. With regard to Part 2, his Government looked forward to receiving additional information, including definitions and an explanation of the rationale underlying the proposed measures for which the Agency would have to be given complementary legal authority. In Germany, many of the proposed measures would have to be implemented on the basis of national legislation, particularly where access to privately owned information or property was involved, so that a clear demonstration of the need for those measures and a clear explanation of their rationale would be essential.

126. The Agency already had the authority to conduct special inspections, and it would be necessary to determine clearly what ground could be covered by that authority. Full use should be made of the Agency's existing legal powers before additional ones were created.

127. At present, the main instrument for detecting undeclared nuclear activities was provided to the Agency by authority to conduct special inspections if it considered that "information made available by the State ... is not adequate for the Agency to fulfil its responsibilities"; that authority included a right to access to information or locations over and above the access specified for ad hoc and routine inspections. There was no clause in comprehensive safeguards agreements which would limit the frequency of special inspections, and the Agency therefore had the right - and even the duty - to conduct such inspections whenever it considered the information supplied to be inadequate. The agreements provided for very effective procedures to be applied in the preparation of special inspections, including consultations with the State concerned and, if necessary, the involvement of the Board of Governors.

128. His delegation would welcome an indication by the Secretariat - as promised earlier - of which of the proposed measures might also be applied in relation to item-specific safeguards agreements and to voluntary-offer agreements with nuclear-weapon States.

129. Although the problem of undeclared nuclear activities was specific to States with full-scope safeguards agreements, some of the measures proposed for addressing that problem could be applied universally - for example, measures based on new techniques such as environmental monitoring, measures based on increased access for the verification of design information, measures based on increased co-operation with States and SSACs, and the gathering of information on the production and exchange of nuclear material and equipment. The efforts to strengthen Agency safeguards should not be restricted to just one part of the system; they should extend to improving the system as a whole, advantage being taken of the synergetic effects resulting from improvements in its different parts.

130. Mr. WALKER (Canada), having recalled points made by his delegation at the Board's March 1995 session, said that the present safeguards system had been created at a time when there already existed tens of thousands of nuclear weapons. A static approach to safeguards, when there was a real possibility of continuing to achieve significant reductions in the number of nuclear weapons in the world, would slow down the process of reducing that number and might even bring it to a halt. It was essential to push ahead.

131. Important guidance in that connection had been provided by the NPT Review and Extension Conference, where 175 States had indicated that Agency safeguards should be regularly assessed, that Board decisions aimed at further strengthening the effectiveness of safeguards should be supported and implemented, and that the Agency's capability to detect undeclared nuclear activities should be increased. The unambiguous wishes of the States party to the NPT gave a legitimacy to the current endeavour which could not be ignored.

132. The Canadian Government had, from the outset, been a strong supporter of the Agency's efforts to find ways of strengthening safeguards, and particularly to acquire a credible means of detecting the presence of undeclared nuclear material. Over the past two

years, Canada's SSAC and the Canadian nuclear industry had been involved with Agency personnel in an extensive testing programme on procedures for enhanced access to information and locations. His Government had consequently found document GOV/2807 to be useful and forward-looking.

133. Expressing support for the action recommended in paragraph 6 of that document, he said that Expanded Declarations with information on SSACs and on present and planned nuclear activities would, by making nuclear programmes more transparent, enhance levels of assurance regarding the peaceful nature of those programmes. Experience during trials in Canada had shown that the completion of an Expanded Declaration was not an onerous task.

134. As regards environmental sampling, thanks to which it should be possible to focus safeguards efforts more precisely on the detection of sensitive activities like reprocessing and enrichment, Canada agreed that, wherever and whenever the Agency had a right of access in order to conduct inspections or make design information verification visits, it might take environmental samples.

135. Canada agreed also that improved evaluation of the information available pursuant to INFCIRC/153-type agreements would make it easier to identify activities inconsistent with States' declarations.

136. Canada agreed in addition that no-notice inspections might usefully be carried out under existing authority for the purposes set out in paragraph 24 of document GOV/2807. It should be recognized in that connection that, in agreeing to the immediate implementation of the measures proposed in Part 1 of that document, the Board would be agreeing to the initiation of activities and forms of access that were new to the Agency, SSACs and the nuclear industry. Those activities and forms of access would be easier to arrange in some States than in others. There were unlikely to be any difficulties in Canada, but it was not expected that the new forms of access would be fully institutionalized before the end of 1995; rather, it was expected that all necessary arrangements would be in place by the end of 1996 - and hoped that the same would apply in other Member States.

137. With regard to Part 2 of document GOV/2807, Canada looked forward to receiving further information and was ready to assist the Agency in developing an appropriate instrument.

138. Most of the Part 1 and Part 2 measures being considered by the Secretariat could and should be implemented on the basis of the broad provisions set out in document INFCIRC/153, and particularly on the basis of the rights and obligations set out in paragraph 2 and the breadth of access possible under paragraph 73 if the Agency considered that it could not adequately fulfil its responsibilities. Any other approach would possibly result in important political problems.

139. Canada endorsed the Secretariat's view, expressed in paragraph 38 of document GOV/2807, that the substance of the rights and obligations contained in the instruments employed in order to give effect to the Agency's complementary legal authority should be the same for all States with comprehensive safeguards agreements; there should be no à la carte comprehensive safeguards. It was concerned, however, that irrespective of the form - or forms - of the complementary authority and no matter how standardized the substance of the rights granted and obligations undertaken was, a two-tier safeguards system might emerge, with the comprehensive safeguards in some States based on document INFCIRC/153 and a separate legal instrument concluded with the Agency and the comprehensive safeguards in other States based exclusively on document INFCIRC/153. Such a situation would be highly regrettable.

140. Referring to item 2c(viii) in Table 1 of document GOV/2807, "Information identified in GOV/2629 (voluntary reporting on nuclear material and specified equipment and non-nuclear material)", he said that, since the information which Canada provided pursuant to the Board's February 1993 decision regarding the establishment of a reporting scheme was intended to enable the Agency to take decisions about the application of safeguards in other States, not in Canada itself, the appropriateness of requiring the inclusion of such information in Canada's Expanded Declaration was difficult to comprehend.

141. His delegation had a number of questions relating to paragraph 53 ("No-notice Inspections") of document GOV/2807. In particular, it would like to know more about the proposal that there be no-notice access to locations which, according to the Expanded Declaration, contained no nuclear material. Canada's difficulty with that proposal was compounded by a failure to understand the conceptual basis of such a rapid-access requirement. The purpose of access, and especially no-notice access, to non-nuclear facilities should be clarified.

142. In the trials carried out in Canada, broad access to nuclear facilities had been granted for the purpose of seeking undeclared nuclear material and undeclared activities involving such material. As Canada had no direct experience of the activities which the Agency might perform at non-nuclear facilities, it would like the Secretariat to provide a description of the activities performed by it when it had had access to a non-nuclear facility.

143. Mr. KHLEBNIKOV (Russian Federation) said that the NPT Review and Extension Conference had shown great appreciation of the efforts to further strengthen the effectiveness of safeguards and to increase the Agency's capability for detecting undeclared nuclear activities.

144. His delegation, which considered Programme 93+2 to be of the highest importance, appreciated the idea of dividing the proposed new measures into two groups (described in Parts 1 and 2 of document GOV/2807) as a function of the feasibility of early practical implementation and shared the Secretariat's wish that the Part 1 measures - including those based on environmental sampling - be implemented soon. Those measures could prove to be a powerful instrument for the detection of undeclared nuclear activities, leading to changes in safeguards approaches and reducing the burden on SSACs.

145. With regard to the measures outlined in paragraph 35 of document GOV/2807, he said that careful preparations should be made for their implementation, with particular thought given to further consultations with States on the development of implementation procedures, on the training of SSAC staff and Agency inspectors and on the development of a system for analysing the information received. As to the field testing of proposed measures, that should

continue on the basis of close co-operation with SSACs, emphasis being placed on activities in sectors of the nuclear fuel cycle where there was a potential for the undeclared production of nuclear materials that could be used in the manufacture of nuclear explosive devices.

146. Recalling that the Director General had said in his introductory statement that the modalities for implementing Part 1 measures would be specified in a letter from the Agency to States with comprehensive safeguards agreements, he expressed the hope that the letter in question would help to create a spirit of co-operation and mutual understanding and to avert confrontation and legal battles.

147. Though the Part 2 measures were not a subject for detailed consideration at the Board's current series of meetings, his delegation would like to have a better idea of the technical, legal and financial consequences of their implementation and a clearer explanation of the reasons for requesting some of the information to be included in the Expanded Declaration and for seeking greater access to information.

148. The Russian Federation sympathized with the desire to make wider use of modern technology, particularly in the area of remote monitoring. However, as a rule the Agency had found the complex and expensive equipment used by it in safeguards not to be very reliable. A more systematic approach should be adopted to the development, procurement and use of such equipment, with the Secretariat playing the principal role in decisions on its introduction for inspection purposes and taking responsibility for the consequences of such decisions.

149. Work should continue on the field testing of new safeguards methods, which should be applied in Member States on a voluntary basis as that would - in his delegation's view - help to resolve a number of outstanding questions, including legal ones.

150. His delegation would welcome a further detailed discussion of Programme 93+2 at the Board's next session.

151. Mr. WÓJCIK (Poland) said that his delegation, which liked document GOV/2807 (particularly because it was action-oriented), welcomed the line drawn in it between measures to be based on existing legal authority and those requiring a complementary legal basis, and shared the Director General's view that the implementation

of measures falling within the first category should be started at an early date. Also, it welcomed the announced intention to specify the implementation modalities in a letter from the Agency to States with comprehensive safeguards agreements and considered it proper that States should be assured of a standard, non-discriminatory application of the proposed measures.

152. In his delegation's view, those of the measures listed on page 6 of document GOV/2807 which would enable the Agency to make better use of equipment and inspectors (for example, unannounced routine inspections, the granting of multiple-entry long-term visas to inspectors and the use of available systems for direct communication between inspectors and Headquarters) should be the first to be implemented. In addition, high priority should be given to environmental sampling, care being taken to ensure that it was carried out only after a thorough analysis of all available information, including information from inspections.

153. His delegation agreed with the Director General that more time, certainly beyond September 1995, would be needed in order to elaborate the Part 2 measures and the draft legal instrument to serve as their basis. In the interest of simplifying matters, perhaps the question of environmental sampling could be dealt with separately. SAGSI, which had played a valuable role in the process of preparing the proposals now before the Board, would undoubtedly be able to make a useful contribution to the work lying ahead.

154. The indefinite extension of the NPT provided the necessary basic rationale for the continuation of Agency safeguards, and the NPT Review and Extension Conference, which had expressed support for the Agency and its safeguards, had endorsed the efforts being made - including those being made within the framework of Programme 93+2 - to increase their effectiveness. The Conference's call for prompt Board action was clear and unequivocal, and the political weight of the Conference's support could not be overstated.

155. Poland was hoping for an early completion of Programme 93+2 and was ready to co-operate with the Agency in carrying out parts of it. It believed that early implementation of the Part 1 measures would substantially increase the effectiveness of the Agency's current

safeguards, which would be further increased through the introduction of Part 2 measures, and trusted that full implementation of the proposed measures would in the long term result in "cost neutrality".

156. Mr. FITZGERALD (Ireland), having endorsed the statement made on behalf of the European Union, said that the Board's task had been given a clearer focus and a strong impulse by the NPT Review and Extension Conference, which had confirmed the Agency's central role in the verification of non-proliferation, clearly indicated what further efforts were expected of the Agency and set the broad political direction for those efforts. Also, the Conference had stated unambiguously that the Agency's capability for detecting undeclared nuclear activity should be increased. The conclusions of the Conference represented a challenge which should be taken very seriously, and the mechanisms necessary for meeting that challenge should be put in place.

157. The phased approach proposed by the Secretariat was appropriate, and his delegation endorsed the Director General's intention to proceed already with the implementation of the measures described in Part 1 of document GOV/2807.

158. The Board would have to consider detailed proposals on the Part 2 measures later in the year. The summary proposals now before it appeared to be in line with his country's assessment regarding what the Agency needed to achieve in the intermediate term and the direction in which the Agency should move if it was to give substance to the conclusions of the NPT Review and Extension Conference and justify the trust based in it. They provided a good basis for achieving the greater transparency and effectiveness needed in the safeguards system and, although greater openness on the part of States and possibly also additional resources would be required, that would be amply justified by a greatly improved atmosphere of confidence and mutual reassurance.

159. Referring to paragraph 36 of document GOV/2807, which spoke of "a redistribution of resources, rather than ... the acquisition of additional resources", he said that the efficiency increases which the Secretariat expected to achieve with the envisaged new arrangements and the expected improvements in the co-operation of States in safeguards implementation should in due course be reflected in the annual budgetary provisions for

safeguards. Those provisions should be sufficient to enable the Agency to discharge its expanded mandate satisfactorily and provide the necessary assurance that NPT obligations were being complied with by all, in relation to both declared and undeclared activities. That assurance was far more important than some marginal alleviation of budgetary burdens; the security of many States was at stake, and slight improvements in national budgets would be poor consolation if their security was jeopardized. If costs were to be the prime concern, safeguards might as well be dispensed with and trust be placed - as some would wish - simply in the declared openness and honesty of States. The assurance being sought would be expensive, but his country would pay its share of whatever was necessary in order to achieve it.

160. Ms. OK (Turkey) said that the measures outlined in document GOV/2807 met the expectations of her Government, which was in favour of greater access to information, greater physical access (including greater physical access through no-notice inspections), optimizing the application of the present safeguards system, and the use of environmental sampling methods.

161. At the same time, her Government believed that the proposed measures should be applied also in the case of item-specific and voluntary-offer safeguards agreements. Their application would be beneficial only if it was universal.

162. In implementing the measures described in Part 1 of document GOV/2807, the Secretariat should make full use of the Agency's authority under existing comprehensive safeguards agreements, which permitted - inter alia - special inspections for the purpose of detecting undeclared nuclear activities when the information provided by a State was not adequate for the Agency to fulfil its responsibilities. Her delegation therefore hoped that the Board would agree that the Secretariat implement the Part 1 measures on the basis of a broad interpretation of the existing comprehensive safeguards agreements.

163. With regard to the Part 2 measures, Turkey would like to see an increase in the Agency's capability for detecting undeclared nuclear activities and would therefore like the Secretariat to pursue its efforts relating to the question of complementary legal authority. Although her country would prefer such authority to take the same form in all cases, it

realized that a variety of forms might be necessary. At all events, the Secretariat should continue its consultations with Member States in order to determine how their specific concerns might best be met.

Excerpt from the record of the Board's 871st meeting

1. Mr. ARCILLA (Philippines), having endorsed the statement made by the Chairman of the Group of 77, said that his delegation looked forward to receiving the letter from the Agency to States with comprehensive safeguards agreements specifying the modalities for implementing the new measures for which there was existing legal authority. In that connection, he urged Parties to the NPT which had not yet entered into safeguards agreements with the Agency to do so as soon as possible. He hoped that the implementation process would be non-discriminatory as stated by the Director General in his introductory statement.
2. At the Board in March, the Philippines delegation had been assured by the Director General that its comments would be taken fully into account in the overall formulation of the Agency's safeguards policy. In particular, his delegation had pointed out the need to identify and examine how the proposed new measures under Part 1 of Programme 93+2 could be usefully applied to safeguards under INFCIRC/66-type agreements and voluntary-offer safeguards agreements. He wondered when the Secretariat intended to act on the assurance it had given.
3. Safeguards was a statutory function of the Agency and safeguards policy should not only be non-discriminatory, but should also ensure that all safeguards were strengthened and made more efficient to make certain that nuclear energy was not used for military purposes. That statutory function had gained greater urgency and importance with the indefinite extension of the NPT, which he feared might also have ensured the indefinite non-universality of the Treaty, owing to the less than universal acceptance of the "package" leading to its indefinite extension without a vote. The lack of consensus was a direct result of the lack of consensus in Main Committee I, particularly concerning the implementation of Articles I, II and VI of the Treaty. Some of the concerns expressed by non-nuclear-weapon States during the deliberations on those Articles had been given more credence by the nuclear test conducted by China so soon after the Conference and France's announcement that it intended to conduct further nuclear tests in the near future.

4. With regard to SSACs, his delegation had in March raised the possibility of developing standard SSACs, but had been informed that document INFCIRC/153 required only in generic terms the existence of such a system. Hence there were variations in SSACs from country to country. The new measures under Part 1 included a model SSAC questionnaire providing a description of the technical and personnel resources, operational capability, legal authority, information holdings related to nuclear material and nuclear-related activities and the administrative structure of the SSAC. The measures also foresaw a description by the State of the scope and timing of SSAC inspections, if any, and related activities. Those measures were a step towards a truly responsive national system of accounting for and control of nuclear materials, which would be useful, if not crucial, to the strengthening of safeguards.

5. In connection with the proposed SSAC questionnaire, he wondered whether, if the completed questionnaires showed that the minimum desirable and necessary systems of accounting and control were lacking, it would not be a good idea to establish some prescribed uniform minimum system of control and accounting that would make the Agency's task of independent verification of the findings of the SSAC more efficient. If that suggestion required complementary legal authority, it could be considered as a Part 2 measure. He would appreciate hearing the views of the Secretariat or receiving further explanations.

6. With regard to the Part 2 measures, he thanked the Secretariat for outlining in clearer terms the new measures requiring complementary legal authority. The Philippine authorities were studying those measures and would indicate their definitive position on their acceptability to the Secretariat prior to the Board's meetings in December 1995.

7. His delegation continued to regard Programme 93+2 as an integrated set of measures, even though it agreed to the implementation of Part 1 measures as soon as possible for practical and legal reasons. The technical and conceptual link between the two sets of measures was however clear from paragraph 57 of the document.

8. His delegation agreed with the Secretariat's view that the substance of the rights and obligations of States and the Agency with regard to the new measures should be the same and that the new measures should not be a menu from which particular items might be chosen,

but a set of complementary measures. In addition, it believed that the form of the legal instrument should be left to the discretion of each State in order to take into account the legal situation of each State.

9. Finally, it continued to believe that the applicability of Part 2 measures, once adopted by the Board as part of the Agency's safeguards policy, should be examined in relation to all the safeguards agreements being implemented by the Agency.

10. Mr. KASEMSARN (Thailand) supported the statement made on behalf of the Group of 77 and said that his country, as a Party to the NPT, attached great importance to the issue of the effectiveness and efficiency of the Agency's safeguards system, which was essential to the successful development of the non-proliferation regime. His delegation welcomed the measures contained in document GOV/2807 aimed at verifying the correctness and completeness of information on the nuclear activities of Member States within the scope of comprehensive safeguards agreements.

11. His delegation had noted with satisfaction that, as indicated by the Director General in his introductory statement, implementation of Programme 93+2 would be cost-neutral and hoped that, with the New Partnership Approach, there might even be cost savings for the Agency.

12. Mr. TARMIDZI (Indonesia) noted that political developments had led the Agency to begin a process of re-evaluation and adjustment of its safeguards system. His delegation followed with interest the activities of the Department of Safeguards, especially the progress on the development and testing of alternative safeguards measures, including environmental monitoring and the involvement of SSACs.

13. His delegation was ready to co-operate with the Secretariat in its efforts to strengthen the Agency's capability to detect undeclared nuclear activities. Indonesia had voluntarily accepted the Agency's field trials to evaluate environmental monitoring as a tool for providing greater transparency and detecting any undeclared nuclear activities. Two Agency experts had been sent to Indonesia and, together with Indonesian scientists, had collected environmental samples for the field trials.

14. Safeguards was a significant part of the Agency's role in promoting the peaceful uses of nuclear energy. Safeguards should be strengthened, not only with respect to declared nuclear activities, but also with respect to the Agency's ability to detect undeclared nuclear activities and to promote and speed up the achievement of nuclear disarmament objectives. In the long term, clean laboratories should be established in developing countries as they had been in developed countries.

15. Finally, his delegation supported the statement made on behalf of the Group of 77 and had no difficulty in agreeing to the measures taken by the Secretariat and to the new proposals to strengthen and improve the effectiveness and efficiency of the Agency's safeguards system

16. Mr. AKAO (Japan) recognized the international wish to establish a strengthened safeguards system which would provide the Agency with increased capability to detect undeclared nuclear activities and therefore strongly supported the general direction of Programme 93+2. However, he noted that additional efforts by both the Agency and the countries concerned would be necessary to implement the proposed new measures and that they therefore needed to be considered carefully from the technical, financial and legal points of view. In examining the new measures, Article III(3) of the NPT, which stated that safeguards should be implemented in a manner which avoided hampering economic or technological development, should also be taken into account. Improvement of the efficiency of safeguards should be rigorously pursued in parallel with the strengthening of the safeguards system.

17. The measures described in Part 1 of the document would have significant positive effects on the future safeguards system. His delegation therefore supported the introduction of those measures and could agree to the recommended action described in paragraph 6 of the document.

18. However, some points concerning the measures in Part 1 required further clarification or consideration in terms of their actual implementation. There should first be close consultation between the Agency and each country concerned to discuss the way in which they would be implemented. For example, the scope and format of the Expanded

Declaration should be more specifically defined. Also, the manner in which environmental sampling activities and no-notice inspections would be carried out should be carefully examined before implementation. It was also extremely important to continue the efforts to streamline the implementation of the current safeguards system.

19. Before proceeding further with the measures described in Part 2, much more information and consideration was required relating to the detailed content, technical effectiveness and feasibility, financial implications and legal basis of each measure. The additional efforts required of the Agency and the countries concerned should be justified by a detailed explanation of the gains to be made from the application of those measures. For example, there should be justification for the new measures which requested countries to provide information on and access to non-nuclear equipment, material and activities and there should be further clarification of the concept of "site". There were many additional points requiring further examination.

20. Regarding the legal basis for the new measures, it was desirable for the legal instrument for each specific measure to be the same for all countries. His Government did not think that it was appropriate for the Agency's authority to carry out a new measure to be based on different legal documents that depended on the individual legal interpretation of document INFCIRC/153 made by each country.

21. Discussion of the measures in Part 2 might be facilitated if they were divided into two separate categories. One category would consist of measures requiring legal instruments whose level would correspond to the current safeguards agreements and the second category would consist of measures which might not necessarily require legal authority at the same level, but might be legally based on some other instrument, such as an exchange of letters.

22. Moreover, discussion of the measures in Part 2 should be based on the experience obtained in the implementation of the new measures in Part 1. The Secretariat should therefore take sufficient time to obtain such experience before further considering the feasibility and effectiveness of Part 2 measures or the efficiency to be gained through their

implementation. The Secretariat should in any case hold intensive consultations with the countries concerned when preparing a document relating to the legal basis for the new measures in Part 2.

23. It was very difficult to provide credible assurances that undeclared nuclear activities did not exist in a country. In order to achieve that goal, additional significant efforts would be necessary both by the Agency and the countries concerned. The extent of the measures and their manner of application should therefore be examined extensively from various points of view, taking into account the results of implementation of current safeguards measures and the limited resources available.

24. In considering the new measures under Programme 93+2, account should be taken of the benefits to be derived from the universal application of the new measures, and the effectiveness of those measures in improving the Agency's technical capability and the cost-efficiency of the safeguards system. For those reasons, the application of new measures could be beneficial not only for the implementation of comprehensive safeguards agreements, but also for the implementation of item-specific and voluntary-offer safeguards agreements. The Secretariat should seriously consider how to apply the new measures in the implementation of each type of agreement. In that respect, he fully shared the view expressed by the Governor from the Philippines.

25. In conclusion, he noted that SAGSI's continued involvement in the analysis and evaluation of new measures was very important and stressed that Programme 93+2 should continue to be carried out in close co-operation with Member States.

26. Mr. ONSY (Egypt) said that his delegation had repeatedly expressed its support for the Agency's efforts to strengthen the effectiveness and improve the efficiency of the safeguards system, believing that it was the cornerstone of international non-proliferation efforts. Programme 93+2 had reached an advanced stage following the endorsement of its general direction by the Board of Governors in March. However, additional efforts by the Secretariat, the Board and Member States were still needed in order to translate those proposals into practical action. That process should be conducted in an objective and non-discriminatory manner.

27. Egypt supported the proposals to strengthen and enhance the safeguards system, especially with regard to cost-effectiveness, on the understanding that if such proposals called for obligations on the part of Member States that went beyond existing safeguards agreements, they would be subject to explicit consent by the Member States concerned.

28. From a technical point of view and in order to reduce costs, his delegation approved the reduction in the number of inspections at LWR plants, as well as the identification of a number of other technical and administrative measures to reduce implementation costs. It also approved the use of environmental monitoring techniques to enhance the Agency's capability to detect undeclared nuclear activities and to provide greater assurance of the absence of undeclared nuclear activities.

29. The first paragraph of the report submitted to the Board in March in document GOV/2784 had indicated that the question of application of the proposed measures to item-specific safeguards agreements would be considered subsequently and the Board's decision at that time had been that the Secretariat should take into account the comments made by delegations during the discussion of that subject. As the Egyptian delegation had been among those which had asked the Secretariat to submit a preliminary account to the Board of how the envisaged measures could usefully be applied in relation to limited-scope safeguards agreements, he had noted with regret that the present report, submitted in document GOV/2807, had not in fact dealt with that very important aspect. He would like the Secretariat to explain the reasons for that omission and to remedy it in the documents presented to the Board in September.

30. Mr. MAFFEI (Argentina) reiterated his country's full support for Programme 93+2 and said that his delegation shared the spirit and objectives of document GOV/2807, and endorsed the Secretariat's intention to implement at an early date the measures described in Part 1.

31. He realized that the document did not provide a detailed review of the costs to States, the Secretariat and the operators, or an analysis of the effectiveness or practical feasibility of the measures, and that it did not describe how the integrated system of proposed new

measures and already existing measures would operate because much of the information could only be gained from experience in implementation. It was therefore important to analyse document GOV/2807 from a practical and realistic point of view.

32. One of the most important tasks for the Secretariat was the development of safeguards criteria and procedures for the implementation and evaluation of the measures in Part 1. That task should be carried out in close co-operation with the Member States involved. As was recognized in the document, some of the measures could be implemented immediately, whereas others required the establishment of a certain infrastructure or further technical development. The implementation of the measures should be based on the specific characteristics of each facility and should result in the most effective and efficient approach for each facility.

33. The measures contained in Part 1 of the document should be implemented in consultation and agreement with the relevant Member States, particularly with respect to the modalities and procedures for their implementation. The Secretariat and the Member States involved would subsequently be able to inform the Board as to the actual effectiveness and efficiency achieved in their experience in carrying out the new measures.

34. Application of the measures in Part 1 to all States with comprehensive safeguards agreements without distinction would enable the parties involved to gain experience and improve procedures. It would also ensure that the objectives of Programme 93+2 were achieved. During that process, the Secretariat should continue to benefit from advice from SAGSI.

35. Finally, as a party to the Quadripartite Agreement, Argentina hoped to begin a constructive dialogue with Brazil, ABACC and the Agency on that subject in the near future.

36. Mr. AHMAD (Pakistan) pointed out that the swiftness with which document GOV/2807 had been issued following the Board in March had allowed the Secretariat little time to make a comprehensive examination of the technical, legal and financial aspects of the proposed measures. The Secretariat might have done better to indicate that, given the limited

time available, the Board's request was unrealistic and have been better advised to ask the Board's permission to defer submission of the document until the Board's September meetings.

37. Although Pakistan was firmly committed to the goal of nuclear non-proliferation and supported the concept of Programme 93+2, his delegation considered that the Programme had acquired such a momentum of its own that there was now a risk of losing sight of the real interests of the Agency and Member States. The real purpose of safeguards was to ensure that material that could be used for the manufacture of nuclear weapons was not diverted to non-peaceful applications. That goal should remain the focus of the Agency's safeguards activities, and it was unwise to attempt to shift the emphasis from the safeguarding of material to the safeguarding of national programmes. There was no real need to extend the scope of safeguards to cover areas such as information on laboratory-scale nuclear research and development, or training.

38. It was important to ensure that, under normal situations, any new safeguards measures that were eventually adopted were applied uniformly in a completely transparent and non-discriminatory manner. Should an extraordinary situation arise in a particular country, the Secretariat would always be able to revert to the Board for urgent advice.

39. Turning to the content of document GOV/2807, he said that the preliminary analysis carried out by Pakistani experts was in many important respects at variance with the summary presented in Table 1 on page 3 of the document. His delegation would have liked the Secretariat to indicate which paragraphs of document INFCIRC/153 had been used as the basis for stating that there was existing legal authority for the measures described. In that respect, his delegation was in full agreement with the statement made by the Chairman of the Group of 77.

40. With regard to environmental sampling, he reiterated his delegation's concern at the fact that the information obtained from samples could be a technically, commercially and politically sensitive issue for a Member State. The entire environmental sampling and analysis procedure would need to be carefully delineated in order to avoid the misinterpretation or misuse of data. It would be a good idea to discuss the issues involved

at a technical seminar to inform Member States about the Secretariat's technical capabilities, including those of the Seibersdorf clean room laboratory. The convening of such a seminar would be wholly in keeping with the Director General's statement at the Board's March meetings that one of the objectives of the Agency's safeguards system was to create trust among Member States.

41. The increased physical access sought by the Secretariat, whereby it would have access to any location at any time, was not even available to national Governments themselves. In many industries, particularly those established in collaboration with multinational corporations, access by national government officials was very restricted and, even at nuclear facilities, access beyond strategic points could not be considered as falling within the bounds of existing legal authority.

42. It should be remembered that Programme 93+2 had been intended originally for States with comprehensive safeguards agreements. There was no basis for applying any of the measures discussed in the document to countries with other types of safeguards agreements.

43. In conclusion, he said that many of the measures proposed in Part 1 of document GOV/2807 were unduly intrusive and of questionable legal validity. Furthermore, the cost implications and necessary technical details involved had not been specified. His delegation therefore advised the Secretariat to devote further study to all the issues identified at the Board's present and previous series of meetings, with a view to producing a well-defined set of proposals in consultation with Member States. Furthermore, his delegation strongly endorsed the suggestion that an intergovernmental group of experts should be set up to study in greater detail the proposals made in the document and to seek to accommodate the wide divergence of views which had been expressed.

44. Mr. de YTURRIAGA (Spain), having endorsed the statement made by the Governor from France on behalf of the European Union, recalled that his delegation had repeatedly insisted on the need for Programme 93+2 to constitute a consistent and well-integrated package. Nevertheless, it recognized that the Director General had to adopt a pragmatic solution in view of the breadth and complexity of the issues involved and the

reservations expressed by certain States about the legal basis of a number of measures. As a result of the decision to delay implementation of some of the measures, there would now be an interval of indeterminate length during which the means available to the Agency for detecting the presence of clandestine nuclear activities in countries with comprehensive safeguards agreements would be less effective than required. In that regard, it was to be hoped that the consensus reached at the NPT Review and Extension Conference on the need to strengthen the international safeguards system would be reflected in the discussions on Programme 93+2, so that the measures still requiring complementary legal authority could be finalized and formalized as soon as possible.

45. His delegation also trusted that the two-part approach would not lead to any significant changes in the Programme's implementation costs, although it understood that overall safeguards costs might increase in the short term before being offset in the medium term by savings made under the Programme. Those measures which were particularly costly, such as environmental monitoring or the introduction of advanced technology, should be introduced gradually and on a selective basis, and only after detailed cost-benefit studies had been undertaken.

46. It was important to remember that although existing legal authority was a prerequisite for the success of the measures included in Part 1 of the Programme, a number of them would also require appropriate discussion between the Secretariat and the Member States concerned prior to implementation. The Government and the operators in the State concerned would, for example, need to make certain arrangements in advance to accommodate no-notice inspections. In the case of Spain and the other States party to the Schengen Agreement, a solution to the problem of inspectors' visas would have to be found which reconciled the Agency's needs and the regulatory requirements in force in the States concerned. For its part, Spain would do its utmost to facilitate rapid implementation of Part 1 of Programme 93+2.

47. Turning to the measures intended for Part 2 of the Programme, he said that the Secretariat would have to restrict its demands for information and access to the minimum necessary for maintaining the credibility of its assessments regarding the absence of clandestine nuclear facilities, while at the same time limiting as far as possible the economic,

legal and administrative impact on the States and organizations involved. An overambitious approach by the Agency might delay or otherwise hamper the adoption of the measures in Part 2. Moreover, since a great deal of information would have to be gathered and processed against a background of probable budgetary cuts, the quality of the analysis and the accuracy of the conclusions obtained might be adversely affected.

48. His delegation agreed with the Governor from France that the most appropriate way to determine the nature and scope of the measures to be adopted in Part 2 was to set up a consultation process based on the proposals made by the Director General in document GOV/2807. His delegation was ready and willing to participate in those consultations.

49. In order to achieve the desired progress in strengthening and improving the efficiency of the safeguards system, a flexible and pragmatic approach should be adopted based on an atmosphere of mutual confidence between the Secretariat and Member States and action taken by consensus.

50. Despite the reservations expressed by some Member States during the present series of meetings, particularly with regard to some of the measures under Part 1 of the Programme, his delegation considered that there was more agreement than disagreement among Member States on the proposals and that agreement was possible on even the most controversial aspects of the Programme. In the final analysis, implementation of the measures proposed in Part 1 of the Programme depended more on the spirit than the letter of document INFCIRC/153.

51. Failure to agree on comprehensive measures acceptable to all Member States would lead to double standards and conflicting systems. Such developments were to be avoided at all costs.

52. Mr. LIU (China) noted that the NPT Review and Extension Conference had produced a positive appraisal of the Agency's role in pursuing its statutory objectives. While affirming the importance of the Agency's existing safeguards system, the Conference had also endorsed the need for further strengthening of its effectiveness and efficiency.

53. The Chinese Government considered that such improvements should be achieved through measures that were fair, objective, rational and transparent. Such measures should also be restricted to the scope of the Agency's Statute and the relevant international treaties, and their implementation should not impinge on the national sovereignty and legitimate rights and obligations of the States concerned.

54. His delegation had urged the Secretariat to devote close attention to the legal implications of the proposals under Programme 93+2 and it appreciated the fact that the Secretariat had taken into account in document GOV/2807 the views of certain Member States that measures to strengthen the safeguards system should first be implemented on the basis of existing legal authority. The decision as to whether a measure could be implemented within the existing legal framework should be based on the international legal instruments relating to comprehensive safeguards agreements.

55. With regard to the implementation of those measures which exceeded existing legal authority, the Secretariat would need to hold extensive consultations and negotiations with Member States in order to reach a consensus and to draft the new complementary legal instruments. His delegation looked forward to the proposals that the Secretariat would submit to future Board meetings following such consultations. In considering any new measures, the Board should take into account not only their technical effectiveness and legal basis, but also their cost-efficiency and the available resources.

56. His delegation welcomed the Secretariat's approach in seeking to strengthen the safeguards system through a redistribution of resources, rather than through the acquisition of additional resources and hoped that the Secretariat would use the conclusions of the current meetings to carry out a more detailed cost-benefit analysis of its proposed measures and report on the results to future Board meetings.

57. China had always considered the strengthening of the safeguards system to be a complementary activity to the promotion of the peaceful uses of nuclear energy. One could not replace the other, since a strengthened safeguards system was the basis for the successful promotion of the peaceful uses of nuclear energy worldwide.

58. Finally, in response to the remarks made by a number of speakers on the issue of nuclear testing, he said that China had always exercised considerable restraint in its nuclear testing and had advocated the comprehensive prohibition and complete destruction of nuclear weapons. It had participated actively in the negotiations in Geneva on a comprehensive test ban treaty and, as had been stated on many occasions in the past, intended to end its nuclear test programme once such a treaty came into force.

59. Mr. ŠTANCEL (Slovakia) reiterated his delegation's support for Programme 93+2 and noted that the Board had already endorsed the Programme's general direction.

60. Turning to the content of document GOV/2807, he said that his country favoured the introduction of greater transparency with regard to nuclear activities and took a particular interest in environmental monitoring, greater access to information and sites, and no-notice inspections. His country was ready to take an active part in the implementation of the measures described in the document, and could approve the recommended actions contained in paragraph 6.

61. Mr. KAHILUOTO (Finland), after associating his delegation with the comments made by the Governor from France on behalf of the European Union, said that his delegation supported the main conclusions of document GOV/2807 and agreed that the Secretariat had the authority to implement the activities described in Part 1. For its part, Finland was ready to engage in early consultations with the Secretariat on the implementation of the measures described in Part 1.

62. The authority and permanence of the Agency's safeguards system had been enhanced by the recent indefinite extension of the NPT. The Agency and its Member States had a responsibility to live up to the expectations created by the Treaty's extension and to ensure that the safeguards system was constantly modernized.

63. The INFCIRC/153-type safeguards agreement had stood the test of time as the basis of the Agency's safeguards system, but its main drawback was that it could not adequately deal with the question of the non-existence of undeclared material or facilities. The

technological progress made in the area of verification offered the possibility of remedying that situation to a considerable extent. Moreover, the NPT Review and Extension Conference had given the Board a clear mandate in that regard.

64. Finland had participated in a number of trial programmes related to the preparatory phase of Programme 93+2 and would retarget its national support programme in the future in order to facilitate the implementation of measures proposed under the Programme which had yet to be introduced.

65. Turning to Part 2 of the measures outlined in document GOV/2807, he welcomed the Director General's statement that consideration of the legal implications involved would be postponed to the December Board in order to allow for further deliberations in September, both in the Board and at the General Conference. A good deal of time would be needed for informal consultations with Member States and, as was also the case with the measures for which legal authority already existed, Finland was ready to begin such talks at an early date.

66. Although the INFCIRC/153-type agreement had served the Agency well for almost 25 years and continued to do so, it was clear that a new legal instrument was needed on which to base the complementary authority required for Part 2 of the new measures. That instrument, which would complement the basic standard safeguards agreement, would need to be ratified in most States and its access requirements would undoubtedly call for new national legislation. Member States would need time before final decisions could be made.

67. The new legal instrument should be a unified standard document with uniform legal standing in Member States. It could not be a verification menu allowing Member States to pick and choose. A protocol based on document INFCIRC/153 might be the best alternative.

68. His delegation believed that the adoption of the new instrument could involve a trade-off, whereby the routine inspection burden of a Member State was reduced against its acceptance of new, more intrusive verification measures. In future, the central role of routine inspections would have to be maintained, although their form would have to change.

69. Mr. KHALIL (Tunisia) said that the Expanded Declaration, as described in paragraph 9 of document GOV/2807, offered the best means of making nuclear programmes more transparent, thereby enhancing the level of assurance as to their peaceful nature.

70. His delegation agreed with the Secretariat that the new safeguards measurement and surveillance systems which the Agency intended to continue to introduce would improve the cost-effectiveness of routine inspections, and that the use of advanced non-destructive assay and containment-surveillance equipment could reduce the number and duration of inspections.

71. It also agreed that full co-operation between States and the Agency was needed in order to facilitate the implementation of safeguards in the context of comprehensive safeguards agreements. In that regard, he noted that the Principles and Objectives for Nuclear Non-Proliferation and Disarmament of the recent NPT Review and Extension Conference had stressed the need for further strengthening of the Agency's safeguards system.

72. Finally, he associated his delegation with the statement made on behalf of the Group of 77.

73. Mr. CAMPUZANO PIÑA (Mexico) acknowledged the effort made by the Secretariat in developing the programme to strengthen the effectiveness and improve the efficiency of the safeguards system. His delegation supported the Director General's approach to group together those measures which could be implemented under the Agency's existing legal authority and those which would require complementary authority.

74. Document GOV/2807 represented a major redefinition of Agency safeguards, since it included measures to detect possible undeclared activities. His delegation believed that the Agency would require complementary authority in order to request additional information from Member States on those parts of the fuel cycle which were not under safeguards, such as mining and initial processing of uranium. It was therefore necessary to define the scope of the measure relating to the description of the nuclear fuel cycle to ensure consistency with document INFCIRC/153.

75. It would be difficult to determine on a case by case basis the information relating to the nature of each of the buildings on the sites on which nuclear facilities, LOFs or research and development activities were located, and on the nature of any other locations directly related to the operation of nuclear facilities (paragraphs 2c(iv), and (v) of the draft Expanded

Declaration). Additional legal authority would be required in order to request that information on a compulsory basis. It was necessary to define the scope of those measures in order to determine where there was sufficient legal authority and what the limits were.

76. With regard to increased physical access, his delegation considered that, in accordance with paragraph 76 of document INFCIRC/153, the Agency's authority for access to locations beyond the strategic points in nuclear facilities or LOFs, but within the sites containing such facilities or LOFs, during design information verification was restricted to the period during which the subsidiary arrangements were being negotiated until the strategic points had been agreed upon. Clarification of the Secretariat's interpretation that the Agency had sufficient legal authority to carry out such inspections was required.

77. With regard to the use of direct satellite communication systems between inspectors in the field and Headquarters, it should be specified that they should comply with the relevant national regulations. A distinction should be made between the Agency's right to use such systems and its authority to do so. Furthermore, the party responsible for the costs involved should be identified.

78. With regard to the environmental monitoring to be carried out under the Agency's existing legal authority, his delegation recommended that the Agency offer the State a duplicate of each sample so that it could compare results if it so wished. It should be made clear that the environmental monitoring to be carried out at sites identified in Part 2 of document GOV/2807 required complementary authority.

79. Notwithstanding the differences in interpretation of those measures and in view of the importance that his Government attached to strengthening the safeguards system through the Programme 93+2 initiative, his delegation supported the action recommended in paragraph 6 of document GOV/2807 on the understanding that the Secretariat would respond in writing to the questions raised and that it would consult with each State before implementing the measures. Furthermore, his delegation supported the proposal, made on behalf of the Group of 77, to add a column to Table 1 in document GOV/2807 indicating the INFCIRC/153 paragraph under which the Secretariat considered that existing legal authority was granted.

80. His delegation requested the Secretariat to prepare a draft legal instrument which, with the Board's approval, would grant the Agency the necessary complementary authority for application of the measures described in Part 2 of document GOV/2807. That instrument could be a provision in document INFCIRC/153 authorizing States with comprehensive safeguards agreements to conclude with the Agency additional protocols establishing the necessary complementary authority and the conditions under which the Agency could implement such measures. At all events, care should be taken to ensure that any measures applied in that context were universal in nature.

81. Mr. POLUREZ (Ukraine) recalled that at the Board in March his country had lent its support to the general direction of Programme 93+2. The recent NPT Review and Extension Conference in New York had given new impetus to the non-proliferation regime and the safeguards system. Ukraine, as a party to the NPT and having recently begun implementation of its safeguards agreement with the Agency, fully supported the Secretariat's efforts to strengthen and improve the effectiveness of the safeguards system. His delegation found it appropriate to divide the Programme into two parts and hoped that the measures set out in Part 1 would be implemented as soon as possible.

82. Mr. ALLOTEY (Ghana), having endorsed the statement made by the Chairman of the Group of 77, noted that the 1995 NPT Review and Extension Conference had recognized the Agency's important role in safeguards matters. His delegation welcomed all the efforts to strengthen the effectiveness and improve the efficiency of the safeguards system provided the financial, technical and legal implications were taken into account. It supported early implementation of measures within the existing legal framework, but noted that Part 2 of document GOV/2807 required further discussion.

83. Mr. ROUX (South Africa)* reaffirmed his country's commitment to non-proliferation and to the safeguards system. South Africa also fully supported the strengthening of safeguards to meet contemporary global needs. While his country's

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

preliminary analysis of the Director General's earlier report contained in document GOV/2784 had been positive, it had needed more time to consider the technical, legal and financial implications of the proposed measures.

84. Following examination of the issue by South African legal authorities, his delegation could now support the Secretariat's legal analysis of measures which fell under the Agency's existing legal authority as outlined in document GOV/2807. Consequently, it supported the Director General's plan to implement at an early date the measures described in Part 1 of that document. There remained, however, an urgent need for clarification of the financial implications.

85. Mr. CEYSSENS (Belgium)* fully endorsed the statement made by the Governor from France on behalf of the European Union. With regard to no-notice inspections, he foresaw practical difficulties requiring consultation between all the parties concerned. No-notice inspections should be organized in such a way as not to incur major additional costs for the SSAC or the facility operator. A further practical difficulty was the fact that all inspections in Belgian facilities required the presence of a EURATOM inspector. He felt sure, however, that acceptable arrangements could be made.

86. His country continued to believe that the strengthening of safeguards should not lead to an overall increase in costs. The Agency's basic mandate to verify compliance with Article III(1) of the NPT had not changed. The Agency's new safeguards system, therefore, was not a new activity, but rather a more efficient and effective approach. In the short term, those changes would lead to some additional costs, which could partly be absorbed through extrabudgetary contributions. Resort to extrabudgetary resources should, nevertheless, be kept to a minimum. It seemed likely that the cost of implementing the additional activities proposed in Part 1 of document GOV/2807 would be offset by compensatory savings in routine inspections. He recalled the results already achieved and the still sizeable potential of the partnership between the Agency and EURATOM. He had expected the Director General to report to the Board on that matter in March, but no such report had yet been presented. He trusted that the Secretariat would provide information in that regard.

87. Turning to Part 2 of document GOV/2807, and in particular the question of complementary legal authority for the Agency, he noted that work in that area had hitherto been through the normal dialogue process between the Secretariat and the Board. That procedure was reminiscent of a slow-motion ping-pong match where the Secretariat and the Board returned the ball once every three months. There was a danger that such a slow pace would rob Programme 93+2 of any impetus. The absence of any true dialogue between States and the Secretariat was likely to reduce the validity of any new measure decided upon by the Board. Having said that, he felt that no hasty decision on Part 2 of the Secretariat's proposal should be taken. In the coming autumn there would be time to organize a genuine dialogue between Member States, with the support of the Secretariat, in order to examine in detail the scope of the new measures and to establish the appropriate legal framework. It was important that all States participated in that process. That process might prove long and tedious, but it was necessary in order to give the Agency the political and legal authority to implement the new safeguards system.

88. Mr. COOK (New Zealand)* expressed his country's strong support for the recommendations to strengthen the safeguards system contained in document GOV/2807. The time was ripe for Programme 93+2. As recent events had demonstrated, the safeguards system must be able to provide a credible assurance of the absence of undeclared nuclear activities.

89. The safeguards system enabled countries to demonstrate transparency and created confidence about the peaceful nature of their nuclear programmes. There could be no confidence unless safeguards provided a credible barrier to known proliferation routes. Programme 93+2 was essential to an effective non-proliferation regime.

90. The recent NPT Review and Extension Conference had agreed that the measures adopted by the Board to strengthen further the effectiveness of Agency safeguards should be implemented and that the Agency's capability to detect undeclared nuclear activities should be increased. The overall direction of Programme 93+2 had been endorsed by consensus. Another important outcome of that Conference had been the establishment of an enhanced review process to assess progress on nuclear disarmament, the implementation of safeguards and other aspects of the Treaty. As a non-nuclear country, New Zealand was strongly

committed to nuclear disarmament, including the early achievement of a cut-off convention and a nuclear test ban. New Zealand had expressed the strongest opposition to France's recent decision to resume nuclear testing in the South Pacific. That decision ran counter to the outcome of the NPT Conference whereby the nuclear-weapon States had been asked to exercise the utmost restraint on testing. The prospect of further nuclear tests in the wake of the recent test by China - also criticized by New Zealand - underlined the urgent need for the conclusion of a comprehensive test ban treaty.

91. Turning to document GOV/2807, he commended the Secretariat on the document's clear and well-focused presentation and endorsed the Secretariat's decision to divide the document into two parts. He fully supported early implementation of those measures which fell under the Agency's existing legal authority. In particular, he endorsed the plans for broader access to information, including expanded declarations, environmental monitoring techniques, no-notice inspections and other measures to optimize the present system. He called on Member States to co-operate fully in the implementation of those measures in order to make them truly effective.

92. He also looked forward to the early introduction of the measures contained in Part 2. They were a fundamental part of the whole strengthened safeguards package and it was to be hoped that all Member States would agree to provide the necessary complementary legal authority.

93. Mr. POROJAN (Romania)*, while recognizing the complexity of the matter under discussion, stressed that unless the Secretariat's proposal were adopted, the Agency's capability to detect undeclared nuclear activities would not be enhanced and that unless the safeguards system was strengthened, other activities such as technical co-operation could not be developed. Romania was determined to support efforts to strengthen the Agency's safeguards system and make it more efficient. Romania, as a country which practised full transparency in all its nuclear activities, had no difficulty in agreeing to the Director General's proposal.

94. Mr. PAPADIMITROPOULOS (Greece)*, having associated himself with the statement made by the Governor from France on behalf of the European Union, reiterated his country's strong support for all efforts to strengthen the effectiveness and improve the efficiency of the Agency's safeguards system. Safeguards activities should be dynamic and continually improved and adapted. It was the Agency's task to provide a system which could respond at any time to the needs of the international community for a more effective and efficient system.

95. Greece fully supported the measures proposed in Part 1 of document GOV/2807 and shared the view that those measures should be implemented on a routine basis and without discrimination as soon as possible.

96. With regard to the measures referred to in Part 2 of the document, his country felt that the Secretariat should examine the proposals more closely. His country had always maintained that a number of the measures listed did not necessarily require special legal authority, which would entail a lengthy and difficult process. Some of those measures involved information that was already available at the Agency and included in its publications and some measures could be accommodated under existing facility attachments or subsidiary arrangements to be negotiated with Member States. The fewer legal instruments that needed to be negotiated with Member States the better. After all, the information required for implementation of the measures contained in Part 2 would be included in the Expanded Declaration and would be made available by the sovereign Member States. Referring in particular to items 2c(ii), 2c(vi), 3b and 3c, he said that the list of items requiring complementary legal authority could be substantially shortened.

97. Greece wholeheartedly supported Programme 93+2 as presented in document GOV/2807, and looked forward to the submission of the next report at a future meeting of the Board. When a final decision was made, he anticipated that the new legal document could perhaps be drafted in the form of a protocol which would apply equally to all States and contain the same clauses for all States.

98. His country lent its full support to the measures to strengthen the Agency's safeguards on the understanding that the Secretariat made every effort to apply them in a cost-efficient manner. Any additional costs should be carefully examined together with Member States in a spirit of co-operation.

99. Mr. SEUNG KON LEE (Republic of Korea)* expressed support for the comprehensive set of measures proposed under Programme 93+2 and particularly welcomed the environmental monitoring and no-notice inspections with respect to declared facilities. It looked forward to early implementation of the measures contained in Part 1 of document GOV/2807. Strengthening of the safeguards system would, of course, be an extra burden to those Member States which had no intention of developing nuclear weapons or any facilities presenting proliferation problems. In the Republic of Korea, which had 17 safeguarded nuclear facilities and an ambitious reactor construction programme, an additional strain would be placed on the domestic inspection authorities. Nevertheless, it believed that that burden was part of the price to pay for a more secure world.

100. Several Governors had expressed concern about the financial implications of implementing Programme 93+2 in spite of the Director General's repeated assurances that it would be cost-neutral in the longer term. He believed that there was room for further cost savings without reducing the Programme's effectiveness. The Programme could also be made more acceptable by alleviating some of the practical problems associated with its implementation and by restructuring the Agency's safeguards activities in such a way as to obtain an approximately equal level of assurance of non-diversion from all States accepting full-scope safeguards. The idea of a trade-off between intrusiveness and frequency of inspections, as had been suggested by the representative of Finland, might be a way of addressing concerns about budgetary constraints without sacrificing effectiveness. States with a proven record of meeting their non-proliferation commitments and of accepting the most intrusive inspections might be allowed to benefit from exemption from routine inspections for a certain category of low-proliferation risk facilities and readjustment of inspection frequency for other facilities.

101. Another idea worthy of consideration was the reallocation of safeguards resources on the basis of the level of proliferation risks of nuclear facilities and activities. He understood that 70% of safeguards activities were devoted to low-proliferation risk facilities, such as LWRs and low-enriched uranium fuel fabrication plants. Reallocation of the relevant resources to higher-proliferation risk facilities, such as enrichment and reprocessing plants, could further improve the efficiency and cost effectiveness of the safeguards system. Another way of saving costs would be to co-ordinate safeguards activities between the SSACs and the Agency inspectorate to avoid duplication of effort.

102. The indefinite extension of the NPT had renewed the Agency's mandate to verify compliance of non-proliferation commitments under that Treaty. The Treaty's non-proliferation objectives would, however, only be served by an effective safeguards system capable of providing credible assurances of States' compliance with their non-proliferation commitments in an increasingly volatile international security environment. The recent NPT Review and Extension Conference had given overwhelming political support to the general direction of the Agency's Programme 93+2.

103. As recent events had shown, safeguards could not deter proliferation by a determined State. Co-operation from SSACs was indispensable for making Programme 93+2 truly effective. That Programme could only lead to worldwide non-proliferation if all nuclear facilities and activities for peaceful purposes were placed under safeguards.

104. In conclusion, he endorsed the Director General's plan to implement the measures proposed in Part 1 of document GOV/2807 at an early date and looked forward to fuller discussions in September on the measures proposed in Part 2.

105. Mr. AL-TAIFI (Saudi Arabia)* said that he was convinced of the importance of the safeguards system and of its usefulness to Member States and non-Member States alike. He supported the efforts to strengthen the effectiveness and improve the efficiency of that system, but requested clarification as to whether the proposed changes to safeguards agreements would apply to States which had already concluded such agreements, or only to

States which had yet to do so. He also asked whether the Secretariat had any other proposals for strengthening the effectiveness and improving the efficiency of safeguards and requested to be informed of any such proposals in writing.

106. Mr. NORDIN (Malaysia)* recalled that the Board had already endorsed the general direction of Programme 93+2 and in particular the Secretariat's request for greater access to relevant information and greater physical access to relevant sites. In strengthening the safeguards system, the Agency should first make full use of its existing authority under existing safeguards agreements. Table 1 in document GOV/2807 provided a useful analysis of the information contained in document GOV/2784 and clarified the situation with regard to the Agency's existing authority. He understood that the Secretariat would only take steps to develop the complementary authority described in Part 2 of the document after it had exhausted its existing authority. Malaysia remained open for further bilateral discussions with the Secretariat on that issue.

107. With regard to the Expanded Declaration, he was still awaiting further instructions from the relevant authorities in Malaysia. The discussions in the Board should help to clarify the details of the Expanded Declaration. That instrument would require certain amendments to Malaysia's national legislation and regulations and his Government was examining the issue carefully, in particular as it related to Malaysia's obligations under the NPT. It was not his intention to block the issue.

108. In conclusion, he noted that the proposed measures should improve the system's efficiency and effectiveness and result in real savings.

109. Mr. WALKER (Australia) reiterated his delegation's view that a safeguards system that provided an objective basis for confidence that there were no clandestine nuclear weapons programmes was essential for world security, nuclear disarmament and peaceful nuclear co-operation. Achieving that objective was a question principally of political will. The related legal issues were questions of implementation.

110. As the Governor from Switzerland had indicated, if any country was opposed as a matter of policy to improvements in the effectiveness of the safeguards system, it would be easy for that country to find ways of blocking such moves. However, countries that had

comprehensive safeguards agreements were committed to non-proliferation and were also committed to having a fully effective safeguards system. Those countries understood that that was the Secretariat's only objective in Programme 93+2 and did not imagine that the proposals contained in document GOV/2807 had any nefarious purpose. The preoccupations of those countries reflected a concern that the proposals, whose objectives they shared, might have unintended undesirable side-effects, that they might, for example, be too expensive or that they might damage legitimate commercial concerns.

111. It was significant that the countries which had voiced concerns about possible undesirable side-effects were those which had not participated in the field trials over the preceding two years. Countries which had participated in those trials, including his own country, seemed confident that any problems of that type could be readily overcome. He therefore urged those countries which had genuine concerns to discuss those concerns with the Secretariat. Further informal briefings by the Secretariat would also be helpful. His delegation trusted that that process would lead to the smooth implementation of the measures proposed in Part 1, and to a consensus on the measures contained in Part 2 in December.

112. The DIRECTOR GENERAL, having expressed the Secretariat's appreciation for the helpful and encouraging comments that had been made, pointed out that the current issue was not one where the Secretariat was simply submitting a document to the Board upon which it was to take a decision. Rather, the Board and the Secretariat were examining together an important step in the life of the Agency. That process had been under development for some time and had involved many parties and numerous consultations. The Board's discussion had looked at the broader aspects of the issue and had examined some of the details of the proposals.

113. As had been indicated by the Governor from Canada, at a time when the world was perhaps moving towards a complete nuclear test ban and further disarmament measures, it was vitally important to demonstrate that a verification system was in place which inspired real confidence. Indeed, disarmament might depend upon the credibility of the safeguards system. He agreed with the Governor from Ireland that the safeguards system had to be either completely satisfactory or that it should not exist at all. If it was not completely satisfactory, there was the danger that it might lull States into a false sense of security.

114. It had been stated that the system had to be based on trust. It was more accurate to say that the system aimed at creating trust. The Agency was not being called upon either to trust or to mistrust States, but merely to observe and report upon what it had observed.

115. With regard to the calls by some Governors for document GOV/2807 to include references to the paragraphs of document INFCIRC/153 under which the Secretariat considered that existing legal authority was granted, he recalled that document GOV/2784, which had been submitted to the March Board, gave detailed references to the relevant articles of document INFCIRC/153. However, if Governors felt it would be useful to submit that information in tabular form, that could be done. He himself had discussed the issue of the legal basis extensively with various members of the Secretariat and views differed among them as to how far the existing legal authority of the Agency extended. In the Board too, some delegations evidently felt that the Agency's authority went further than what was stated in the document and others were more conservative in their views. He himself considered that the position adopted by the Secretariat was a reasonable one and he hoped that it would be possible to explain that position satisfactorily to Member States in bilateral discussions.

116. As to the impact of the proposals, he was encouraged to hear the comments made by the representatives of Finland and Canada to the effect that they did not think that the system would prove to be onerous. Those countries had had field trials and had not found them to pose an undue burden. When document INFCIRC/153 had been drafted, there had also been many fears at the beginning, including the concern that it might, for example, reveal industrial secrets. With time, it had become clear that that was not the case and those fears had been allayed.

117. The question had been raised as to whether it was justifiable to require reporting on research laboratories as they would not contain any significant quantities of nuclear material. However, as recent events had shown, research could cover a number of activities and one site in the DPRK which was of interest to the Agency was the so-called radioisotope research laboratory. He could assure Member States that the proposed measures would not in any way hamper research and development work. Another point of concern had been the question of confidentiality and he could also assure Member States that confidentiality would be preserved. The Secretariat was also confident that, after an initial increase in costs,

Programme 93+2 would subsequently result in a cost-neutral system and had no reason to believe that the proposed measures would lead to any reduction in technical co-operation or promotional activities.

118. One delegation had asked whether it would not be possible simply to place more emphasis on special inspections. However, special inspections were not a substitute for Programme 93+2. The new measures were designed to ensure that the Secretariat had sufficient information at its disposal so as to avoid having to request special inspections, which tended to create a somewhat antagonistic situation.

119. Parts 1 and 2 of the document formed an integral package and were not a menu of measures from which Member States could select some but not others. Undoubtedly, some of those measures would need to be further refined. They would be applied to all comprehensive safeguards agreements without distinction. The Governor from Canada had pointed out that it might be difficult to implement the various measures at the same speed in all countries during the transitional period, as the time taken for each country to adopt a new legal instrument would differ. That was very possible, but Member States should note that the full benefits of the new system, such as increased confidence and alleviation of unnecessary inspection efforts, would only be felt when the system was accepted in full.

120. A number of delegations had noted that some of the measures could be applied to item-specific and voluntary-offer safeguards agreements, whereas other delegations had been opposed to any such idea. Although that issue was not on the agenda, it seemed to him that many of the measures in Programme 93+2 which promoted cost-effectiveness and efficiency were also applicable to voluntary-offer and item-specific safeguards agreements and he did not see why their application to such agreements should not be considered. It was not the Agency's job to look for undeclared facilities in countries with item-specific and voluntary-offer safeguards agreements, but it was its responsibility to ensure that it had all the information it required on declared facilities.

121. Most Governors appeared to be in favour of early implementation of the measures contained in Part 1 of the document, although some had pointed out that a number of those measures would need to be fine-tuned. No delegation had seemed eager to delay a decision

on Part 1 until a consensus had been reached on Part 2. That being so, he reassured Governors that he would implement them without delay, but that he would, nevertheless, consult with Member States before the new measures were implemented in order to allay any outstanding concerns and clarify any doubts.

122. Even closer consultations would be required for the measures contained in Part 2 of the document and he planned to initiate such consultations in the autumn. Some had suggested that there might be group discussions on the issue. He would investigate that possibility and the possibility of holding briefings or seminars. He would also be consulting SAGSI further on the matter. It was important that there should be full dialogue before the proposals were submitted to the Board. Some delegations had mentioned that national legislation might stand in the way of the implementation of the measures contained in Part 2. However, national legislation could be changed. In particular, the issue of visas had been raised. In that regard, he noted that document INFCIRC/153 already contained provisions for unannounced inspections, which, in itself, implied flexible visa arrangements.

123. In conclusion, he thanked the Board for the comments it had made and looked forward to further discussions. It was important that progress on the issue be neither too hasty nor too slow.

124. Mr. PELLAUD (Deputy Director General for Safeguards) pointed out that the Secretariat was well aware of the need for greater specificity with regard to the information requested in the Expanded Declaration and the way in which it was to be reflected in a legal instrument. The Governor from the United Kingdom had summarized well the purpose of the Expanded Declaration, which was a commitment to transparency on the part of Member States. The Secretariat would verify the information provided by Member States, but it did not want to seek information itself from States, as that might lead to confrontational situations. Much progress had already been made in working out the details of the Expanded Declaration. The work which was being carried out under Task 5 of Programme 93+2 to characterize all known processes that could be part of a State's nuclear fuel cycle was the basis for including specific activities, equipment and materials in the Expanded Declaration. Since March it had, for example, been possible to make element 2c(i) of the Expanded Declaration much more specific by identifying activities and locations which the Secretariat

believed States should include in their Expanded Declaration. Similarly, a list of specific equipment and manufacturers which should be reported on under element 2c(vii) had been proposed and was being evaluated.

125. Work on defining the broader access sought with respect to the information provided in the Expanded Declaration was not yet complete. The Secretariat was well aware of the difficulties and the need to be flexible in looking for ways of obtaining the required assurances. At present, the Secretariat anticipated that broad access would be requested to locations on sites where a State had indicated that nuclear material was present. Access would also probably be requested to locations which States had identified as having activities functionally related to the operation of the nuclear fuel cycle. On the other hand, it was not anticipated that access would be requested to the premises of domestic manufacturers of specific items of equipment identified under element 2c(vii) of the Expanded Declaration. The no-notice feature was most useful at locations where a State had indicated that nuclear material was present.

126. A number of issues relating primarily to the Agency's right of access under its existing authority to carry out design information verification and ad hoc, routine and special inspections required further clarification. The limitation on the Agency's right of access to strategic points applied only to routine inspections. While there were other restrictions on the Agency's right to carry out ad hoc and special inspections and design information verification, they did not relate to strategic points. Document INFCIRC/153 did not stipulate that the Agency was empowered to carry out design information verification activities only until subsidiary arrangements were concluded. While, from a practical point of view, design information verification was mainly a preparation for the conclusion of subsidiary arrangements, the Agency was bound by no legal limitations in that regard. Indeed, as the Board had confirmed when it had discussed the early provision of design information, the Agency's right to verify design information was a continuous one.

127. Co-operation with SSACs was at the very heart of the strengthened and more cost-effective safeguards system. However, there was no practical way of defining the minimum capabilities of an SSAC required to support some postulated level of co-operation in safeguarding declared material. Improving safeguards required a philosophy of constant

improvement on the part of both the Secretariat and the SSACs. Should it be concluded that the technical capabilities of an SSAC needed to be upgraded in order to achieve a level of co-operation sought by the State, then the Secretariat was ready to provide assistance.

128. With respect to the comments which had been made about environmental monitoring and the possible misuse of that technique, he had made reference in his introductory statement on the item to the environmental sample distribution protocol, which had been developed and implemented to protect against the misuse of samples. The Secretariat believed that that protocol provided adequate protection. However, in the autumn it planned to convene a consultants' meeting with experts from a number of Member States to review and carry out further evaluation of sample distribution and laboratory certification protocols.

129. Finally, with regard to the promised report on collaboration between EURATOM and the Agency under the partnership approach, he reassured the Belgian delegation that the Secretariat's failure to provide such a report at the March Board had not been due to any lack of interest, but to its excessive work load. He had hoped to be able to submit a report in June, but several key participants had been heavily involved in work relating to the NPT Review and Extension Conference and the report had therefore been further delayed.

130. The CHAIRMAN, noting that interpretation was no longer being provided, said that he was compelled to close the meeting and postpone his summing-up on the discussion to the next meeting.

Excerpt from the record of the Board's 872nd meeting

7. The CHAIRMAN said that there had been a wide-ranging discussion on both parts of document GOV/2807. Some suggestions had been made as to the approach the Agency should take to achieve a strengthened and more efficient safeguards system as envisaged in that document, including the establishment of a group of governmental experts. All the comments and suggestions made would be taken into account in the next phase of the Agency's work on that issue.

8. While there had been general endorsement of the measures proposed in Part 1 of document GOV/2807, some Governors had expressed concern regarding some of the proposed measures which they felt would give rise to implementation difficulties in their countries, and also regarding the unspecified cost implications of implementing the measures.

9. On the understanding that the elaboration of the implementation arrangements and clarification of any concerns would require consultations between the Secretariat and individual Member States, he said he took it the Board was ready to accept the recommended action set out in paragraph 6 of the document.

10. It was so decided.