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**MODEL PROTOCOL ADDITIONAL TO THE AGREEMENT(S) BETWEEN STATE(S) AND THE INTERNATIONAL ATOMIC ENERGY AGENCY FOR THE APPLICATION OF SAFEGUARDS (MODEL ADDITIONAL SAFEGUARDS PROTOCOL, INFCIRC 540)**

*Adopted by the IAEA Board of Governors at Vienna on 15 May 1997*

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**RELATIONSHIP BETWEEN THE PROTOCOL AND THE SAFEGUARDS AGREEMENT**

Article 1

The provisions of the Safeguards Agreement shall apply to this Protocol to the extent that they are relevant to and compatible with the provisions of this Protocol. In case of conflict between the provisions of the Safeguards Agreement and those of this Protocol, the provisions of this Protocol shall apply.

**PROVISION OF INFORMATION**

Article 2

a. .... shall provide the Agency with a declaration containing:

(i) A general description of and information specifying the location of *nuclear fuel cycle-related research and development activities*<sup>1</sup> not involving *nuclear material* carried out anywhere that are funded, specifically authorized or controlled by, or carried out on behalf of, .....

(ii) Information identified by the Agency on the basis of expected gains in effectiveness or efficiency, and agreed to by ....., on operational activities of safeguards relevance at *facilities* and at *locations outside facilities* where *nuclear material* is customarily used.

(iii) A general description of each building on each *site*, including its use and, if not apparent from that description, its contents. The description shall include a map of the *site*.

(iv) A description of the scale of operations for each location engaged in the activities specified in Annex I to this Protocol.

(v) Information specifying the location, operational status and the estimated annual production capacity of uranium mines and concentration plants and thorium concentration plants, and the current annual production of such mines and concentration plants for ..... as a whole. .... shall provide, upon request by the Agency, the current annual production of an individual mine or concentration plant. The provision of this information does not require detailed *nuclear material* accountancy.

<sup>1</sup> Terms in italics have specialized meanings, which are defined in Article 18 below.

(vi) Information regarding source material which has not reached the composition and purity suitable for fuel fabrication or for being isotopically enriched, as follows:

(a) The quantities, the chemical composition, the use or intended use of such material, whether in nuclear or non-nuclear use, for each location in ..... at which the material is present in quantities exceeding ten metric tons of uranium and/or twenty metric tons of thorium, and for other locations with quantities of more than one metric ton, the aggregate for ..... as a whole if the aggregate exceeds ten metric tons of uranium or twenty metric tons of thorium. The provision of this information does not require detailed *nuclear material* accountancy;

(b) The quantities, the chemical composition and the destination of each export out of ....., of such material for specifically non-nuclear purposes in quantities exceeding:

(1) Ten metric tons of uranium, or for successive exports of uranium from ..... to the same State, each of less than ten metric tons, but exceeding a total of ten metric tons for the year;

(2) Twenty metric tons of thorium, or for successive exports of thorium from ..... to the same State, each of less than twenty metric tons, but exceeding a total of twenty metric tons for the year;

(c) The quantities, chemical composition, current location and use or intended use of each import into ..... of such material for specifically non-nuclear purposes in quantities exceeding:

(1) Ten metric tons of uranium, or for successive imports of uranium into ..... each of less than ten metric tons, but exceeding a total of ten metric tons for the year;

(2) Twenty metric tons of thorium, or for successive imports of thorium into ..... each of less than twenty metric tons, but exceeding a total of twenty metric tons for the year;

it being understood that there is no requirement to provide information on such material intended for a non-nuclear use once it is in its non-nuclear end-use form.

(vii) (a) Information regarding the quantities, uses and locations of *nuclear material* exempted from safeguards pursuant to [paragraph 37 of INFCIRC/153]<sup>2</sup>;

(b) Information regarding the quantities (which may be in the form of estimates) and uses at each location, of *nuclear material* exempted from safeguards pursuant to [paragraph 36(b) of INFCIRC/153]<sup>2</sup> but not yet in a non-nuclear end-use form, in quantities exceeding those set out in [paragraph 37 of INFCIRC/153]<sup>2</sup>. The provision of this information does not require detailed *nuclear material* accountancy.

(viii) Information regarding the location or further processing of intermediate or high-level waste containing plutonium, *high enriched uranium* or uranium-233 on which safeguards have been terminated pursuant to [paragraph 11 of INFCIRC/153]<sup>2</sup>. For the purpose of this paragraph, "further processing" does not include repackaging of the waste or its further conditioning not involving the separation of elements, for storage or disposal.

<sup>2</sup> The reference to the corresponding provision of the relevant Safeguards Agreement should be inserted where bracketed references to INFCIRC/153 are made.

(ix) The following information regarding specified equipment and non-nuclear material listed in Annex II:

(a) For each export out of ..... of such equipment and material: the identity, quantity, location of intended use in the receiving State and date or, as appropriate, expected date, of export;

(b) Upon specific request by the Agency, confirmation by ....., as importing State, of information provided to the Agency by another State concerning the export of such equipment and material to .....

(x) General plans for the succeeding ten-year period relevant to the development of the nuclear fuel cycle (including planned *nuclear fuel cycle-related research and development activities*) when approved by the appropriate authorities in .....

b. .... shall make every reasonable effort to provide the Agency with the following information:

(i) A general description of and information specifying the location of *nuclear fuel cycle-related research and development activities* not involving *nuclear material* which are specifically related to enrichment, reprocessing of nuclear fuel or the processing of intermediate or high-level waste containing plutonium, *high enriched uranium* or uranium-233 that are carried out anywhere in ..... but which are not funded, specifically authorized or controlled by, or carried out on behalf of, ..... . For the purpose of this paragraph, "processing" of intermediate or high-level waste does not include repackaging of the waste or its conditioning not involving the separation of elements, for storage or disposal.

(ii) A general description of activities and the identity of the person or entity carrying out such activities, at locations identified by the Agency outside a *site* which the Agency considers might be functionally related to the activities of that *site*. The provision of this information is subject to a specific request by the Agency. It shall be provided in consultation with the Agency and in a timely fashion.

c. Upon request by the Agency, ..... shall provide amplifications or clarifications of any information it has provided under this Article, in so far as relevant for the purpose of safeguards.

### Article 3

a. .... shall provide to the Agency the information identified in Article 2.a.(i), (iii), (iv), (v), (vi)(a), (vii) and (x) and Article 2.b.(i) within 180 days of the entry into force of this Protocol.

b. .... shall provide to the Agency, by 15 May of each year, updates of the information referred to in paragraph a. above for the period covering the previous calendar year. If there has been no change to the information previously provided, ..... shall so indicate.

c. .... shall provide to the Agency, by 15 May of each year, the information identified in Article 2.a.(vi)(b) and (c) for the period covering the previous calendar year.

d. .... shall provide to the Agency on a quarterly basis the information identified in Article 2.a.(ix)(a). This information shall be provided within sixty days of the end of each quarter.

e. .... shall provide to the Agency the information identified in Article 2.a.(viii) 180 days before further processing is carried out and, by 15 May of each year, information on changes in location for the period covering the previous calendar year.

f. .... and the Agency shall agree on the timing and frequency of the provision of the information identified in Article 2.a.(ii).

g. .... shall provide to the Agency the information in Article 2.a.(ix)(b) within sixty days of the Agency's request.

#### COMPLEMENTARY ACCESS

##### Article 4

The following shall apply in connection with the implementation of complementary access under Article 5 of this Protocol:

a. The Agency shall not mechanically or systematically seek to verify the information referred to in Article 2; however, the Agency shall have access to:

(i) Any location referred to in Article 5.a.(i) or (ii) on a selective basis in order to assure the absence of undeclared *nuclear material* and activities;

(ii) Any location referred to in Article 5.b. or c. to resolve a question relating to the correctness and completeness of the information provided pursuant to Article 2 or to resolve an inconsistency relating to that information;

(iii) Any location referred to in Article 5.a.(iii) to the extent necessary for the Agency to confirm, for safeguards purposes, .....’s declaration of the decommissioned status of a *facility* or of a *location outside facilities* where *nuclear material* was customarily used.

b. (i) Except as provided in paragraph (ii) below, the Agency shall give ..... advance notice of access of at least 24 hours;

(ii) For access to any place on a *site* that is sought in conjunction with design information verification visits or ad hoc or routine inspections on that *site*, the period of advance notice shall, if the Agency so requests, be at least two hours but, in exceptional circumstances, it may be less than two hours.

c. Advance notice shall be in writing and shall specify the reasons for access and the activities to be carried out during such access.

d. In the case of a question or inconsistency, the Agency shall provide ..... with an opportunity to clarify and facilitate the resolution of the question or inconsistency. Such an opportunity will be provided before a request for access, unless the Agency considers that delay in access would prejudice the purpose for which the access is sought. In any event, the Agency shall not draw any conclusions about the question or inconsistency until ..... has been provided with such an opportunity.

e. Unless otherwise agreed to by ....., access shall only take place during regular working hours.

f. .... shall have the right to have Agency inspectors accompanied during their access by representatives of ....., provided that the inspectors shall not thereby be delayed or otherwise impeded in the exercise of their functions.

##### Article 5

..... shall provide the Agency with access to:

a. (i) Any place on a *site*;

(ii) Any location identified by ..... under Article 2.a.(v)–(viii);

(iii) Any *decommissioned facility or decommissioned location outside facilities* where *nuclear material* was customarily used.

b. Any location identified by ..... under Article 2.a.(i), Article 2.a.(iv), Article 2.a.(ix)(b) or Article 2.b, other than those referred to in paragraph a.(i) above, provided that if ..... is unable to provide such access, ..... shall make every reasonable effort to satisfy Agency requirements, without delay, through other means.

c. Any location specified by the Agency, other than locations referred to in paragraphs a. and b. above, to carry out *location-specific environmental sampling*, provided that if ..... is unable to provide such access, ..... shall make every reasonable effort to satisfy Agency requirements, without delay, at adjacent locations or through other means.

#### Article 6

When implementing Article 5, the Agency may carry out the following activities:

a. For access in accordance with Article 5.a.(i) or (iii): visual observation; collection of environmental samples; utilization of radiation detection and measurement devices; application of seals and other identifying and tamper indicating devices specified in Subsidiary Arrangements; and other objective measures which have been demonstrated to be technically feasible and the use of which has been agreed by the Board of Governors (hereinafter referred to as the "Board") and following consultations between the Agency and .....

b. For access in accordance with Article 5.a.(ii): visual observation; item counting of *nuclear material*; non-destructive measurements and sampling; utilization of radiation detection and measurement devices; examination of records relevant to the quantities, origin and disposition of the material; collection of environmental samples; and other objective measures which have been demonstrated to be technically feasible and the use of which has been agreed by the Board and following consultations between the Agency and .....

c. For access in accordance with Article 5.b.: visual observation; collection of environmental samples; utilization of radiation detection and measurement devices; examination of safeguards relevant production and shipping records; and other objective measures which have been demonstrated to be technically feasible and the use of which has been agreed by the Board and following consultations between the Agency and .....

d. For access in accordance with Article 5.c.: collection of environmental samples and, in the event the results do not resolve the question or inconsistency at the location specified by the Agency pursuant to Article 5.c., utilization at that location of visual observation, radiation detection and measurement devices, and, as agreed by ..... and the Agency, other objective measures.

#### Article 7

a. Upon request by ....., the Agency and ..... shall make arrangements for managed access under this Protocol in order to prevent the dissemination of proliferation sensitive information, to meet safety or physical protection requirements, or to protect proprietary or commercially sensitive information. Such arrangements shall not preclude the Agency from conducting activities necessary to provide credible assurance of the absence of undeclared *nuclear material* and activities at the

location in question, including the resolution of a question relating to the correctness and completeness of the information referred to in Article 2 or of an inconsistency relating to that information.

b. .... may, when providing the information referred to in Article 2, inform the Agency of the places at a *site* or location at which managed access may be applicable.

c. Pending the entry into force of any necessary Subsidiary Arrangements, ..... may have recourse to managed access consistent with the provisions of paragraph a. above.

#### Article 8

Nothing in this Protocol shall preclude ..... from offering the Agency access to locations in addition to those referred to in Articles 5 and 9 or from requesting the Agency to conduct verification activities at a particular location. The Agency shall, without delay, make every reasonable effort to act upon such a request.

#### Article 9

..... shall provide the Agency with access to locations specified by the Agency to carry out *wide-area environmental sampling*, provided that if ..... is unable to provide such access it shall make every reasonable effort to satisfy Agency requirements at alternative locations. The Agency shall not seek such access until the use of *wide-area environmental sampling* and the procedural arrangements therefor have been approved by the Board and following consultations between the Agency and .....

#### Article 10

The Agency shall inform ..... of:

a. The activities carried out under this Protocol, including those in respect of any questions or inconsistencies the Agency had brought to the attention of ....., within sixty days of the activities being carried out by the Agency.

b. The results of activities in respect of any questions or inconsistencies the Agency had brought to the attention of ....., as soon as possible but in any case within thirty days of the results being established by the Agency.

c. The conclusions it has drawn from its activities under this Protocol. The conclusions shall be provided annually.

### **DESIGNATION OF AGENCY INSPECTORS**

#### Article 11

a. (i) The Director General shall notify ..... of the Board's approval of any Agency official as a safeguards inspector. Unless ..... advises the Director General of its rejection of such an official as an inspector for ..... within three months of receipt of notification of the Board's approval, the inspector so notified to ..... shall be considered designated to .....

(ii) The Director General, acting in response to a request by ..... or on his own initiative, shall immediately inform ..... of the withdrawal of the designation of any official as an inspector for .....

b. A notification referred to in paragraph a. above shall be deemed to be received by ..... seven days after the date of the transmission by registered mail of the notification by the Agency to .....

**VISAS**

## Article 12

..... shall, within one month of the receipt of a request therefor, provide the designated inspector specified in the request with appropriate multiple entry/exit and/or transit visas, where required, to enable the inspector to enter and remain on the territory of ..... for the purpose of carrying out his/her functions. Any visas required shall be valid for at least one year and shall be renewed, as required, to cover the duration of the inspector's designation to .....

**SUBSIDIARY ARRANGEMENTS**

## Article 13

a. Where ..... or the Agency indicates that it is necessary to specify in Subsidiary Arrangements how measures laid down in this Protocol are to be applied, ..... and the Agency shall agree on such Subsidiary Arrangements within ninety days of the entry into force of this Protocol or, where the indication of the need for such Subsidiary Arrangements is made after the entry into force of this Protocol, within ninety days of the date of such indication.

b. Pending the entry into force of any necessary Subsidiary Arrangements, the Agency shall be entitled to apply the measures laid down in this Protocol.

**COMMUNICATIONS SYSTEMS**

## Article 14

a. .... shall permit and protect free communications by the Agency for official purposes between Agency inspectors in ..... and Agency Headquarters and/or Regional Offices, including attended and unattended transmission of information generated by Agency containment and/or surveillance or measurement devices. The Agency shall have, in consultation with ....., the right to make use of internationally established systems of direct communications, including satellite systems and other forms of telecommunication, not in use in .....

At the request of ..... or the Agency, details of the implementation of this paragraph with respect to the attended or unattended transmission of information generated by Agency containment and/or surveillance or measurement devices shall be specified in the Subsidiary Arrangements.

b. Communication and transmission of information as provided for in paragraph a. above shall take due account of the need to protect proprietary or commercially sensitive information or design information which ..... regards as being of particular sensitivity.

**PROTECTION OF CONFIDENTIAL INFORMATION**

## Article 15

a. The Agency shall maintain a stringent regime to ensure effective protection against disclosure of commercial, technological and industrial secrets and other confidential information coming to its knowledge, including such information coming to the Agency's knowledge in the implementation of this Protocol.

b. The regime referred to in paragraph a. above shall include, among others, provisions relating to:

(i) General principles and associated measures for the handling of confidential information;

(ii) Conditions of staff employment relating to the protection of confidential information;

(iii) Procedures in cases of breaches or alleged breaches of confidentiality.

c. The regime referred to in paragraph a. above shall be approved and periodically reviewed by the Board.

## ANNEXES

### Article 16

a. The Annexes to this Protocol shall be an integral part thereof. Except for the purposes of amendment of the Annexes, the term "Protocol" as used in this instrument means the Protocol and the Annexes together.

b. The list of activities specified in Annex I, and the list of equipment and material specified in Annex II, may be amended by the Board upon the advice of an open-ended working group of experts established by the Board. Any such amendment shall take effect four months after its adoption by the Board.

## ENTRY INTO FORCE

### Article 17

a. This Protocol shall enter into force

on the date on which the Agency receives from ..... written notification that .....’s statutory and/or constitutional requirements for entry into force have been met.

**OR,**<sup>3</sup>

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

b. .... may, at any date before this Protocol enters into force, declare that it will apply this Protocol provisionally.

c. The Director General shall promptly inform all Member States of the Agency of any declaration of provisional application of, and of the entry into force of, this Protocol.

## DEFINITIONS

### Article 18

For the purpose of this Protocol:

a. *Nuclear fuel cycle-related research and development activities* means those activities which are specifically related to any process or system development aspect of any of the following:

- conversion of *nuclear material*,
- enrichment of *nuclear material*,
- nuclear fuel fabrication,
- reactors,
- critical facilities,
- reprocessing of nuclear fuel,

<sup>3</sup> The choice of alternative depends on the preference of the State concerned according to its internal legal requirements.

– processing (not including repackaging or conditioning not involving the separation of elements, for storage or disposal) of intermediate or high-level waste containing plutonium, *high enriched uranium* or uranium-233,

but do not include activities related to theoretical or basic scientific research or to research and development on industrial radioisotope applications, medical, hydrological and agricultural applications, health and environmental effects and improved maintenance.

b. *Site* means that area delimited by ..... in the relevant design information for a *facility*, including a *closed-down facility*, and in the relevant information on a *location outside facilities* where *nuclear material* is customarily used, including a *closed-down location outside facilities* where *nuclear material* was customarily used (this is limited to locations with hot cells or where activities related to conversion, enrichment, fuel fabrication or reprocessing were carried out). It shall also include all installations, co-located with the *facility* or location, for the provision or use of essential services, including: hot cells for processing irradiated materials not containing *nuclear material*; installations for the treatment, storage and disposal of waste; and buildings associated with specified activities identified by ..... under Article 2.a.(iv) above.

c. *Decommissioned facility* or *decommissioned location outside facilities* means an installation or location at which residual structures and equipment essential for its use have been removed or rendered inoperable so that it is not used to store and can no longer be used to handle, process or utilize *nuclear material*.

d. *Closed-down facility* or *closed-down location outside facilities* means an installation or location where operations have been stopped and the *nuclear material* removed but which has not been decommissioned.

e. *High enriched uranium* means uranium containing 20 percent or more of the isotope uranium-235.

f. *Location-specific environmental sampling* means the collection of environmental samples (e.g., air, water, vegetation, soil, smears) at, and in the immediate vicinity of, a location specified by the Agency for the purpose of assisting the Agency to draw conclusions about the absence of undeclared *nuclear material* or nuclear activities at the specified location.

g. *Wide-area environmental sampling* means the collection of environmental samples (e.g., air, water, vegetation, soil, smears) at a set of locations specified by the Agency for the purpose of assisting the Agency to draw conclusions about the absence of undeclared *nuclear material* or nuclear activities over a wide area.

h. *Nuclear material* means any source or any special fissionable material as defined in Article XX of the Statute. The term source material shall not be interpreted as applying to ore or ore residue. Any determination by the Board under Article XX of the Statute of the Agency after the entry into force of this Protocol which adds to the materials considered to be source material or special fissionable material shall have effect under this Protocol only upon acceptance by .....

i. *Facility* means:

(i) A reactor, a critical facility, a conversion plant, a fabrication plant, a reprocessing plant, an isotope separation plant or a separate storage installation; or

(ii) Any location where *nuclear material* in amounts greater than one effective kilogram is customarily used.

j. *Location outside facilities* means any installation or location, which is not a facility, where *nuclear material* is customarily used in amounts of one effective kilogram or less.

#### ANNEX I

##### LIST OF ACTIVITIES REFERRED TO IN ARTICLE 2.a.(iv) OF THE PROTOCOL

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#### ANNEX II

##### LIST OF SPECIFIED EQUIPMENT AND NON-NUCLEAR MATERIAL FOR THE REPORTING OF EXPORTS AND IMPORTS ACCORDING TO ARTICLE 2.a.(ix)

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**Source:** *Model Protocol Additional to the Agreement(s) between State(s) and the International Atomic Energy Agency for the Application of Safeguards*, IAEA document INFCIRC/540, September 1997, and Corr.1, 12 October 1998

**Additional Safeguards Protocols in force as of 1 May 2002:** Australia, Azerbaijan, Bangladesh, Bulgaria, Canada, China, Croatia, Ecuador, Holy See, Hungary, Indonesia, Japan, Jordan, Latvia, Lithuania, Monaco, New Zealand, Norway, Panama, Peru, Poland, Romania, Slovenia, Turkey, Uzbekistan

Taiwan, which has not concluded an agreement with the IAEA under INFCIRC/153 (it is subject to safeguards under INFCIRC/66/REV.2), nevertheless agreed to apply the measures contained in the Protocol to INFCIRC/153.

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