No. 53088*

International Atomic Energy Agency, Chile and United States of America

Agreement between the International Atomic Energy Agency, the Government of the Republic of Chile and the Government of the United States of America concerning the transfer of enriched uranium for two research reactors (with annexes). Vienna, 13 July 2011 and 16 December 2011

Entry into force: *16 December 2011 by signature, in accordance with article XI*

Authentic texts: *English and Spanish*

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Agence internationale de l'énergie atomique, Chili et États-Unis d'Amérique

Accord entre l'Agence internationale de l'énergie atomique, le Gouvernement de la République du Chili et le Gouvernement des États-Unis d'Amérique concernant la cession d'uranium enrichi destiné à deux réacteurs de recherche (avec annexes). Vienne, 13 juillet 2011 et 16 décembre 2011

Entrée en vigueur : *16 décembre 2011 par signature, conformément à l'article XI*

Textes authentiques : *anglais et espagnol*

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[ENGLISH TEXT – TEXTE ANGLAIS]

PROJECT AND SUPPLY AGREEMENT

AGREEMENT BETWEEN THE INTERNATIONAL ATOMIC ENERGY AGENCY, THE GOVERNMENT OF CHILE AND THE GOVERNMENT OF THE UNITED STATES OF AMERICA CONCERNING THE TRANSFER OF ENRICHED URANIUM FOR TWO RESEARCH REACTORS

WHEREAS the Republic of Chile (hereinafter called "Chile"), desiring to establish a project relating to the operation of the RECH-1 and RECH-2 research reactors (hereinafter called the "reactors") on low enriched uranium fuel (hereinafter called "LEU"), has requested the assistance of the International Atomic Energy Agency (hereinafter called the "Agency") in securing special fissionable material for the reactors;

WHEREAS under the Agreement for Cooperation between the Agency and the United States, concluded on 11 May 1959, as amended (hereinafter called the "Cooperation Agreement"), the Government of the United States of America (hereinafter "the United States") undertook to make available to the Agency pursuant to the Statute of the Agency (hereinafter called the "Statute) certain quantities of special fissionable material, and also undertook, subject to various applicable provisions and license requirements to permit, upon request of the Agency, persons under the jurisdiction of the United States to make arrangements to transfer and export materials, equipment or facilities for Members of the Agency in connection with an Agency-assisted project;

WHEREAS Chile, on 5 April 1995, concluded with the Agency an Agreement for the Application of Safeguards in connection with the Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean and the Treaty on the Non-Proliferation of Nuclear Weapons (hereinafter called the "Safeguards Agreement");

WHEREAS Chile and the United States reaffirm their support of the objectives of the Statute and their commitment to ensuring that the international development and use of nuclear energy for peaceful purposes are carried out under arrangements that, to the maximum extent, will prevent the proliferation of nuclear explosive devices;

NOW THEREFORE the Agency, Chile and the United States (hereinafter called the "Parties") hereby agree as follows:

ARTICLE I

Definition of the Project

1. The project that is the subject of this Agreement is the supply by the United States of America, through the Agency, of LEU to Chile for the fabrication of fuel for the RECH-1 and RECH-2 research reactors, which are located near Santiago, Chile and are operated by the Chilean Nuclear Energy Commission (hereinafter called the "Commission").

2. This Agreement shall apply, mutatis mutandis, to any additional assistance provided by the Agency to Chile for the project.

3. Except as specified in this Agreement, neither the Agency nor the United States assume any obligations or responsibilities insofar as the project is concerned. Chile shall assume full responsibility for any claims arising out of its activities in connection with the project.

ARTICLE II

Supply of Enriched Uranium

1. The Agency, pursuant to Article IV of the Cooperation Agreement, shall request the United States to permit the transfer and export to Chile of approximately 33 kilograms of uranium enriched to less than 20 per cent by weight in the isotope uranium-235 (hereinafter called the "supplied material") to be fabricated into fuel assemblies for the reactors.

2. The United States shall, subject to the provisions of the Cooperation Agreement, approve the transfer specified in paragraph 1 above. Upon transfer to Chile, the supplied material shall be subject to the terms and conditions of this Agreement.

3. The supplied material and any special fissionable material produced through its use, including subsequent generations of produced special fissionable material, shall be stored, processed, or otherwise altered in form or content only under conditions and in facilities acceptable to the Parties. Such material shall not be further enriched unless the Parties amend this Agreement for that purpose.

4. The particular terms and conditions for the transfer of supplied material, including charges for or connected with such material, a schedule of deliveries and shipping instructions, shall be specified in a contract to be concluded between Chile and the United States in implementation of this Agreement.

ARTICLE III

Transport, Handling and Use

1. The United States and Chile shall take all appropriate measures to ensure the safe transport, handling and use of the supplied material. Upon arrival in Chile, such measures shall be the responsibility of Chile.

2. Neither the United States nor the Agency warrants the suitability or fitness of the supplied material for any particular use or application or shall at any time bear any responsibility towards Chile or any person for any claim arising out of the transport, handling or use of the supplied material.

ARTICLE IV

Safeguards

1. Chile undertakes that the supplied material and any special fissionable material used in or produced through the use of the supplied material, including subsequent generations of produced special fissionable material, shall not be used for the manufacture of any nuclear weapon or any nuclear explosive device, for research on or the development of any nuclear weapon or any nuclear explosive device, or in such a way as to further any military purpose.

2. The safeguards rights and responsibilities of the Agency provided for in Article XII.A of the Statute of the Agency are relevant to the project and shall be implemented and maintained with respect to the project. Chile shall cooperate with the Agency to facilitate the implementation of the safeguards required by this Agreement.

3. The IAEA safeguards referred to in paragraph 2 of this Article shall, for the duration of this Agreement, be implemented pursuant to the Safeguards Agreement.

4. Article XII.C of the Statute shall apply with respect to any non-compliance by Chile with the provisions of this Agreement.

ARTICLE V

Safety Standards and Measures

The safety standards and measures specified in Annex A to this Agreement shall apply to the project.

ARTICLE VI

Agency Inspectors

The relevant provisions of the Safeguards Agreement shall apply to Agency inspectors performing functions pursuant to this Agreement.

ARTICLE VII

Scientific Information

In conformity with Article VIII.B of the Statute, Chile shall make available to the Agency without charge all scientific information developed as a result of the assistance provided by the Agency for the project.

ARTICLE VIII

Languages

All reports and other information required for the implementation of this Agreement shall be submitted to the Agency in one of the working languages of the Board.

ARTICLE IX

Physical Protection

1. Chile undertakes that adequate physical protection measures shall be maintained with respect to the supplied material and any special fissionable material produced through the use of the supplied material, including subsequent generations of produced special fissionable material.

2. The Parties agree to the levels for the application of physical protection set forth in Annex B to this Agreement, which levels may be modified by consent of all of the Parties without amendment to this Agreement. Chile shall maintain adequate physical protection measures in accordance with such levels. These measures shall as a minimum provide protection comparable to that set forth in Agency document INFCIRC/225/Rev.4 (Corrected), entitled "The Physical Protection of Nuclear Material and Nuclear Facilities," as it may be revised from time to time.

ARTICLE X

Settlement of Disputes

1. Any decision of the Board concerning the implementation of Article IV, V or VI shall, if the decision so provides, be given effect immediately by Chile and the Agency pending the final settlement of the dispute.

2. Any dispute arising out of the interpretation or implementation of this Agreement shall be settled by the Parties by consultation.

ARTICLE XI

Entry into Force and Duration

1. This Agreement shall enter into force upon signature by or for the Director General of the Agency and by the authorized representatives of Chile and the United States.

2. This Agreement shall continue in effect so long as any material, equipment or facility which was ever subject to this Agreement remains in the territory of Chile or under its jurisdiction or control anywhere, or until such time as the Parties agree that such material, equipment or facility is no longer usable for any nuclear activity relevant from the point of view of safeguards.

DONE in triplicate in the English and Spanish languages, the texts in both languages being equally authentic.

For the **INTERNATIONAL ATOMIC ENERGY AGENCY:**

(Signed)

Yukiya Amano, Director General
Vienna, 16 December 2011

For the **GOVERNMENT OF CHILE:**

(Signed)

Alfredo Alejandro Labbé Villa, Ambassador
Vienna, 16 December 2011

For the **GOVERNMENT OF THE UNITED STATES OF AMERICA:**

(Signed)

Glyn T. Davies, Ambassador
Vienna, 13 July 2011

ANNEX A

SAFETY STANDARDS AND MEASURES

1. The safety standards and measures applicable to the Agreement between the International Atomic Energy Agency and the Governments of Chile and the United States of America Concerning the Transfer of Enriched Uranium for Research Reactors shall be those defined in Agency document INFCIRC/18/Rev.1 (hereinafter the "Safety Document"), or in any subsequent revision thereof, and as specified below.

2. Chile shall, inter alia, apply the International Basic Safety Standards for Protection Against Ionizing Radiation and for the Safety of Radiation Sources (IAEA Safety Series No. 115), and the relevant provisions of the IAEA's Regulations for the Safe Transport of Radioactive Materials (IAEA Safety Standard Series, TS-R-1) as they may be revised from time to time, and as far as possible Chile shall apply them also to any shipment of the supplied material outside the jurisdiction of Chile. Chile shall, inter alia, ensure safety conditions as recommended in the Safety of Research Reactors, Safety Requirements (IAEA Safety Standards Series No. NS-R-4) and other relevant IAEA Safety Standards.

3. Chile shall arrange for the submission to the IAEA, at least thirty (30) days prior to the proposed transfer of any part of the supplied material to the jurisdiction of Chile, of a detailed safety analysis report containing the information specified in paragraph 4.7 of the Safety Document and as recommended in the relevant sections of the Agency's Guides on the Safety Assessment of Research Reactors and Preparation of the Safety Analysis Report (IAEA Safety Series No. 35-G1) and the Safety in the Utilization and Modification of Research Reactors (IAEA Safety Series No. 35-G2), including particular reference to the following types of operations, to the extent that the relevant information is not yet available to the IAEA:

(a) Receipt and handling of the supplied material;
(b) Loading of the supplied material into the reactor;
(c) Commissioning test, including start-up and pre-operational testing of the reactor with the supplied material;
(d) Experimental program and procedures involving the reactor;
(e) Unloading of the supplied material from the reactor; and
(f) Handling and storage of the supplied material after unloading from the reactor.

4. Once the IAEA has determined that the safety measures provided for the project are adequate, the IAEA shall give its consent for the start of the proposed operations. Should Chile desire to make substantial modifications to the procedures with respect to which information has been submitted, or to perform any operations with the reactor or the supplied material with respect to which operations no information has been submitted, Chile shall submit to the IAEA all relevant information as specified in paragraph 4.7 of the Safety Document, on the basis of which the IAEA may require the application of additional safety measures in accordance with paragraph 4.8 of the Safety Document. Once Chile has undertaken to apply the additional safety measures requested by the IAEA, the IAEA shall give its consent for the aforementioned modifications or operations envisaged by Chile.

5. Chile shall arrange for submission to the IAEA, as appropriate, of the reports specified in paragraphs 4.9 and 4.10 of the Safety Document.

6. The IAEA may, in agreement with Chile, send safety missions for the purpose of providing advice and assistance to Chile in connection with the application of adequate safety measures to the project, in accordance with paragraphs 5.1 and 5.3 of the Safety Document. Moreover, special safety missions may be arranged by the IAEA in the circumstances specified in paragraph 5.2 of the Safety Document.

7. Changes in the safety standards and measures laid down in this Annex may be made by mutual consent between the IAEA and Chile in accordance with paragraphs 6.2 and 6.3 of the Safety Document.

ANNEX B

LEVELS OF PHYSICAL PROTECTION

Pursuant to Article IX of the Agreement between the International Atomic Energy Agency and the Governments of Chile and the United States of America Concerning the Transfer of Enriched Uranium for Research Reactors, the agreed levels of physical protection to be ensured by the competent national authorities in the use, storage and transportation of nuclear material listed in the attached table shall as a minimum include protection characteristics as follows:

CATEGORY III

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

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

CATEGORY I

Materials 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	Category II	Category III[c]
1. Plutonium[a]	Unirradiated[b]	2 kg or more	Less than 2 kg but more than 500 g	500 g 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 500 g	500 g 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 rad/hr) at one meter unshielded.

c Quantities not falling in Category III and natural uranium, depleted uranium and thorium should be protected at least 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 rad/hr) at one meter unshielded.