

Information Circular

INFCIRC/539/Rev.2

Date: 16 September 2003

General Distribution

Original: English

Communication of 28 August 2003 received from the Government of the United States of America on behalf of the Member States of the Nuclear Suppliers Group

1. The Director General has received a letter dated 28 August 2003 from the Government of the United States of America on behalf of participating Governments of the “*Nuclear Suppliers Group*” (NSG)¹. Attached to this letter is an updated version of a paper entitled “*The Nuclear Suppliers Group: Its Origins, Role and Activities*”. The original version of the paper was issued as INFCIRC/539 on 15 September 1997, and a revision was issued on 17 April 2000 as INFCIRC/539/Rev.1.
2. In the light of the wish expressed at the end of the letter, the revised version of the paper, attached hereto, is being circulated to Member States of the IAEA.

¹ A list of Members in the NSG is contained in the Attachment to the Annex.



Department of Energy
National Nuclear Security Administration
Washington, DC 20585
August 28, 2003

To the Director-General
of the International Atomic Energy Agency
Vienna International Center
Vienna

Sir:

Pursuant to the letter dated August 13, 1997, by the Permanent Mission of Australia, and on behalf of the Participating Governments of the Nuclear Suppliers Group (NSG), I have the honor to send you in my capacity as Chairman of the NSG Consultative Group a revised text of a paper entitled: "The Nuclear Suppliers Group: Its Origins, Role and Activities."

The purpose of the attached paper is to provide detailed background on the origins of the NSG Guidelines (INFCIRC/254/Parts 1 and 2, as amended), which govern exports of items and technologies exclusively for nuclear use, as well as the export of nuclear-related dual-use items and technologies. The original version of paper was published by the Agency as INFCIRC/539 dated September 15, 1997. The International Atomic Energy Agency also published a revision, dated November 29, 2000. In light of many developments in the activities of the NSG since that date, the Participating Governments of the NSG deemed it necessary to update this document.

I would be grateful if you could circulate the attached document to the Member States of the IAEA as a revised version of INFCIRC/539.

Please accept, Sir, the assurance of my highest consideration.

Yours Sincerely,

A handwritten signature in black ink, appearing to read "R. Goorevich".

Richard Goorevich
Chairman
Nuclear Suppliers Group, Consultative Group



Background to Present Paper

7. The purpose of this paper is to contribute to a broader understanding of the NSG and its activities as part of an overall effort to promote dialogue and cooperation between NSG participants and non-NSG participants. This document provides information on actions taken by NSG participants to give effect to their commitment to improve transparency in nuclear-related export controls and to cooperate more closely with non-NSG participants to achieve this objective. In so doing, it aims to encourage wider adherence to the NSG Guidelines.

8. The paper's purpose is therefore consistent with Decision 2 on "Principles and Objectives for Nuclear Non-Proliferation and Disarmament," agreed at the 1995 Review and Extension Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPTREC) where Paragraph 17 of that document states that "transparency in nuclear-related export controls should be promoted within the framework of dialogue and cooperation among all interested States party to the Treaty." In this connection, NSG participants also take into account Paragraph 16 of that document, which calls for preferential treatment to be accorded to non-nuclear weapon States party to the Treaty in the promotion of peaceful uses of nuclear energy, taking the needs of developing countries particularly into account.

Section I traces the origins and development of the NSG.

Section II describes the structure and current activities of the NSG.

Section III describes the developments of the NSG to date.

Section IV reports on the NSG action to promote openness and transparency.

I. Origins and Development of the NSG

Export Controls

9. From the beginning of international cooperation in the peaceful uses of nuclear energy, supplier countries have recognised the responsibility to ensure that such cooperation does not contribute to the proliferation of nuclear weapons. Shortly after entry into force of the NPT in 1970, multilateral consultations on nuclear export controls led to the establishment of two separate mechanisms for dealing with nuclear exports: the Zangger Committee in 1971 and what has become known as the Nuclear Suppliers Group in 1975. Between 1978 and 1991, the NSG was not active, even though its Guidelines were in place. The Zangger Committee continued to meet on a regular basis during this period to review and amend the list of items subject to export controls, the so-called "Trigger List."

The Zangger Committee

10. The Zangger Committee had its origins in 1971 when major nuclear suppliers regularly involved in nuclear trade came together to reach common understandings on how to implement Article 111.2³ of the NPT with a view to facilitating consistent interpretation of the obligations arising from that Article. In 1974 the Zangger Committee published a "Trigger List," that is, items which would "trigger" a requirement for safeguards and the Zangger guidelines ("common understandings") governing the export, direct or indirect, of those items to non-nuclear-weapon States (NNWS) that are not party to the NPT. The Zangger Understandings establish three conditions for the supply: a non-explosive-use assurance, an IAEA safeguards requirement, and a re-transfer provision that requires the receiving State to apply the same conditions when re-exporting these items. The Zangger Trigger List and the Understandings are published as IAEA document INFCIRC/209, as amended.

The NSG

11. The NSG was created following the explosion in 1974 of a nuclear device by a non-nuclear-weapon State, an event which demonstrated that nuclear technology transferred for peaceful purposes could be misused. It was thus felt that conditions of nuclear supply might need to be adapted so as to better ensure that nuclear cooperation could be pursued without contributing to the risk of nuclear proliferation. This event brought together the major suppliers of nuclear material, non-nuclear material for reactors, equipment and technology who were members of the Zangger Committee, as well as States who were not parties to the NPT.

12. The NSG, taking into account the work already done by the Zangger Committee, agreed on a set of guidelines incorporating a Trigger List. The NSG Guidelines were published in 1978 as IAEA Document INFCIRC/254 (subsequently amended), to apply to nuclear transfers for peaceful purposes to help ensure that such transfers would not be diverted to unsafeguarded nuclear fuel cycle or nuclear explosive activities. There is a requirement for formal government assurances from recipients to this effect. The NSG Guidelines also strengthened re-transfer provisions and adopted a requirement for physical protection measures and an agreement to exercise particular caution in the transfer of sensitive facilities, technology and material usable for nuclear weapons or other nuclear explosive devices. In doing so, the NSG Guidelines recognised the fact that there is a class of technologies and materials that are particularly sensitive because they can lead directly to the creation of material usable for nuclear weapons or other nuclear explosive devices. The implementation of effective physical protection measures is also critical. This can help prevent the theft and illicit transfer of nuclear material.

³

Article 111.2 of the NPT states that:

"Each State Party to the Treaty undertakes not to provide:

- (a) source or special fissionable material, or
- (b) equipment or material especially designed or prepared for the processing, use or production of special fissionable material, to any non-nuclear-weapon State for peaceful purposes, unless the source or special fissionable material shall be subject to the safeguards required by this Article."

13. At the 1990 NPT Review Conference (NPTRC), a number of recommendations made by the committee reviewing the implementation of Article III had a significant impact on the NSG's activities in the 1990s. These included the following:

- That NPT parties consider further improvements in measures to prevent the diversion of nuclear technology for nuclear weapons;
- That States engage in consultations to ensure appropriate coordination of their controls on the exports of items, such as tritium, not identified in Article III.2 but still relevant to nuclear weapons proliferation and therefore to the NPT as a whole;
- That nuclear supplier States require, as a necessary condition for the transfer of relevant nuclear supplies to non-nuclear weapon States, the acceptance of IAEA safeguards on all their current and future nuclear activities (i.e. full-scope safeguards or comprehensive safeguards).

14. Shortly thereafter, it became apparent that export control provisions then in force had not prevented Iraq, a party to the NPT, from pursuing a clandestine nuclear weapons programme, which later prompted UN Security Council action. A large part of Iraq's effort had been to acquire dual-use items not covered by the NSG Guidelines and then to build its own Trigger List items. This gave major impetus to the NSG's development of its Dual-Use Guidelines. In doing so, the NSG demonstrated its commitment to nuclear non-proliferation by ensuring that items like those used by Iraq would from now on be controlled to ensure their non-explosive use. These items would, however, continue to be available for peaceful nuclear activities subject to IAEA safeguards, as well as for other industrial activities where they would not contribute to nuclear proliferation.

15. Following these developments, the NSG decided in 1992:

- To establish guidelines for transfers of nuclear-related dual-use equipment, material and technology (items which have both nuclear and non-nuclear applications) that could make a significant contribution to an unsafeguarded nuclear fuel cycle or nuclear explosive activity. These Dual-Use Guidelines were published as Part 2 of INFCIRC/254, and the original Guidelines published in 1978 became Part 1 of INFCIRC/254;
- To establish a framework for consultation on the Dual-Use Guidelines, for the exchange of information on their implementation and on procurement activities of potential proliferation concern;
- To establish procedures for exchanging notifications that have been issued as a result of national decisions not to authorise transfers of dual-use equipment or technology and to ensure that NSG participants do not approve transfers of such items without first consulting with the State that issued the notification;

- To make a full-scope safeguards agreement with the IAEA a condition for the future supply of Trigger List items to any non-nuclear-weapon State. This decision ensured that only NPT parties and other States with full-scope safeguards agreements could benefit from nuclear transfers.

16. The endorsement at the 1995 NPTREC of the full-scope safeguards policy already adopted by the NSG in 1992 clearly reflects the conviction of the international community that this nuclear supply policy is a vital element to promote shared nuclear non-proliferation commitments and obligations. Specifically, Paragraph 12 of Decision 2 on "Principles and Objectives for Nuclear Non-Proliferation and Disarmament" states that full-scope safeguards and international legally binding commitments not to acquire nuclear weapons or other nuclear explosive devices should be a condition for granting licences for Trigger List items under new supply arrangements with non-nuclear-weapon States.

17. The 2000 NPTRC reconfirmed also that any transfer of nuclear-related dual-use items should be in full conformity with the NPT.

The NSG, the Zangger Committee and the NPT

18. The NSG and the Zangger Committee differ slightly in the scope of their Trigger Lists of *especially designed or prepared* (EDP) items and in the export conditions for items on those lists. Concerning the scope of those lists, the Zangger list is restricted to items falling under Article 111.2 of the NPT. The NSG Guidelines, in addition to covering equipment and material, also cover the technology for the development, production and use of the items on the list. On export conditions for the items on the Trigger Lists, the NSG has a formal full-scope safeguards requirement as a condition of supply. The NSG Guidelines apply to transfers for peaceful purposes to any NNWS and, in the case of controls on retransfer, to transfers to any State.

19. The NSG Guidelines also contain the so-called "Non-Proliferation Principle," adopted in 1994, whereby a supplier, notwithstanding other provisions in the NSG Guidelines, authorises a transfer only when satisfied that the transfer would not contribute to the proliferation of nuclear weapons. The Non-Proliferation Principle seeks to cover the rare but important cases where adherence to the NPT or to a Nuclear Weapon Free Zone Treaty may not by itself be a guarantee that a State will consistently share the objectives of the Treaty or that it will remain in compliance with its Treaty obligations.

20. The NSG arrangement covering exports of dual-use items is a major difference between the NSG and the Zangger Committee. As dual-use items cannot be defined as EDP equipment, they fall outside the Zangger Committee's mandate. As noted above, the control of dual-use items has been recognised as making an important contribution to nuclear non-proliferation.

21. Despite these differences between the two regimes, it is important to keep in mind that they serve the same objective and are equally valid instruments of nuclear non-proliferation efforts. There is close cooperation between the NSG and the Zangger Committee on the review and amendment of the Trigger Lists.

II. Structure and Current Activities of the NSG

Participation

22. From the initial publication of INFCIRC/254 in 1978 to now, participation has increased steadily. (See full list of NSG participants in the Annex.)

23. Factors taken into account for participation include the following:

- The ability to supply items (including items in transit) covered by the Annexes to Parts 1 and 2 of the NSG Guidelines;
- Adherence to the Guidelines and action in accordance with them;
- Enforcement of a legally based domestic export control system that gives effect to the commitment to act in accordance with the Guidelines;
- Adherence to one or more treaties, such as the NPT, the Treaties of Tlatelolco, Rarotonga, Pelindaba, Bangkok or an equivalent international nuclear non-proliferation agreement, and full compliance with the obligations of such agreement(s);
- Support of international efforts towards non-proliferation of weapons of mass destruction and of their delivery vehicles.

Organisation of Work

24. The NSG works on the basis of consensus. Overall responsibility for activities lies with the NSG participants who meet once a year in a Plenary meeting.

25. A rotating Chair has overall responsibility for coordination of work and outreach activities. (See full list of NSG Chairs in the Annex.)

26. The NSG Plenary can decide to set up technical working groups on matters such as the review of the NSG Guidelines, the Annexes, the procedural arrangements, information sharing and transparency activities. The NSG Plenary can also mandate the Chair to conduct outreach activities with specific countries. The aim of the outreach activities is to promote adherence to the NSG Guidelines.

27. Typically, the agenda of the Plenary meeting focuses on reports from working groups that may be operating or may have concluded their work since previous Plenaries as well as on reports from the previous NSG Chair on outreach activities. Time is also allotted to review items of interests such as trends in nuclear proliferation and developments since the previous Plenary meeting.

28. In addition to the Plenary meeting, the NSG has two other standing bodies that report to the Plenary. These are the Consultative Group (CG) and the Information Exchange Meeting (IEM) with Chairs that also rotate annually. The CG meets at least twice a year and is tasked to hold consultations on issues associated with the Guidelines on nuclear supply and the technical annexes. The IEM precedes the NSG Plenary and provides another opportunity for NSG participants to share information and developments of relevance to the objectives and content of the NSG Guidelines.

29. NSG participants review the Guidelines in INFCIRC/254 from time to time to ensure that they are up to date to meet evolving nuclear proliferation challenges. The IAEA is notified of agreed amendments to Parts 1 and 2 of the NSG Guidelines and their associated lists and reissues INFCIRC/254 accordingly. Such amendments can be additions, deletions or corrections.

30. The Permanent Mission of Japan in Vienna, acting as a Point of Contact, carries out a practical support function. It receives and distributes NSG documents, notifies meeting schedules and provides practical assistance to the NSG Plenary, the CG and IEM Chairs and Chairs of the various working groups established by the Plenary.

How the Guidelines Work

31. The NSG Guidelines introduce a degree of order and predictability among the suppliers and harmonise standards and interpretations of suppliers' undertakings with the aim of ensuring that the normal process of commercial competition does not lead to outcomes that further the proliferation of nuclear weapons. Consultations among NSG participants are also designed to ensure that any possible impediments to international nuclear trade and cooperation are kept to a minimum.

32. The NSG Guidelines are implemented by each NSG participant in accordance with its national laws and practices. Decisions on export applications are taken at the national level in accordance with national export licensing requirements. This is the prerogative and right of all States for all export decisions in any field of commercial activity and is also in line with the text of Article 111.2 of the NPT, which refers to "each State Party," and thus emphasises the sovereign obligation of any party to the Treaty to exercise proper export controls. NSG participants meet regularly to exchange information on issues of nuclear proliferation concern and how these impact on national export control policy and practice. However, it is important to remember that the NSG does not have a mechanism for limiting supply or the coordination of marketing arrangements and does not take decisions on licence applications as a group.

33. The requirement that no transfer of Trigger List items to NNWS takes place unless the recipient State has full-scope safeguards on all its nuclear activities is particularly pertinent because it establishes a uniform standard of supply that is based on the IAEA's international verification system. The strengthened safeguards system of the IAEA, as adopted in 1997, should improve considerably the Agency's ability to exercise its verification role.

34. Contacts and briefings take place with non-participating countries: in addition to the outreach activities conducted with potential NSG participants, the NSG conducts briefings of non-NSG participants with a view to increasing the understanding of and adherence to the NSG

Guidelines. States can choose to adhere to the Guidelines without being obliged to participate in the NSG.

III. Developments of the NSG to Date

35. The NSG Guidelines have significantly strengthened international solidarity in the field of transfers of nuclear material. NSG undertakings reflect the non-proliferation and peaceful nuclear cooperation objectives that NSG participants share with all NPT parties and parties to other international legally binding non-proliferation commitments. Controls on the transfer of listed items and technologies provide essential support for the implementation of these treaties and for the continuation and development of peaceful nuclear cooperation, thus also facilitating the utilisation of nuclear energy in developing countries.

36. Contrary to fears that the NSG Guidelines act as an impediment to the transfer of nuclear materials and equipment, they have in fact facilitated the development of such trade. For some time now, supply arrangements have incorporated NSG commitments. Such arrangements are designed to expedite transfers and trade. The NSG commitments, when woven into the supply arrangements with a basis in respective national laws, provide governments with legitimate and defensible arguments that such arrangements diminish proliferation risk. In this manner, non-proliferation and trade purposes are mutually reinforcing.

37. The NSG Guidelines are applied both to NSG participants and non-NSG participants. Most NSG participants do not possess a self-sufficient fuel cycle and are major importers of nuclear items. Accordingly, they are required to provide the same assurances for nuclear transfers as non-NSG participants in accordance with the Guidelines.

38. As practised by NSG participants, export controls operate on the basis that cooperation is the principle and restrictions are the exception. Few NPT parties have been refused controlled items: this has occurred when a supplier had good reason to believe that the item in question could contribute to nuclear proliferation. Almost all rejections by NSG participants of applications for export licences have concerned States with unsafeguarded nuclear programmes.

39. There is close interdependence between the controls in Part I of the Guidelines and the effective implementation of comprehensive IAEA safeguards. The NSG supports fully international efforts to strengthen safeguards to detect undeclared activities as well as to monitor declared nuclear activities to ensure that they continue to meet vital nuclear non-proliferation requirements and to provide the assurances needed for the continuation of international nuclear trade.

40. The NSG held an Intersessional Meeting in Vienna in October 1998, following the concern expressed by NSG participants at the nuclear tests conducted by India and Pakistan in May 1998. NSG participants discussed their impact and they reaffirmed their commitment to the NSG Guidelines.

41. The NSG held an Extraordinary Plenary Meeting in Vienna in December 2002 and agreed to several comprehensive amendments to strengthen its Guidelines, intended to prevent and counter the threat of diversion of nuclear exports to nuclear terrorism. The Plenary emphasised that effective export controls are an important tool to combat the threat of nuclear

terrorism. While discussing the DPRK nuclear programme, the Participating Governments of the NSG called on all states to exercise extreme vigilance that their exports and any goods or nuclear technologies that transit their territorial jurisdiction do not contribute to any aspect of a North Korean nuclear weapons effort.

IV. NSG Action to Promote Openness and Transparency

42. The NSG is aware that non-NSG participants have in the past expressed concern about the lack of transparency in the NSG's proceedings. Non-NSG participants have not been part of the decision-making process in the establishment of the Guidelines. Concerns have therefore been expressed that the NSG has sought to deprive States of the benefits of nuclear technology or imposed requirements on non-NSG participants, which have been made without their participation.

43. NSG participants understand the reasons for these concerns but state emphatically that the objectives of the NSG have consistently been to fulfil their obligations as suppliers to support nuclear non-proliferation and, in doing so, to facilitate peaceful nuclear cooperation. The growing and diverse participation of the NSG demonstrates that it is not a closed shop.

44. The NSG has consistently promoted openness and greater understanding of its aims, as well as adherence to its Guidelines and is prepared to support efforts by States to adhere to and implement the Guidelines. In response to the interest shown by individual States and groups of States, a series of contacts have taken place to inform them about the NSG's activities and to encourage them to adhere to the Guidelines. These contacts have been organised through special missions to these countries by successive NSG Plenary Chairs and representatives of NSG participants as well as during NSG seminars specially convened for this purpose (in 1994 and 1995).

45. The NSG welcomes the call in Paragraph 17 of the "Principles and Objectives for Nuclear Non-proliferation and Disarmament" adopted at the 1995 NPTREC for more openness and transparency, and responded substantively to the call at its Buenos Aires Plenary meeting on 25-26 April 1996 by establishing a working group to consider how to promote openness and transparency through further dialogue and cooperation with non-NSG participants.

46. This is in addition to the ongoing NSG outreach programme and regular contacts with specific countries to inform them about NSG practices and to promote adherence to the Guidelines.

47. As a first step, NSG participants have strengthened their dialogue with non-NSG participants through contacts that took place in the margins of the 1996 IAEA General Conference. This dialogue continues in capitals and on other occasions such as regular nuclear and security policy dialogues, as well as during multilateral meetings that deal with these issues. This paper is a further practical contribution to this process.

48. On 7-8 October 1997, immediately following the forty-first session of the IAEA General Conference, the NSG held the "International Seminar on the Role of Export Controls in Nuclear Non-Proliferation" in Vienna. Given the importance of including all actual and potential supplier countries and the wish for a genuine, open and all-inclusive dialogue, it was decided to invite all States to the Seminar, both parties and non-parties to the NPT.

49. On the basis of the dialogue started in Vienna, a second international seminar on the same subject was held in New York on 8-9 April 1999, ahead of the 1999 NPT Preparatory Committee Meeting. As in 1997, speakers were drawn from both NSG participants and non-NSG participants and from a variety of backgrounds so that the debate could cover a broad spectrum of views. Both seminars were attended by representatives from Governments, international organisations, and leading experts from the media, the academic world and industry.

50. The two international seminars were designed to be a further but not final step in promoting the goals of transparency within a framework of dialogue and cooperation on the role of export controls in nuclear non-proliferation and in the promotion of nuclear trade for peaceful purposes. These events proved to be very beneficial in terms of furthering transparency about nuclear export controls.

51. At the 2001 Aspen Plenary the NSG agreed upon the creation of a web site in order to better inform the public of the role and activities of the NSG. The web site, with the following URLs, was opened to the public at the 2002 Prague Plenary.

<http://www.nuclearsuppliersgroup.org>

<http://www.nsg-online.org>

52. NSG participants are also exploring other means of cooperating more closely with non-NSG participants, to promote understanding of the Guidelines as well as adherence and implementation.

Conclusions

53. In its future activities, the NSG will continue to be guided by the objectives of supporting nuclear non-proliferation and facilitating the peaceful applications of nuclear energy.

54. With regard to the future development of the Guidelines, NSG participants will continue to harmonise their national export control policies in a transparent manner. In this way they will continue to contribute to nuclear non-proliferation and at the same time support the development of nuclear trade and cooperation and help sustain genuine commercial competition between suppliers.

55. Universal transparency of the NSG Guidelines and the Annexes will continue through their publication as IAEA Information Circulars.

56. The NSG remains open to admitting further supplier countries in order to strengthen international non-proliferation efforts, as already illustrated by its broadening participation in all regions of the world.

57. The NSG is committed to the further promotion of openness and transparency in its practices and policy.

NSG participants and those who have held the Chair

ARGENTINA	(1996 / 97 - BUENOS AIRES)
AUSTRALIA	
AUSTRIA	
BELARUS	
BELGIUM	
BRAZIL	
BULGARIA	
CANADA	(1997 / 98 - OTTAWA)
CYPRUS	
CZECH REPUBLIC	(2002 / 03 - PRAGUE)
DENMARK	
FINLAND	(1995 / 96 - HELSINKI)
FRANCE	(2000 / 01 - PARIS)
GERMANY	
GREECE	
HUNGARY	
IRELAND	
ITALY	(1999 / 00 - FLORENCE)
JAPAN	
KAZAKHSTAN	
REPUBLIC OF KOREA	(2003 / 04 - BUSAN)
LATVIA	
LUXEMBOURG	
NETHERLANDS	(1991 / 92 - THE HAGUE)
NEW ZEALAND	
NORWAY	
POLAND	(1992 / 93 - WARSAW)
PORTUGAL	
ROMANIA	
RUSSIAN FEDERATION	
SLOVAKIA	
SLOVENIA	
SOUTH AFRICA	
SPAIN	(1994 / 95 - MADRID)
SWEDEN	
SWITZERLAND	(1993 / 94 - LUCERNE)
TURKEY	
UKRAINE	
UNITED KINGDOM	(1998 / 99 - EDINBURGH)
UNITED STATES	(2001 / 02 - ASPEN)

Permanent Observer: EUROPEAN COMMISSION