

AGREEMENT BETWEEN THE GOVERNMENT OF THE REPUBLIC OF KOREA AND THE GOVERNMENT OF THE ARAB REPUBLIC OF EGYPT FOR COOPERATION IN THE PEACEFUL USES OF NUCLEAR ENERGY

Signed at Cairo August 14, 2001

Entered into force June 24, 2002

The Government of the Republic of Korea and the Government of the Arab Republic of Egypt (hereinafter referred to as "the Parties");

Noting that the utilization of nuclear energy for peaceful purposes is an important factor for the promotion of the social and economic development of the two countries;

Desiring to strengthen the basis of friendly relations existing between the two countries;

Recognizing that both countries are Member States of the International Atomic Energy Agency (hereinafter referred to as "the IAEA") and Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (hereinafter referred to as "the Treaty");

Reaffirming to place the highest priority on nuclear safety and environmental protection in both countries in the course of implementing their nuclear programmes;

Bearing in mind the common desire of both countries to expand and strengthen cooperation, on the basis of equality and mutual benefit, in the development and application of nuclear energy for peaceful purposes;

Have agreed as follows:

ARTICLE I

For the purposes of this Agreement;

- (a) "Equipment" means any equipment listed in Part A of Annex A to this Agreement;
- (b) "Material" means any material listed in Part B of Annex A to this Agreement;
- (c) "Nuclear material" means any source material or any special fissionable material as these terms are defined in Article XX of the Statute of the IAEA which is attached as Annex B to this Agreement. Any determination by the Board of Governors of the IAEA under Article XX of the Agency's Statute, which amends the list of material considered to be "source material" or "special fissionable material", shall only have effect under this Agreement when the Parties to this Agreement have informed each other in writing that they accept such an amendment;
- (d) "Persons" means individuals, firms, corporations, companies, partnerships, associations and other entities private or governmental and their respective agents and local representatives, but the term "persons" shall not include "governmental enterprises" as defined in the next paragraph (e) of this Article;
- (e) "Governmental enterprise" means an enterprise under the jurisdiction of a Party which that Party has designated to the other Party in writing as a governmental enterprise; and
- (f) "Technology" means technical data in physical form designated by the supplying Party as important for the design, construction, operation or maintenance of equipment, but excluding data available to the public.

ARTICLE II

1. Subject to this Agreement, the areas of cooperation between the Parties may include, but not limited to:

- (a) basic and applied research and development with respect to the peaceful uses of nuclear energy;
- (b) research, development, design, construction, operation and maintenance of nuclear power plants or research reactors;
- (c) manufacture and supply of nuclear fuel elements to be used in nuclear power plants or research reactors;

- (d) nuclear fuel cycle starting from exploration and exploitation of nuclear ores up to radioactive waste management;
- (e) production and application of radioactive isotopes in industry, agriculture and medicine;
- (f) nuclear safety, radiation protection and environmental protection;
- (g) nuclear safeguards and physical protection; and
- (h) nuclear policy and manpower development.

2. The cooperation under paragraph 1 of this Article may be undertaken in the following forms:

- (a) exchange and training of scientific and technological personnel;
- (b) exchange of scientific and technological information and data;
- (c) organization of symposia, seminars and working groups;
- (d) transfer of nuclear material, material, equipment and technology;
- (e) provision of relevant technological consultancy and services;
- (f) joint research or projects on subjects of mutual interest;
- (g) access to and use of nuclear research and development facilities;
- (h) licensing arrangements and transfer of patent rights; and
- (i) other forms as may be agreed upon by the Parties.

ARTICLE III

1. The Parties shall, on the basis of equality and mutual benefit, cooperate in the peaceful uses of nuclear energy in accordance with the provisions of this Agreement and their applicable laws and regulations.

2. Transfer of information, nuclear material, material, equipment and technology under this Agreement may be undertaken between the Parties, governmental enterprises or persons authorized by either Party. Such transfer shall be subject to this Agreement and to such additional terms and conditions as may be agreed by the Parties.

3. Any information exchanged in conformity with the provisions of this Agreement may be used freely, except in the cases where the Party, governmental enterprises or authorized persons providing such information have previously made known the restrictions and reservations concerning its use and dissemination.

4. The Parties shall take all appropriate measures in accordance with their respective laws and regulations to preserve the restrictions and reservations of information and to protect intellectual property rights including commercial and industrial secrets transferred between governmental enterprises or authorized persons within the jurisdiction of either Party. For the purpose of this Agreement, intellectual property is understood to have the meaning given in Article 2 of the Convention Establishing the World Intellectual Property Organization, done at Stockholm on 14 July 1967.

ARTICLE IV

Nuclear material, material, equipment and technology transferred pursuant to this Agreement and special fissionable material produced through the use of nuclear material, material or equipment transferred pursuant to this Agreement shall not be transferred beyond the jurisdiction of the receiving Party to a third party unless the Parties agree.

ARTICLE V

1. Uranium transferred pursuant to this Agreement or used in any equipment so transferred shall not be enriched to twenty(20) percent or more in the isotope U-235 unless the Parties agree.

2. Nuclear material transferred pursuant to this Agreement and nuclear material used in or produced through the use of nuclear material, material or equipment so transferred shall not be reprocessed unless the Parties agree.

3. Such agreement in the previous paragraphs in this Article shall describe the conditions under which the resultant plutonium or uranium enriched to twenty (20) percent or more may be stored and used.

ARTICLE VI

Nuclear material, material, equipment and technology transferred pursuant to this Agreement and special fissionable material used in or produced through the use of nuclear material, material or equipment so transferred shall not be used for the development or the manufacture of nuclear weapons or any nuclear explosive device, or for any military purpose.

ARTICLE VII

1. With respect to nuclear material, the commitment contained in Article VI of this Agreement shall be verified pursuant to the safeguards agreement between either Party and the IAEA, in connection with the Treaty.

2. If, for any reason or at any time, the IAEA is not administering such safeguards within the jurisdiction of a Party, that Party shall forthwith enter into arrangements with the other Party which conform to the IAEA safeguards principles and procedures for the application of safeguards to nuclear material transferred pursuant to this Agreement.

ARTICLE VIII

The Parties shall maintain adequate physical protection measures, in accordance with levels set forth in Annex C to this Agreement, with respect to nuclear material and equipment transferred pursuant to this Agreement and nuclear material used in or produced through the use of nuclear material, material or equipment so transferred within their respective jurisdictions. These measures shall as a minimum provide protection comparable to the recommendations set forth in the IAEA document INFCIRC/225/Rev.4 concerning the physical protection of nuclear material, or in any revision of that document agreed by the Parties.

ARTICLE IX

The Parties shall consult, with regard to activities under this Agreement, to identify nuclear safety and international environmental implications arising from such activities and shall cooperate in preventing nuclear accidents arising from nuclear facilities transferred pursuant to this Agreement and in protecting the international environment from radioactive, chemical or thermal contamination arising from such activities under this Agreement.

ARTICLE X

1. Nuclear material, material and equipment shall remain subject to this Agreement until:

(a) such items have been transferred beyond the jurisdiction of the receiving Party in accordance with the provisions of Article IV of this Agreement;

(b) in the case of nuclear material, a determination is made that it is no longer usable nor practicably recoverable for processing into a form in which it is usable for any nuclear activity relevant from the point of view of safeguards referred to in Article VII of this Agreement. Both Parties shall accept a determination made by the IAEA in accordance with the provisions for the termination of safeguards of the relevant safeguards agreement to which the IAEA is a party; or

(c) otherwise agreed upon between the Parties.

2. Technology shall remain subject to this Agreement until otherwise agreed upon between the Parties.

ARTICLE XI

If either Party at any time following entry into force of this Agreement:

(a) does not comply with the provisions of Article IV, V, VI, VII, or VIII;

(b) terminates or materially violates a safeguards agreement with the IAEA; or

(c) detonates a nuclear explosive device;

the other Party shall have the right to cease further cooperation under this Agreement, suspend or terminate this Agreement.

ARTICLE XII

1. The Parties shall meet from time to time and consult with each other, at the request of either Party, to review the operation of this Agreement or to consider matters arising from its implementation.

2. Any dispute arising out of the interpretation or application of this Agreement shall be settled amicably by negotiation or consultation between the Parties.

3. If a dispute cannot be settled by means of mutual negotiation or consultation, it may, by mutual agreement, be submitted to an arbitral tribunal for its decision. Such arbitral tribunal shall be constituted ad hoc by mutual agreement between the Parties, in accordance with international practice.

ARTICLE XIII

The Annexes of this Agreement form an integral part of this Agreement. They may be amended with the written consent of both Parties without the revision of this Agreement.

ARTICLE XIV

1. This Agreement shall enter into force on the date on which the Parties exchange diplomatic notes informing each other that they have completed all necessary legal requirements for its entry into force.
2. This Agreement shall remain in force for a period of thirty (30) years, and shall be automatically extended for subsequent periods of five (5) years each, unless either Party notifies, in writing, the other Party of its intention to terminate it six (6) months prior to its expiry.
3. This Agreement may be amended at any time with the written consent of both Parties. Any such amendment shall enter into force in accordance with the procedures stipulated in paragraph 1 of this Article.
4. Notwithstanding expiration or termination of this Agreement, the obligations contained in Articles IV, V, VI, VII, VIII, and X of this Agreement shall remain in force until otherwise agreed upon by the Parties.

IN WITNESS WHEREOF the undersigned, being duly authorized for this purpose by their respective Governments, have signed this Agreement.

Done in duplicate, at Cairo, this 14th day of August 2001, in the Korean, Arabic and English languages, all texts being equally authentic. In case of any divergence of interpretation, the English text shall prevail.

FOR THE GOVERNMENT OF FOR THE GOVERNMENT OF
THE REPUBLIC OF KOREA THE ARAB REPUBLIC OF EGYPT

ANNEX A Part A Equipment

- (1) Complete nuclear reactors: 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) Nuclear reactor vessels: Metal vessels, as complete units or as major shop-fabricated parts therefor, especially designed or prepared to contain the core of a nuclear reactor as defined in paragraph (1) above, as well as relevant reactor internals as defined in paragraph (8) below.
- (3) Nuclear reactor fuel charging and discharging machines: Manipulative equipment especially designed or prepared for inserting or removing fuel in a nuclear reactor as defined in paragraph (1) above.
- (4) Nuclear reactor control rods and equipment: Especially designed or prepared rods, support or suspension structures therefor, rod drive mechanisms or rod guide tubes to control the fission process in a nuclear reactor as defined in paragraph (1) above.
- (5) Nuclear reactor pressure tubes: Tubes which are especially designed or prepared to contain fuel elements and the primary coolant in a reactor as defined in paragraph (1) above at an operating pressure in excess of 50 atmospheres.
- (6) Zirconium tubes: Zirconium metal and alloys in the form of tubes or assemblies of tubes, and in quantities exceeding 500 kg in any period of 12 months, especially designed or prepared for use in a reactor as defined in paragraph(1) above, and in which the relation of hafnium to zirconium is less than 1:500 parts by weight.
- (7) Primary coolant pumps: Pumps especially designed or prepared for circulating the primary coolant for nuclear reactors as defined in paragraph (1) above.
- (8) Nuclear reactor internals: "Nuclear reactor internals" especially designed or prepared for use in a nuclear reactor as defined in paragraph (1) above, including support columns for the core, fuel channels, thermal shields, baffles, core grid plates, and diffuser plates.
- (9) Heat exchangers: Heat exchangers (steam generators) especially designed or prepared for use in the primary coolant circuit of

a nuclear reactor as defined in paragraph (1) above.

(10) Neutron detection and measuring instruments: Especially designed or prepared neutron detection and measuring instruments for determining neutron flux level within the core of a reactor as defined paragraph (1) above.

(11) Plants for the reprocessing of irradiated fuel elements, and equipment especially designed or prepared therefor: 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.

(12) Plants for the fabrication of fuel elements, and equipment especially designed or prepared therefor.

(13) Plants for the separation of isotopes of uranium and equipment, other than analytical instruments, especially designed or prepared therefor.

(14) Plants for the production or concentration of heavy water, deuterium and deuterium compounds and equipment especially designed or prepared therefor.

(15) Plants for the conversion of uranium and equipment especially designed or prepared therefor.

Part B Material

(1) Deuterium and heavy water: Deuterium, heavy water(deuterium oxide) and any deuterium compound in which the ratio of deuterium to hydrogen exceeds 1:5000 for use in a nuclear reactor, as defined in paragraph (1) of Part A to this Annex, in quantities exceeding 200 kg of deuterium atoms in any period of 12 months.

(2) Nuclear grade graphite: Graphite having a purity level better than 5 parts per million boron equivalent and with a density greater than 1.50 g/cm³ for use in a nuclear reactor, as defined in paragraph (1) of Part A to this Annex, in quantities exceeding 30 metric tons in any period of 12 months.

ANNEX B

Article XX of the Statute of the International Atomic Energy Agency Definitions

As used in this Statute:

(1) The term "special fissionable material" means plutonium-239; uranium-233; uranium enriched in the isotopes 235 or 233; any material containing one or more of the foregoing; and such other fissionable material as the Board of Governors shall from time to time determine; but the term "special fissionable material" does not include source material.

(2) The term "uranium enriched in the isotopes 235 or 233" means uranium containing the isotopes 235 or 233 or both in an amount such that the abundance ratio of the sum of these isotopes to the isotope 238 is greater than the ratio of the isotope 235 to the isotope 238 occurring in nature.

(3) The term "source material" means uranium containing the mixture of isotopes occurring in nature; uranium depleted in the isotope 235; thorium; any of the foregoing in the form of metal, alloy, chemical compound, or concentrate; any other material containing one or more of the foregoing in such concentration as the Board of Governors shall from time to time determine; and such other materials as the Board of Governors shall from time to time determine.

ANNEX C

Levels of Physical Protection Measures

Pursuant to Article VIII, the agreed levels of physical protection to be ensured by the competent national authorities in the use,

storage and transportation of the materials listed in the attached table shall as a minimum include protection characteristics as below.

Category III

Use and storage within an area to which access is controlled.

Transportation under special precautions including prior arrangements among sender, recipient and carrier, and prior agreement between entities subject to the jurisdiction and regulation of supplier and recipient States, respectively, in case of international transport, specifying time, place and procedures for transferring transport responsibility.

Category II

Use and storage within a protected area to which access is controlled, i.e., an area under constant surveillance by guards or electronic devices, surrounded by a physical barrier with a limited number of points of entry under appropriate control, or any area with an equivalent level of physical protection.

Transportation under special precautions including prior arrangements among sender, recipient and carrier, and prior agreement between entities subject to the jurisdiction and regulation of supplier and recipient States, respectively, in case of international transport, specifying time, place and procedures for transferring transport responsibility.

Category I

Material in this category shall be protected with highly reliable systems against unauthorized use as follows:

Use and storage within a highly protected area, i.e., a protected area as defined for Category II above, to which, in addition, access is restricted to persons whose trustworthiness has been determined, and which is under surveillance by guards who are in close communication with appropriate response forces. Specific measures taken in this context should have as their objective the detection and prevention of any assault, unauthorized access or unauthorized removal of material.

Transportation under special precautions as identified above for transportation of Category II and III materials and, in addition, under constant surveillance by escorts and under conditions which assure close communication with appropriate response forces.

(Table) Categorization of Nuclear Material

Material	Form	Category
		I II IIIc)
1.Plutonium a)	Unirradiated b)	2 kg or more Less than 2 kg but more than 500g 500g or less but more than 15 g
2.Uranium-235	Unirradiated b)	
	- uranium enriched to 20% ²³⁵ U or more	5 kg or more Less than 5 kg but more than 1 kg 1 kg or less but more than 15 g
	- uranium enriched to 10% ²³⁵ U but less than 20% ²³⁵ U	10 kg or more Less than 10 kg but more than 1 kg
	- uranium enriched above natural, but less than 10% ²³⁵ U	10 kg or more
3.Uranium-233	Unirradiated b)	2 kg or more Less than 2 kg but more than 500g 500g or less but more than 15 g
4.Irradiated fuel		Depleted or natural uranium, thorium or low-enriched fuel(less than 10% fissile content)d) e)

- a) All plutonium except that with isotopic concentration exceeding 80% in plutonium-238.
- b) Material not irradiated in a reactor or material irradiated in a reactor but with a radiation level equal to or less than 1 Gy/hr (100 rd/h) at one metre unshielded.
- c) Quantities not falling in Category III and natural uranium, depleted uranium and thorium should be protected in accordance with prudent management practice.
- d) Although this level of protection is recommended, it would be open to States, upon evaluation of the specific circumstances, to assign a different category of physical protection.
- e) Other fuel which by virtue of its original fissile material content is classified as Category I or II before irradiation may be reduced one category level while the radiation level from the fuel exceeds 1 Gy/hr (100 rd/h) at one metre unshielded