



International Atomic Energy Agency

GENERAL CONFERENCE

GC(XXXVI)/COM.5/OR.86
9 October 1992

GENERAL Distr.

Original: ENGLISH

THIRTY-SIXTH (1992) REGULAR SESSION

COMMITTEE OF THE WHOLE

RECORD OF THE EIGHTY-SIXTH MEETING

Held at the Austria Center, Vienna
on Thursday, 24 September 1992, at 5 p.m.

Chairman: Mr. EL-SAIEDI (Egypt)

CONTENTS

<u>Item of the agenda*</u>	<u>Paragraphs</u>
12 Measures to strengthen international Co-operation in matters relating to nuclear safety and radiological protection (continued)	1 - 32
- Draft resolution on liability for nuclear damage	1 - 6
- Draft resolution on measures to strengthen international co- operation in matters relating to nuclear safety and radiological protection	7 - 18

[*] GC(XXXVI)/1027.

The composition of delegations attending the session is given in document
GC(XXXVI)/INF/313/Rev.2.

<u>Item of the agenda*</u>	<u>Paragraphs</u>
- Draft resolution on implementation of resolution GC(XXXV)/RES/553 as a whole	19 - 20
- Draft resolution on education and training in radiation protection and nuclear safety	21 - 32
17 Plan for producing potable water economically	33 - 66
13 Strengthening of the safeguards system	67 - 74

MEASURES TO STRENGTHEN INTERNATIONAL CO-OPERATION IN MATTERS RELATING TO
NUCLEAR SAFETY AND RADIOLOGICAL PROTECTION (continued)

- Draft resolution on liability for nuclear damage (GC(XXXVI)/COM.5/118)

1. Mr. LIDGARD (Sweden), reporting on the informal consultations on the draft resolution on liability for nuclear damage contained in document GC(XXXVI)/COM.5/118, thanked the participants for their constructive attitude and said that agreement had been reached on the following amendment. Operative paragraphs 2 to 4 should be replaced by "Considers that international co-operation in nuclear safety would benefit from a wide and early acceptance of an effective regime of liability for nuclear damage."
2. In presenting that compromise text, he wished to convey to the sponsors his disappointment that more could not have been achieved at present and his hope that the following year's session of the General Conference would adopt a resolution of greater scope.
3. Mr. LAMPARELLI (Italy) said that he could go along with the revised draft resolution but that his country would nevertheless be raising the question of international nuclear liability in the Standing Committee on Liability for Nuclear Damage.
4. Mr. CSERVENY (Hungary), supported by Mr. PAPADIMITROPOULOS (Greece), Mr. MIKHALEVICH (Belarus), Mr. OKONKWO (Nigeria), Mr. TITKOV (Russian Federation), Mr. VERBEEK (Netherlands), Mr. AGRELL (United Kingdom), Mr. MOHAN (India), Mr. PAREDES PORTELLA (Peru), Mr. GOESELE (Germany), Mr. PELEN (France) and Mr. HASHIMI (Pakistan) endorsed the draft resolution as amended.
5. The CHAIRMAN thanked the group that had devised the compromise text. If there were no objections, he would take it that the Committee of the Whole wished to recommend that the General Conference adopt the draft resolution contained in document GC(XXXVI)/COM.5/118, with the amendment just discussed.
6. It was so decided.

- Draft resolution on measures to strengthen international co-operation in matters relating to nuclear safety and radiological protection (GC(XXXVI))/COM.5/119

7. Mr. VERBEEK (Netherlands), reporting on the outcome of discussions on the draft resolution, said the following amendments had been agreed upon. In paragraph 1, the phrase "field of nuclear safety and radiological protection" should be replaced by "fields of nuclear safety, radiological protection and radioactive waste management". In paragraph 5, the words "the comments made by Member States during this Conference and" should be inserted between "taking into account" and "the vital necessity of", and the word "always" inserted after the latter phrase. In paragraph 6, the word "ensure" should be replaced by "seek", and "budgetary" should be deleted. In paragraph 7, the words "in the implementation of resolution GC(XXXV)/RES/553 and of this resolution" should be inserted between "the progress achieved" and "to the General Conference".

8. He thanked the participants in the discussions for their co-operation.

9. Mr. GONZALEZ (Deputy Director, Division of Nuclear Safety) suggested that, to make paragraph 1 technically correct, the amendment should read "fields of nuclear safety and radiological protection, including radioactive waste management".

10. Mr. VERBEEK (Netherlands) said he had no difficulty with that suggestion.

11. Mr. AGRELL (United Kingdom), referring to the proposed amendment to paragraph 5, said a number of delegations had alerted him to the need to make the wording more precise. He therefore proposed substituting the phrase "the vital necessity of a continuing effort to raise" for the phrase "the vital necessity of always raising".

12. Mr. RUIZ (Spain) said that, as his was one of the delegations that had expressed concern over the wording of paragraph 5, he fully endorsed the proposal made by the United Kingdom.

13. Mr. HASHIMI (Pakistan) said the United Kingdom's stylistic amendment to paragraph 5 was acceptable.

14. Ms. LACANLALE (Philippines), referring to paragraph 6, queried the phrase "the Agency's biennial programmes", which seemed to commit the Agency to a perennial financial contribution to the strengthening of international co-operation in matters relating to nuclear safety and radiological protection.

15. Mr. VERBEEK (Netherlands) said that the text was in no way intended to prejudge the decisions of the Board of Governors. Its purpose was merely to suggest that in future the Board should take account of the need to strengthen international co-operation in nuclear safety and radiological protection in the course of its periodic negotiations on the Agency's budget.

16. Mr. HASHIMI (Pakistan) said that, in view of the importance of the issues being discussed, the summary record of the current discussion should be transmitted to the Board of Governors along with the draft resolution under consideration.

17. The CHAIRMAN said that, if there were no objections, he would take it that the Committee of the Whole wished to recommend to the General Conference that it adopt the draft resolution contained in document GC(XXXVI)/COM.5/119 with the amendments agreed upon during the discussion and that the Committee also wished to recommend to the Conference that it request the Director General to transmit to the Board of Governors the summary record of the discussion on the draft resolution in document GC(XXXVI)/COM.5/119.

18. It was so decided.

- Draft resolution on implementation of resolution GC(XXXV)/RES/553 as a whole (GC(XXXVI)/COM.5/122)

19. The CHAIRMAN said that Chile, which had submitted the draft resolution, was now prepared to withdraw it, on the understanding that he, the Chairman, would make a statement to the General Conference indicating that, in his understanding, it was the wish of many Member States to request the Secretariat to prepare a report on the subject of the recording and notification of nuclear accidents. If there were no objections, he would take it that the Committee of the Whole wished to authorize him to make such a statement and to accept the withdrawal of the draft resolution.

20. It was so decided.

- Draft resolution on education and training in radiation protection and nuclear safety (GC(XXXVI)/COM.5/114)

21. Mr. McRAE (Canada), speaking as a sponsor of the draft resolution, said it had been pointed out that paragraph 2 might have financial implications necessitating the application of Rule 67 of the Conference's Rules of Procedure. As such had not been the intent of the sponsors, they suggested revising the paragraph in the following manner: the phrase "Requests the Board of Governors and the Director General to prepare and execute a ..." should be replaced by "Requests the Director General to prepare a report for the Board of Governors and for subsequent consideration by the General Conference on a possible ..."
22. Mr. ORNSTEIN (Argentina), and Mr. ELYSEU FILHO (Brazil), speaking as sponsors of the draft resolution, expressed support for the proposed revision.
23. Mr. LAMPARELLI (Italy) endorsed the revision but drew attention to the need to include training in the use of radiation sources in hospitals among the educational activities referred to in the text.
24. Mr. MOHAN (India) pointed out that the Agency had already provided substantial assistance with the training of personnel from India and other developing countries in radiation protection and nuclear safety, with the result that considerable expertise had been built up in those countries. Full use should be made of such trained manpower, and he therefore suggested adding the following phrase to the end of paragraph 2: "... special attention being given to utilizing expertise and trained manpower now available in developing countries."
25. Mr. ORNSTEIN (Argentina), supported by Mr. FARAHAT (Egypt), said he had no difficulty in accepting the Indian amendment.
26. Mr. OSTROWSKI (Poland) said that he, too, could support the amendment, even though he preferred the draft resolution as originally worded.
27. Mr. NORDIN (Malaysia) observed that the purpose of the Canadian amendment to paragraph 2 was to make it clear that the measures outlined in the draft resolution should not have financial implications. Paragraph 3,

however, seemed to imply additional costs, in that it called for the extension of educational courses "to cover other Agency working languages as well".

28. Mr. GONZALEZ (Deputy Director, Division of Nuclear Safety) said the measures referred to in paragraph 3 could be implemented by re-allocating existing resources and thus would have no financial implications.

29. After a discussion in which Mr. McRAE (Canada), Mr. HASHIMI (Pakistan), Mr. DAVIES (Secretary of the Committee), Mr. PELEN (France) and Mr. NORDIN (Malaysia) participated, Mr. AGRELL (United Kingdom) proposed that the phrase "extend them to cover other Agency working languages as well" be replaced by "arrange for them to be conducted in appropriate languages".

30. The CHAIRMAN suggested that that proposal be reworded slightly so that it read: "arrange for such courses to be conducted in appropriate official languages of the Agency".

31. If there were no objections, he would take it that that amendment as well as the amendments to paragraph 2 proposed by Canada and India were acceptable to the Committee, and that the Committee wished to recommend that the General Conference adopt the draft resolution contained in document GC(XXXVI)/COM.5/114 with those amendments.

32. It was so decided.

PLAN FOR PRODUCING POTABLE WATER ECONOMICALLY (GC(XXXV)/RES/563);
GC(XXXVI)/1013; GC(XXXVI)/COM.5/120)

33. Mr. OKONKWO (Nigeria) said that the question under consideration had been before the General Conference for at least three years. The pressing need to produce potable water economically could not be overemphasized.

34. Following discussions in the Group of 77, he wished to suggest two amendments to paragraph 2 of the draft resolution which had been circulated in document GC(XXXVI)/COM.5/120: in the first line of the English text the words "expert services and" should be inserted between "provide" and "extrabudgetary", and in the last line the words "services and" should be inserted between "such" and "resources".

35. Mr. ELYSEU FILHO (Brazil) expressed his support for the draft resolution as amended.

36. Mr. HELLAL (Algeria) said that the countries on the southern rim of the Mediterranean basin, whose chronic shortage in potable water would grow from its present level of 3 million cubic metres to 9 million cubic metres by the year 2000, had a special interest in the draft resolution under consideration.

37. There had been many new developments in the past year. The work done within the framework of the regional feasibility study on nuclear desalination was to be commended. A great deal of effort had gone into collecting and processing data on water and electricity resources and needs and into examining desalination processes, the choice of representative sites, local participation, infrastructure, institutional aspects, and financing.

38. The Secretariat was preparing to embark on the second phase - a detailed feasibility study. He recalled that, the General Conference in resolution GC(XXXIV)/RES/540, had requested the Director General to include nuclear desalination in future Agency programmes. It was therefore essential that more resources be made available to enable the Agency to complete that programme.

39. Mr. HOGG (Australia) said that, while the goal of producing potable water economically was worth while, his country was not convinced, on the basis of the studies so far, that using dedicated nuclear, solar or oil-fired plants was the correct route. A more cost-effective option would be to use flared-off natural gas from oil wells as a source of energy for desalination in the areas under consideration.

40. The main aim of the project should be to determine the economics of nuclear desalination and, if they were unfavourable, the project should be terminated or at least cut back. Furthermore, the role of the Agency in the project and the priority to be assigned to it should be closely examined during the normal process of budget preparation and consultation.

41. Mr. VERBEEK (Netherlands), referring to paragraph 1 of the draft resolution, wondered whether the Secretariat or any delegates present could indicate whether there was any active interest in a joint international demonstration project.
42. Mr. OSTROWSKI (Poland) said he supported the resolution, particularly as there were other environmentally important applications of the technology.
43. Mr. AGRELL (United Kingdom) endorsed the views of Australia. Having to discuss so technical a subject before the full text of the experts' study was available put delegates at a disadvantage. In matters where the detailed economics of different options had to be compared, a summary was seldom helpful and raised more questions than it answered. It was impossible, in fact, to reach a sound conclusion without a full understanding not only of the calculations but also of the underlying assumptions. His delegation felt some dissatisfaction at being rushed into a decision and requested that the Chairman's report to the plenary reflect the comments made by the delegate of Australia.
44. Mr. LIDGARD (Sweden) said that the conclusions drawn in the resolution with regard to the most cost-effective method of producing desalinated water did not appear to be based on a full analysis of all the possibilities. The technical considerations also needed to be studied in greater depth before a decision was taken on the issue.
45. Mr. GIOVANSILY (France) said that, while he fully appreciated the concerns of countries in urgent need of potable water, it seemed somewhat premature to envisage the construction of a demonstration facility at present. The Conference had before it only a summary of the report, which clearly indicated that under certain conditions nuclear power was not really an appropriate option for desalination. It would therefore be preferable for further studies to be carried out before embarking on the implementation phase.
46. Mr. McRAE (Canada) said that the general and technical studies already carried out were sufficient and that further study by the Agency was unjustified. Furthermore, it would be inappropriate for the Agency to

undertake a demonstration desalination project, as was suggested in the draft resolution.

47. Mr. GOESELE (Germany) said that his Government was keen to find the best possible solution to the problems of those countries which needed to improve their supply of potable water. However, it felt that the studies done so far did not warrant the construction of a demonstration facility and that the Agency should not become involved in such a project for the time being.

48. Mr. MUTRU (Finland) also felt that what had been done so far was sufficient and was as much as the Agency could do. Desalination by nuclear means might be a feasible option, but the motion of which competing source of energy to use was one for the countries concerned to answer.

49. Mr. STRATFORD (United States of America) supported the statements by the delegates of France, Canada and Germany. His Government had reviewed the summary report attached to document GC(XXXVI)/1013 and did not believe it adequately addressed the issue of the economic feasibility of nuclear desalination, which was still very unclear. His Government consequently considered it premature to create an extrabudgetary fund for a programme relating to the production of potable water and was unlikely to contribute to such a programme. Moreover, the proliferation of extrabudgetary funds resulted in "patchwork funding" and therefore in less efficient overall financial management of the Agency.

50. He endorsed the comment made by the United Kingdom that the Conference should not be asked to make a decision on the matter without first having the opportunity to examine the full text of the report on desalination.

51. Mr. PAPADIMITROPOULOS (Greece) said that it appeared from the comments made by previous speakers that the prospects for a nuclear power desalination plant were not good at present. Further studies on the subject therefore seemed premature.

52. Mr. ABOUGHALYA (Libyan Arab Jamahiriya) said that the item on potable water had been on the Agency's agenda for a number of years and needed to be resolved. The countries concerned appreciated the studies carried out and the valuable contributions made by some industrial States and the Agency,

and urged it to tackle the question as part of its regular programme. The main need was to reduce costs, and for that international co-operation was indispensable: developing countries could not solve that problem on their own. He therefore urged Member States - with the help of the Agency - to pursue the study of the subject with a view to setting up low-cost nuclear desalination programmes.

53. Finally, he pointed out that the full text of the technical report had already been issued and was available to delegations.

54. Mr. KUPITZ (Head, Nuclear Power Technology Development Section) said that the report in question (now available under the symbol IAEA/TECDOC/660) was the result of a co-operative effort between experts from many Member States and the Secretariat who had analysed possible desalination processes based on various energy sources. The variety of options was very wide and the amount of work involved had been considerable. The Agency's conclusions, based on the information provided by Member States and particularly vendors, was that nuclear desalination was economically and technically feasible, particularly where medium-sized and large facilities were concerned.

55. A number of studies on the feasibility of nuclear desalination had been done by vendors but, although great interest had always been expressed at the technical level, the cost of proceeding to the next stage had been prohibitive for a single vendor. The solution might be to work on an international basis.

56. A great deal of work was still needed, since only a small prefeasibility study with very limited resources had been done. In particular, the information from vendors needed to be assessed in greater detail to determine the economics of such a project.

57. Mr. FARAHAT (Egypt) said that an important juncture had been reached where a decision had to be taken on whether or not to proceed. If the interest shown earlier was genuine, Member States might only need more time to consider the study. It would be a great disappointment to many developing countries if the project was abruptly brought to an end.

58. Mr. PENG (China) expressed his appreciation of the amount of work done by the Agency in implementing the resolution adopted by the General Conference the previous year: it had evaluated the technical and economic

feasibility of using nuclear power for desalination and had compared the use of different energy sources for that purpose. In so doing, it had worked with Member States in the regions concerned and with others. The first stage had gone smoothly and it was to be hoped that the Agency could now proceed to the second.

59. Mr. AGRELL (United Kingdom) said that there was clearly no dispute about the importance of increasing supplies of potable water or the urgency of the problem to the countries concerned. The question was how the Agency should proceed over the next year in the light of the information now before the General Conference.

60. The Executive Summary in document GC(XXXVI)/1013, which was the only document available for consideration, was not a sufficient basis for the sort of action envisaged in the draft resolution before the Committee. However, it would understandably be disappointing for many Member States, including the United Kingdom, if the subject were lost sight of altogether. He therefore proposed as a way forward that the first two subparagraphs of paragraph 1 of the draft resolution be deleted and that paragraph 4 be amended to read: "Requests the Director General to submit to the Conference at that session a document on which discussion can be based." Those amendments would ensure that the issue was kept alive for a further year and would allow the Agency time to reflect on the report and the discussions in the Committee. In addition, the Agency would be requested to convey the conclusions of the report to other relevant United Nations bodies. What would be lost would be the proposal to establish an extrabudgetary fund - for which there was no sign of early support - for a programme which many delegates had argued was premature, and the initiation of a study of a demonstration facility for which support seemed doubtful and which many delegates had suggested was also premature.

61. Mr. STRATFORD (United States of America) supported the proposal just made. There had been many expressions of concern with regard to the establishment of a special extrabudgetary fund yet and to whether the time was ripe to investigate the construction of an international demonstration facility. If paragraph 1 were amended as suggested by the United Kingdom, the

desalination activities foreseen in the 1993-94 budget could still be carried out and phase 2 of the project, which would comprise the in-depth feasibility study referred to on page 3 of document GC(XXXVI)/1013, would then be initiated. In addition, the resolution would still be asking for the main conclusions of the study to be conveyed to the relevant organizations of the United Nations family and calling on Member States to provide extrabudgetary resources in support of the activities foreseen in the 1993-94 budget. With those amendments, the draft resolution seemed to be a reasonable compromise which did much more than keep the issue alive.

62. Mr. GIOVANSILY (France), Mr. MUTRU (Finland), Mr. HOGG (Australia), Mr. McRAE (Canada), Mr. LIDGARD (Sweden) and Mr. GOESELE (Germany) expressed full support for the United Kingdom proposal.

63. Mr. SHINOTSUKA (Japan) said that his country considered it premature to set up an extrabudgetary fund for a desalination project. He endorsed the position of previous speakers.

64. Mr. PAPADIMITROPOULOS (Greece) said that he agreed with the proposal to delete the first two paragraphs of paragraph 1, but that he would prefer to keep the rest of the text as it stood.

65. The CHAIRMAN took it that the Committee wished to recommend to the General Conference that it adopt the draft resolution contained in document GC(XXXVI)/COM.5/120 as amended by the United Kingdom.

66. It was so decided.

STRENGTHENING OF THE SAFEGUARDS SYSTEM (GC(XXXV)/RES/559; GC(XXXVI)/1017;
GC(XXXVI)/COM.5/121)

67. Mr. VILAIN XIII (Belgium), introducing the draft resolution contained in document GC(XXXVI)/COM.5/121, said that its text had been taken to a large extent from resolution GC(XXXV)/RES/559, which had been adopted by the General Conference in 1991. The main changes were in paragraphs 3 and 4, which simply welcomed the measures taken in the past year and urged the Director General to intensify his efforts. Draft resolution GC(XXXVI)/COM.5/121 was not controversial; its purpose was to express support for the activities

of the Board of Governors and the Director General in improving the effectiveness and efficiency of safeguards, and he hoped that it could be adopted by consensus.

68. Mr. WILSON (Australia) said that his country believed that effective safeguards benefited all Member States. It therefore welcomed the progress made in the strengthening of safeguards described in document GC(XXXVI)/1017. However, further efforts in that direction were needed, as the case of Iraq's clandestine nuclear programme had shown. His Government agreed in principle to participate in the extended reporting scheme proposed by the Agency, although certain technical matters required clarification.

69. It would be helpful to the discussion on the strengthening of safeguards if the Secretariat could produce new papers on decommissioning and on exemptions and terminations.

70. Where decommissioned facilities were concerned, he observed that, as safeguards agreements concluded pursuant to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) focused on nuclear material rather than facilities, they were not concerned with verifying that facilities declared to have been taken out of service had in fact been shut down. Such facilities, operating with unreported materials, were the most obvious possible type of undeclared installation. That issue might assume greater importance as more nuclear facilities approached the end of their working life. The problem could perhaps be handled in a manner similar to that of the new requirements for design information - i.e. by amending subsidiary agreements.

71. With respect to exemptions, the Committee would recall that in Iraq irradiated reactor fuel which had been exempted from safeguards had been reprocessed to produce a small quantity of separated plutonium. It therefore seemed advisable that the question be examined further. Australia welcomed the Secretariat's non-paper on substitution, exemption and termination and was pleased to hear that information on all requests for exemptions would be provided in consolidated form in the safeguards chapter of the annual report. His Government would, however, like to have some clarification of what information would be made known and some analysis of the options available. It would like to see the maximum degree of transparency consistent with the

confidentiality of safeguards. His delegation noted that the Secretariat was in the process of reviewing the whole question of exemptions with a view to ensuring that the purposes of safeguards agreements were met, and it would be useful if a paper on that subject could be prepared for consideration by the Board in 1993.

72. Australia supported efforts to improve the efficiency of safeguards - and all other Agency programmes - and endorsed the action taken by the Director General in that regard. Nevertheless, there was no quick or easy way to reduce safeguards costs, and it would not be in the interest of Member States if savings were made at the expense of the system's effectiveness. Furthermore, the Agency had treaty responsibilities in the area of safeguards. Sufficient funds must be made available for the effective discharge of those responsibilities.

73. His Government supported the draft resolution contained in document GC(XXXVI)/COM.5/121. The text drew heavily on the language used in the resolution on the strengthening of safeguards, adopted by consensus in 1991, and he therefore hoped that the draft resolution would be adopted by consensus.

74. Mr. SCHMIDT (Austria) made a presentation on "Considerations for an Alternative Safeguards Concept", which appears in the Annex to the present text.

The meeting rose at 7.30 p.m.

A N N E X

Delegation of Austria

Delegation of CSFR

Non-paper introduced in the Committee of the Whole
in relation to agenda item 13

CONSIDERATIONS FOR AN ALTERNATIVE SAFEGUARDS CONCEPT

A. Introduction

In the course of events in 1991, the Agency's safeguards system met strong challenges. Questions came up, whether this system - to verify that no diversion of nuclear material from peaceful uses to other purposes has taken place - has failed or was at least insufficient.

Discussions came up about the strengthening of Safeguards, focussing at a first stage on improvements in the existing verification system, i.e. detect diversion of nuclear material from declared nuclear facilities.

The triggering events, however, have shown, that international mechanisms to detect "clandestine nuclear activities", which could be developed outside the range of nuclear activities controlled by the IAEA, were under-developed and to a certain degree intentionally left out of the considerations of the IAEA Safeguards System.

The need to establish this task within the framework of the IAEA was not without dissenting opinions, but finally it was felt necessary.

The Agency should add to its Safeguards system the task of the detection of clandestine nuclear activities. The information input necessary would come from three sources:

- reports from Member States on all their exports and imports of nuclear materials, and equipment and material for nuclear purposes (the so-called "universal reporting" of nuclear transfers)

- information from other sources outside the Secretariat and
- information from inside the Secretariat, such as observations of inspectors during their verification activities (this should require the re-introduction of the function of "country officer").

The establishment of such new mechanisms and activities within the Agency would require new funds.

At the same time the Agency has been faced for many years with the problem of "zero real growth". So it is evident that no major additional increase in member contributions to the Agency's SG-budget would be likely to happen.

The funds would have to come from other areas of the current SG-budget.

How could that be achieved?

Already years ago when the discussion on financing of SG had once again reached a peak a member of SAGSI presented first ideas on a "selective SG approach" which was based on the view that the IAEA SG-system in its verification of declared nuclear facilities should distinguish between "sensitive" and "less sensitive" facilities.

While for the first type full verification by the Agency would continue, for the second type the verification responsibility could be shared between the IAEA and the State's system for accountancy and control (SSAC). It goes without saying that such allocation of responsibility from the IAEA to the SSAC and its amount is very much depending upon the quality of the SSAC. In accordance with the standard of the SSAC the IAEA could reduce its verification efforts and still reach the assumed verification goals.

In addition increased use of mechanical "passive" monitoring systems could provide assurance of on-going safeguards and less reliance upon its human inspection factor. Such

monitors could provide for fewer visits and could provide information through direct transmission to the IAEA Safeguards officials.

This process would lead to a gradually increasing availability of resources in the SG-budget, which would be used for the "Clandestine Facility Task" of the Agency (as described before).

Besides the additional contribution to the effectiveness in the IAEA SG-system these efforts would also contribute to the cost-efficiency in SG and would prove to those members of the IAEA, which so far have been reluctant to agree to a new approach on the financing of safeguards before every effort has been taken to streamline the system, that their concerns are considered with great seriousness and in a goal oriented manner.

With this in mind an "ALTERNATIVE SAFEGUARDS SYSTEM" (ASS) should be based on the following technical principles:

B. Main elements of an Alternative Safeguards System
(ASS)

Basic considerations:

1. ASS in accordance with the Agency's obligations under the NPT should enable the application of safeguards
 - on all source or special fissionable material
 - in all peaceful nuclear activities within the State's territory.....

2. ASS should
 - (a) improve safeguarding of all nuclear materials
 - (b) develop consistent safeguarding of all peaceful nuclear activities and

- (c) develop methods to detect undeclared facilities.
- 3. ASS should be implemented within the framework of INFCIRC/153 by making full use of its existing legal possibilities (flexibility).
- 4. ASS should limit the necessary amendments to existing Safeguards Agreements to a minimum.

Application of safeguards on nuclear materials

- 5. ASS should continue to be based on the use of material accountancy as a safeguards measure of fundamental importance, with containment and surveillance as important complementary measures.
- 6. ASS should continue to keep all present Agency's rights for independent verification of all nuclear materials.
- 7. ASS should be based on a wider and more structured (greater) co-operation between the Agency and the State.
- 8. ASS should provide for the possibility to allocate much of the verification responsibility to States by taking account of the possibility foreseen in the SG-model INFCIRC/153 to establish and maintain an SSAC in all states under SG, and to improve or up-grade such SSACs.
- 9. ASS should take due account of the technical effectiveness of the SSAC, in particular through verification of findings of the SSAC. Unnecessary duplication of the State's accounting and control activities should be avoided.
- 10. ASS should limit the expanded use of SSACs to less sensitive facilities (LSF). Nuclear material in sensitive facilities and direct use materials should remain under direct

verification by the Agency. Flexibility should be granted.

11. ASS should provide for Agency verification in the LSF area of the SSAC in two ways:
 - verification of the feasibility (quality) of the SSAC and the credibility of its performance and
 - independent verification of nuclear material at randomly selected facilities (a necessary duplication) (in this regard the possibility of making use of a "passive" monitoring and reporting system should be taken into account).
12. ASS should continue to be based on the full implementation of INFCIRC/153 para 81.(..more description to be provided).
13. Existing criteria, schemes and requirements for statements and conclusions should be used for both the Agency's and the SSAC's verification activities and evaluation of results. In addition inspections to confirm the general performance of SSAC should be introduced (as basis for acceptance of the SSAC's conclusions at LSF).

Application of safeguards on the state's
nuclear activities

14. ASS should be based on full transparency. Information supplied regularly by the state should include
 - nuclear programme
 - design information
 - information on construction and operation of nuclear facilities
 - export and import reporting
15. ASS should introduce consistent verification measures which may include evaluation of

- public media
 - export-import reporting to the Agency
 - information provided from other sources
 - Agency non-safeguards information
 - Agency safeguards information
 - environmental monitoring.
 - results of prior inspection activities.
16. ASS should introduce the Agency's right for routine inspections of the State's nuclear activities anywhere and at any time.
17. ASS should enable the Agency to review regularly the validity of the State's information on its nuclear activities (no undeclared facilities).

Inspections

18. ASS should keep the INFCIRC/153 scheme of inspections with two additional types of routine inspections:
- routine inspections to verify the performance of the SSAC,
 - routine inspections to verify the validity of the state's nuclear activities.

(special inspections should be reserved for special cases - see INFCIRC/153/ para 73).