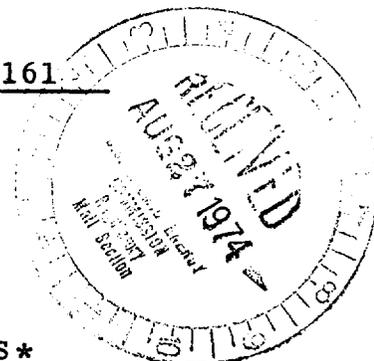


August 23, 1974

SECY-75-161

INFORMATION REPORT

SUMMARY SHEET



Subject: NUCLEAR EXPORTERS (ZANGGER) COMMITTEE DOCUMENTS *

Purpose: On August 22, 1974, the U.S., USSR, U.K., Japan, Federal Republic of Germany, Canada, Sweden, Netherlands, Belgium, Norway, Austria, Australia, Denmark and Finland are expected to exchange diplomatic notes committing themselves to a common minimum export policy in conformance with objectives of Article III.2. of the NPT. The diplomatic note stating the U.S. agreement with the Committee's arrangements and the documents setting forth those arrangements are attached for the Commission's information.

John A. Eberwein
General Manager

Attachments:

1. Brief Summary of Committee Documents, dated August 1974, (Attachment A), OJO.
2. Text of the Diplomatic Note With the Committee Documents Enclosed, dated August 1974, (Attachment B), w/"Unabridged," Versions of Encls. A and B (C/NSI).

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*Previous report provided in SECY-75-146 - Status of Nuclear Exporters (Zangger) Committee

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ATTACHMENT A

August 1974

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SUMMARY OF DOCUMENT ZC(71)/10/REV. 6:
CONCLUSIONS OF THE ZANGGER COMMITTEE REGARDING
EQUIPMENT AND NON-NUCLEAR MATERIAL

1. Fifteen supplier nations voluntarily participated in meetings to determine what areas of common understanding exist as to the way in which they might regulate exports of nuclear equipment or material when such exports are directed to non-nuclear weapons states not party to the NPT. The objective is to create conditions for fair international commercial competition in cases where such exports would be approved or denied on the basis of whether or not IAEA safeguards will be applied to any uranium or plutonium which will be associated with the exported equipment or material.
2. A minimum "trigger list" of nine reactor items*, plus fuel fabrication and chemical processing plants and isotope separation equipment has been agreed.
3. Each member of the group would supply a trigger list item only on the condition that the associated nuclear material would not be diverted to nuclear weapons or other nuclear explosive devices. Each member would also satisfy itself that IAEA safeguards would be applied for that purpose.
4. The prohibition of use for any nuclear explosive device would be either covered in the formal safeguards agreement with the IAEA or in specific communications from the supplier to the recipient state, the IAEA, and the other members of the group.
5. The supplier nation would need to be satisfied as to the existence of an adequate safeguards agreement between the recipient state and the IAEA before it authorizes the export.
6. The document covers the situation of a trigger list item being re-exported to a NNWS, without safeguards, by a non-member of the group after having been imported from a member of the group.
7. Each group member will notify others annually of its actual or planned exports under this arrangement.
8. Such notices will include information about the items exported and about the specific recipient.

* Reactors, pressure vessels, fuel charging and discharging machines, control rods, pressure tubes, zirconium tubing, liquid metal primary coolant pumps, heavy water, and nuclear-grade graphite.

Summary

- 2 -

9. Reports need not be made regarding anticipated exports if the contracts for the exports have not been concluded.
10. These arrangements will be reviewed no later than September 1976. Any member may request a meeting earlier, e.g., in a case where a non-member states' export practices threaten commercial disadvantages.
11. Other supplier countries are welcome to act in accordance with these arrangements.

SUMMARY OF DOCUMENT ZC(72)/12/REV. 3:CONCLUSIONS OF THE ZANGGER COMMITTEE REGARDING THE
SUPPLY OF SOURCE AND SPECIAL FISSIONABLE MATERIAL

1. (The first paragraph is basically the same as described above in the summary of document ZC(71)/10/Rev. 6.)
2. The items to be controlled are source and special fissionable material as defined in the IAEA Statute. The procedures would not apply to materials and quantities exempted under the IAEA's NPT safeguards system.
3. The remainder of the document parallels ZC(71)/10/Rev. 6 with minor technical modifications; therefore, see Summary of document ZC(71)/10/Rev. 5, paragraphs 3 through 11.



August 1974

ATTACHMENT B

TEXT OF DIPLOMATIC NOTE TRANSMITTING FULL ZANGGER
COMMITTEE DOCUMENTS TO CERTAIN OTHER
MEMBERS OF ZANGGER COMMITTEE *

"I refer to the discussions held in Vienna regarding exports to any non-nuclear-weapon state for peaceful purposes of: (A) source or special fissionable material; and (B) equipment and material especially designed or prepared for the processing, use, or production of special fissionable material. I also refer to the commitment of the Government of the United States of America under Article III, Paragraph 2, of the Treaty on the Non-Proliferation of Nuclear Weapons not to provide such nuclear material, equipment, or material to any non-nuclear-weapon state for peaceful purposes, unless the nuclear material so provided or that which is produced, processed, or used in or by the equipment or material so provided shall be subject to safeguards under an agreement with the International Atomic Energy Agency meeting the requirements of the NPT.

I am able to inform you that the procedures for controlling exports of source and special fissionable material and of equipment and material especially designed or prepared for the processing, use, or production of special fissionable material, currently in force under the policy of the Government of the United States of America, are fully consistent with those set out in the two memoranda arrived at during the said discussions. Copies of those memoranda are enclosed. With regard to sub-Paragraph 1(C) of Enclosure B, I am also able to inform you that the Government of the United States of America, in accordance with its existing procedures, requires safeguards in relation to items of equipment and material it exports in addition to those specified in Paragraph 2 of Enclosure B.

The Government of the United States of America will advise your government if the situation described in the foregoing paragraph should change.

Deliveries to the European Atomic Energy Community and to its members of source and special fissionable material and of equipment and material especially designed or prepared for the processing, use, or production of special fissionable material, under contracts made pursuant to existing agreements between the United States and the European Atomic Energy Community, will continue to be made, in light of our expectation that the agreement between the IAEA, the European Atomic Energy Community, and certain of its member states, signed on April 5, 1973, will enter into force in the very near future.

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August 1974

The Government of the United States of America has informed the European Atomic Energy Community and all of its members that no source or special fissionable material or equipment and material especially designed or prepared for the processing, use, or production of special fissionable material transferred from the United States of America to the European Atomic Energy Community or its members may be re-exported to any non-nuclear-weapon state outside the European Community except upon express consent by the Government of the United States of America, as provided for in its existing agreements with the European Atomic Energy Community, and that such consent will not be given unless acceptable arrangements have been made for the application of safeguards, pursuant to an agreement with the International Atomic Energy Agency, on the nuclear material to be re-exported or on the nuclear material processed, used, or produced in or by the use of such especially designed or prepared equipment and material which is to be re-exported.

With respect to Paragraphs 3 and 4 of each of the memoranda enclosed, I wish to note that the representative of the Government of the United States of America has placed on the record of the meetings of the Board of Governors of the International Atomic Energy Agency on March 1, 1972, and on June 12, 1974, the understanding inherent in all of the bilateral agreements for cooperation to which the Government of the United States is a party, that the use of any material or equipment supplied by the United States under such agreements for any nuclear explosive device is precluded; and the understanding inherent in the safeguards agreements related to such cooperation agreements, that the International Atomic Energy Agency would verify, inter alia, that the safeguarded material was not used for any nuclear explosive device. It was further noted by the United States representative that the continued cooperation of the United States of America with other countries in the nuclear field is dependent on the assurance that these understandings will continue to be respected in the future."

Enclosures:

1. "Unabridged," Version, Enclosure A, dated August 1974, w/Annex I.
2. "Unabridged," Version, Enclosure B, dated August 1974, w/Annexes I and II.

*Note: Not all Committee member nations have completed the internal arrangements to permit themselves to make the common undertaking at this time and therefore the exchange of notes with them is expected to come at a later date.



Document classified by:

F. J. Arsenault
F. J. Arsenault
Chief, IDPB, SS, 8/15/74

"UNABRIDGED," VERSION

ENCLOSURE "A"

1 (a) Representatives of Australia, Austria, Belgium, Canada, Denmark, Federal Republic of Germany, Italy, Japan, Netherlands, Norway, South Africa, Sweden, Switzerland, U.K., and the USA held a series of meetings in Vienna and Berne from February 1972 to June 1974, to consider procedures in relation to exports of nuclear materials in the light of the commitment of certain States not to provide source or special fissionable material to any non-nuclear-weapon State for peaceful purposes unless the source or special fissionable material is subject to safeguards under an agreement with the IAEA.

(b) The purpose of the meetings was to determine the areas of common understanding existing among members of the Group as to the way in which each State would interpret and implement this commitment (or would act in accord with those States which had made the commitment), with a view to creating conditions for fair commercial competition with respect to its implementation, so far as such areas were concerned.

DEFINITION OF SOURCE AND SPECIAL FISSIONABLE MATERIAL

2 (i) For the purposes of these understandings, the definition of source and special fissionable material shall be that contained in Article XX of the IAEA Statute.

(ii) It is understood that exports of the items specified in subparagraph (a) below, and exports of source or special fissionable material from a given supplying to a given recipient country, within a period of twelve months, below the limits specified in subparagraph (b) below, should be disregarded for the purposes of these understandings:

- (a) Plutonium with an isotopic concentration exceeding 80%.

Special fissionable material when used in gratings or less as a sensing component in instruments

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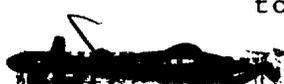
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Source material which the supplying State is satisfied to be used only in non-nuclear activities, such as the production of alloys or ceramics.

- (b) Special fissionable material 50 effective grams
- Natural Uranium 500 kilograms
- Depleted Uranium 1,000 kilograms
- Thorium 1,000 kilograms

THE APPLICATION OF SAFEGUARDS

3 Members of the Group are solely concerned with ensuring, where relevant, the application of safeguards in non-nuclear-weapon States not party to the NPT with a view to preventing diversion of the safeguarded nuclear material from peaceful purposes to nuclear weapons or other nuclear explosive devices. It is understood that, if any member of the Group wishes to supply source or special fissionable material for peaceful purposes to such a State, that member would:

- (a) specify to the recipient State, as a condition of supply, that the source or special fissionable material, or special fissionable material produced in or by the use thereof, should not be diverted to nuclear weapons or other nuclear explosive devices, and
- (b) satisfy itself that safeguards to that end, under an agreement with the IAEA and in accordance with its safeguards system, would be applied to the source or special fissionable material in question.

4 The understanding that safeguarded nuclear material was not to be used for any nuclear explosive device would either:

- (a) be included in the formal safeguards agreement with the IAEA, or
- (b) would be specified by the supplier State, as a condition of supply.

In case (b), the supplier State would inform the IAEA of the understanding on this matter and request that safeguards in

[REDACTED]

relation to the nuclear material in question reflect that understanding. The supplier State would also inform the other members of the Group of each such understanding, either on each occasion or in connection with the annual supply of information called for in paragraph 7.

DIRECT EXPORTS

5 It is understood that, in the case of direct exports of source or special fissionable material to non-nuclear-weapon States not party to the NPT, a supplying State would need to have satisfied itself, before authorising the export of the material in question, that such material would be subject to a safeguards agreement with the Agency, as soon as the recipient State took over responsibility for the material, but no later than the time the material reached its destination. Some recommendations as to how this could be achieved are annexed to the present document.

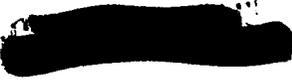
RETRANSFERS

6 It is understood that it would be necessary for a member of the Group, exporting source or special fissionable material to a nuclear-weapon State not party to the NPT which was neither a member of the Group nor acting in accord with members of the Group, to obtain satisfactory assurances that the material would not be re-exported to a non-nuclear-weapon State not party to the NPT unless arrangements corresponding to those referred to above were made for the acceptance of safeguards by the State receiving such re-export.

INFORMATION TO OTHER MEMBERS OF THE GROUP

7 It is understood that each member of the Group would supply to other members of the Group, on an annual basis, information regarding its exports of source or special fissionable material to non-nuclear-weapon States not party to the NPT. Such information would need only to include separate lists of countries to which (a) source or (b) special fissionable material had been supplied, together with an indication of the safeguards agreement under which the material was supplied.

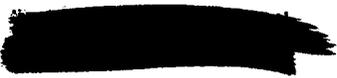
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ARRANGEMENTS FOR REVIEW

8 The Group will review these understandings not later than September 1976. Unless revised earlier, they are regarded as valid until February 1977, when they will need to be reconfirmed or, if the Group so decides, modified. Any member of the Group may request a meeting at any time to consider matters arising from these understandings, including the case where exporting action, on the part of a State not a member of the Group, unaccompanied by a requirement for concomitant safeguards, threatens commercial disadvantage to a member or members of the Group. On receipt of any request for a meeting, the Chairman of the Group for the time being will arrange for the Group to be convened after taking soundings as to a convenient date.

ASSOCIATION OF OTHER COUNTRIES

9 The participating countries of the Group would welcome the acceptance of its aims and practices by other supplying countries whether party or not party to the NPT.




RECOMMENDATIONS AS TO HOW THE PURPOSE SPECIFIED
IN PARAGRAPH 5 COULD BE ACHIEVED

It is recommended that the purpose specified in paragraph 5 might be achieved by the following alternative means:

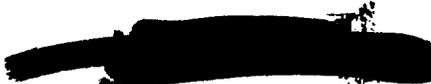
- (a) the conclusion of a bilateral agreement ("master agreement") between the non-nuclear-weapon state not party to the NPT and the Agency, under which safeguards could be applied to nuclear material in relation to "trigger list" items (or consignments of nuclear material) from a number of different supplying States. Any member of the Group supplying "trigger list" items could then arrange with the Agency and the recipient State for inclusion of the items supplied in the category for equipment and non-nuclear material of the inventory.
 - (b) the conclusion, in respect of the items supplied, of either
 - (i) a bilateral agreement between the recipient State and the Agency, or
 - (ii) a trilateral agreement between the supplying State, the recipient State and the Agency
 - (c) an undertaking by the recipient State, to be provided to the supplier State, that the "trigger list" item would be used only in a facility in which all nuclear material to be processed, used or produced would be subject to safeguards under an existing safeguards agreement with the IAEA to which the recipient State was a party; that such safeguards would continue to be applied as long as the item was used in the facility; and that the recipient State would request the IAEA to list, if it deemed it necessary, the item in question on the inventory of such agreement. For example, a
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[REDACTED]

State supplying control rods for a reactor might be willing to rely on the application of safeguards under an agreement concluded in connection with the supply of the fuel charging and discharging machine by a third State.

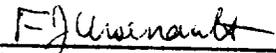
The supplier State and the recipient State would inform the IAEA of the undertaking referred to above.

[REDACTED]


"UNABRIDGED," VERSION

ENCLOSURE "B"

Document classified by:


F. J. Arsenault
Chief, IDPB, SS, 8/15/74

(a) Representatives of Austria, Belgium, Canada, Denmark, the Federal Republic of Germany, Italy, Japan, the Netherlands, Norway, Sweden, Switzerland, the U.K., and the USA, held a series of informal meetings in Vienna and Berne between December 1970 and _____ to consider procedures in relation to exports of certain categories of equipment and material, in the light of the commitment of certain States not to provide 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 produced, processed, or used in the equipment or material in question is subject to safeguards under an agreement with the IAEA.

(b) The purpose of the meetings was to determine what areas of common understanding existed among the members of the Group as to the way in which each State would interpret and implement this commitment (or would act in accord with those States which had undertaken this commitment) with a view to creating conditions for fair commercial competition with respect to its implementation, so far as such areas were concerned.

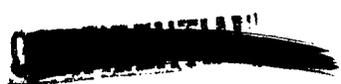
(c) The understandings reached, which are set out in the following paragraphs, are without prejudice to each State making its own decisions, and in particular requiring, if it wishes, safeguards in relation to items it exports in addition to those items specified in paragraph 2.

THE DESIGNATION OF EQUIPMENT OR MATERIAL ESPECIALLY DESIGNED OR PREPARED FOR THE PROCESSING, USE, OR PRODUCTION OF SPECIAL FISSIONABLE MATERIAL

2 It is understood that an appropriate designation of items of equipment or material especially designed or prepared for the processing, use, or production of special fissionable material (hereinafter referred to as the "Trigger List") would be as follows (quantities below the indicated levels being regarded as insignificant for practical purposes):

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2.1 Reactors and Equipment therefor

- 2.1.1 Nuclear reactors capable of operation so as to maintain a controlled self-sustaining fission chain reaction, excluding zero energy reactors, the latter being defined as reactors with a designed maximum rate of production of plutonium not exceeding 100 grams per year.
- 2.1.2 Reactor Pressure Vessels:
Metal vessels, as complete units or as major shop-fabricated parts therefor, which are especially designed or prepared to contain the core of a nuclear reactor as defined in para 2.1.1 above and are capable of withstanding the operating pressure of the primary coolant.
- 2.1.3 Reactor Fuel Charging and Discharging Machines:
Manipulative equipment especially designed or prepared for inserting or removing fuel in a nuclear reactor as defined in para 2.1.1 above capable of on-load operation or employing technically sophisticated positioning or alignment features to allow complex off-load fuelling operations such as those in which direct viewing of or access to the fuel is not normally available.
- 2.1.4 Reactor Control Rods:
Rods especially designed or prepared for the control of the reaction rate in a nuclear reactor as defined in para 2.1.1 above.
- 2.1.5 Reactor Pressure Tubes:
Tubes which are especially designed or prepared to contain fuel elements and the primary coolant in a reactor as defined in para 2.1.1

[REDACTED]

above at an operating pressure in excess of 50 atmospheres.

2.1.6 Zirconium Tubes:

Zirconium metal and alloys in the form of tubes or assemblies of tubes, and in quantities exceeding 500 kg, especially designed or prepared for use in a reactor as defined in paragraph 2.1.1 above and in which the relationship of hafnium to zirconium is less than 1:500 parts by weight.

2.1.7 Primary Coolant Pumps:

Pumps especially designed or prepared for circulating liquid metal as primary coolant for nuclear reactors as defined in para 2.1.1 above.

2.2 Non-Nuclear Materials for Reactors

2.2.1 Deuterium and Heavy Water:

Deuterium, and any deuterium compound in which the ratio of deuterium to hydrogen exceeds 1:5,000, for use in a nuclear reactor as defined in para 2.1.1 above in quantities exceeding 200 kg of deuterium atoms for any one recipient country in any period of 12 months.

2.2.2 Nuclear grade Graphite:

Graphite having a purity level better than 5 p.p.m. boron equivalent and with a density greater than 1.50 grams per cubic centimetre in quantities exceeding 30 metric tons for any one recipient country in any period of 12 months.

2.3.1 Plants for the reprocessing of irradiated fuel elements, and equipment especially designed or prepared therefor.

2.4.1 Plants for the fabrication of fuel elements.

[REDACTED]

- 2.5.1 Equipment, other than analytical instruments, especially designed or prepared for the separation of isotopes of uranium.

Clarifications of certain of the items on the above list are annexed.

THE APPLICATION OF SAFEGUARDS

3 Members of the Group are solely concerned with ensuring, where relevant, the application of safeguards in non-nuclear-weapon States not party to the NPT with a view to preventing diversion of the safeguarded nuclear material from peaceful purposes to nuclear weapons or other nuclear explosive devices. It is understood that, if any member of the Group wishes to supply "trigger list" items for peaceful purposes to such a State, that member would:

- (a) specify to the recipient state, as a condition of supply, that the source or special fissionable material produced, processed or used in the facility for which the item is supplied should not be diverted to nuclear weapons or other nuclear explosive devices, and
- (b) satisfy itself that safeguards to that end, under an agreement with the IAEA and in accordance with its safeguards system, would be applied to the source or special fissionable material in question.

4 The understanding that safeguarded nuclear material was not to be used for any nuclear explosive device would either:

- (a) be included in the formal safeguards agreement with the IAEA, or
- (b) would be specified by the supplier state, as a condition of supply.

In case (b), the supplier state would inform the IAEA of the understanding on this matter and request that safeguards in relation to the nuclear material in question reflect that

[REDACTED]

understanding. The supplier state would also inform the other members of the Group of each such understanding, either on each occasion or in connection with the annual return called for in paragraph 7.

DIRECT EXPORTS

5 It is further understood that, in the case of direct exports to non-nuclear-weapon States not party to the NPT, a supplying State would need to have satisfied itself, before authorising the export of the equipment or material in question, that such equipment or material would fall under a safeguards agreement with the Agency. Some recommendations as to how this could be achieved are annexed to the present document.

RETRANSFERS

6 It is understood that it would be necessary for a member of the Group exporting "trigger list" items to States not members of the Group to obtain satisfactory assurances that the items would not be re-exported to a non-nuclear-weapon State not party to the NPT unless arrangements corresponding to those referred to above were made for the acceptance of safeguards by the State receiving such re-export.

INFORMATION TO OTHER MEMBERS OF THE GROUP

7 It is understood that each member of the Group would provide an annual return, for circulation to other members, showing either

- (a) all actual exports, or
- (b) all licenses it has issued for export

for peaceful purposes of "trigger list" items to non-nuclear-weapon States not party to the NPT.

8 These returns, which should indicate nil returns, should be furnished either to the Secretary of the Group or direct to other members of the Group with, if desired, a copy to the Secretary, not later than 1 April each year, and should cover the information specified in paragraph 7 above in respect of the preceding calendar year. They should give

[REDACTED]

[REDACTED]

in respect of each export or export licence a brief description of the item (and in the case of non-nuclear material its quantity), the name of the recipient State and an indication of the safeguards agreement under which the item would fall or of the facility for which it is to be supplied.

9 Members of the Group would be free to include from their annual returns information on export licences in respect of which contracts had not been concluded at the end of the period covered by the return. Such information should however be included in the next annual return.

ARRANGEMENTS FOR REVIEW

10 The Group will review these understandings not later than September 1976. Unless revised earlier, they are regarded as valid until February 1977, when they will need to be reconfirmed or, if the Group so desires, modified. Any member of the Group may request a meeting at any time to consider matters arising from these understandings, including the case where exporting action, on the part of a State not a member of the Group, unaccompanied by a requirement for concomitant safeguards, threatens commercial disadvantage to a member or members of the Group. On receipt of any request for a meeting, the Chairman of the Group for the time being will arrange for the Group to be convened after taking soundings as to a convenient date.

ASSOCIATION OF OTHER COUNTRIES

11 The participating countries of the Group would welcome the acceptance of its aims and practices by other supplying countries whether party or not party to the NPT.

[REDACTED]

CLARIFICATIONS OF ITEMS ON TRIGGER LIST

A. COMPLETE NUCLEAR REACTORS (Paragraph 2.1.1 of the memorandum)

It is the understanding of the Committee that a "nuclear reactor" basically includes the items within or attached directly to the reactor vessel, the equipment which controls the level of power in the core, and the components which normally contain or come in direct contact with or control the primary coolant of the reactor core.

The export of the whole set of major items within this boundary would take place only in accordance with the procedures of the memorandum. Those individual items within this functionally defined boundary which will be exported only in accordance with the procedures of the memorandum are listed in paragraphs 2.1.2 to 2.1.5. It is understood, in the light of paragraph 7 of the version of the memorandum designed for publication, that it would be open to supplier states to apply the procedures of the memorandum to other items within the functionally defined boundary.

It is not the intention of the Committee to exclude reactors which could reasonably be capable of modification to produce significantly more than 100 grams of plutonium per year. Reactors designed for sustained operation at significant power levels, regardless of their capacity for plutonium production, would not be considered as "zero energy reactors".

B. PRESSURE VESSELS (Paragraph 2.1.2 of the memorandum)

It is the Committee's understanding that a top plate for a reactor pressure vessel would be covered by Item 2.1.2 as a major shop fabricated part of a pressure vessel.

Reactor internals (e.g., support columns and plates for core and other vessel internals, control rod guide tubes, thermal shields, baffles, core grid plates, diffuser plates, etc.) are normally supplied by the reactor supplier. In some cases, certain internal support components are:

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included in the fabrication of the pressure vessel. These items are sufficiently critical to the safety and reliability of the operation of the reactor (and, therefore, to the guarantees and liability of the reactor supplier) so that their supply, outside the basic supply arrangement for the reactor itself, would not be common practice. Therefore, although the Committee would not necessarily consider the separate supply of these unique, especially designed and prepared, critical, large, and expensive items to be outside its area of concern, such a mode of supply is considered unlikely.

C. REACTOR CONTROL RODS (Paragraph 2.1.4 of the memorandum)

It is the Committee's understanding that this Item includes, in addition to the neutron absorbing part, the support or suspension structures therefor if supplied separately.

D. FUEL REPROCESSING PLANTS (Paragraph 2.3.1 of the memorandum)

It is the Committee's understanding that a "plant for the reprocessing of irradiated fuel elements" includes the equipment and components which normally come in direct contact with and directly control the irradiated fuel and the major nuclear material and fission product processing streams. The export of the whole set of major items within this boundary would take place only in accordance with the procedures of the memorandum. In the present state of technology only two items of equipment are considered to fall within the meaning of the phrase "and equipment especially designed or prepared therefor". These items are:

- (a) irradiated fuel element chopping machines: remotely operated equipment especially designed or prepared for use in a reprocessing plant as identified above and intended to cut, chop or shear irradiated nuclear fuel assemblies, bundles or rods;

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- (b) critically safe tanks (e.g., small diameter, annular or slab tanks) especially designed or prepared for use in a reprocessing plant as identified above, intended for dissolution of irradiated nuclear fuel and which are capable of withstanding hot, highly corrosive liquid, and which can be remotely loaded and maintained.

It is understood, in the light of paragraph 7 of the version of the memorandum designed for publication, that it would be open to supplier states to apply the procedures of the memorandum to other items within the functionally defined boundary.

E. FUEL FABRICATION PLANTS (Paragraph 2.4.1 of the memorandum)

It is the Committee's understanding that a "plant for the fabrication of fuel elements" includes the equipment:

- (a) which normally comes in direct contact with, or directly processes or controls, the production flow of nuclear material,

or

- (b) which seals the nuclear material within the cladding.

The export of the whole set of items for the foregoing operations would take place only in accordance with the procedures of the memorandum. Each supplier state would also give consideration to application of the procedures of the memorandum to individual items intended for any of the foregoing operations, as well as for other fuel fabrication operations, such as checking the integrity of the cladding or the seal, and the finish treatment to the sealed fuel.

F. ISOTOPE SEPARATION PLANT EQUIPMENT (Paragraph 2.5.1 of the memorandum)

It is the Committee's understanding that the "equipment, other than analytical instruments, especially designed or prepared for the separation of isotopes of uranium" would include each of the major items of equipment especially designed or prepared for the separation process.

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RECOMMENDATIONS AS TO HOW THE PURPOSE SPECIFIED
IN PARAGRAPH 5 COULD BE ACHIEVED

It is recommended that the purpose specified in paragraph 5 might be achieved by the following alternative means:

- (a) the conclusion of a bilateral agreement ("master agreement") between the non-nuclear-weapon state not party to the NPT and the Agency, under which safeguards could be applied to nuclear material in relation to "trigger list" items (or consignments of nuclear material) from a number of different supplying States. Any member of the Group supplying "trigger list" items could then arrange with the Agency and the recipient State for inclusion of the items supplied in the category for equipment and non-nuclear material of the inventory.
- (b) the conclusion, in respect of the items supplied, of either
 - (i) a bilateral agreement between the recipient State and the Agency, or
 - (ii) a trilateral agreement between the supplying State, the recipient State and the Agency
- (c) an undertaking by the recipient State, to be provided to the supplier State, that the "trigger list" item would be used only in a facility in which all nuclear material to be processed, used or produced would be subject to safeguards under an existing safeguards agreement with the IAEA to which the recipient State was a party; that such safeguards would continue to be applied as long as the item was used in the facility; and that the recipient State would request the IAEA to list, if it deemed it necessary, the item in question on the inventory of such agreement. For example, a

~~CONFIDENTIAL~~

2

State supplying control rods for a reactor might be willing to rely on the application of safeguards under an agreement concluded in connection with the supply of the fuel charging and discharging machine by a third State.

The supplier State and the recipient State would inform the IAEA of the undertaking referred to above.

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