IAEA
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# Information Circular

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# Agreement between the International Atomic Energy Agency, the Government of the Republic of Nigeria and the Government of the People's Republic of China for Assistance in Securing Low Enriched Uranium for a Research Reactor

1. The text of the Agreement between the International Atomic Energy Agency, the Government of the Republic of Nigeria and the Government of the People's Republic of China for Assistance in Securing Low Enriched Uranium for a Research Reactor is reproduced in this document for the information of all Members of the Agency. The Agency's Board of Governors approved the text of the Agreement on 7 June 2018. The Agreement was signed by the authorized representative of Nigeria on 20 August 2018, by the authorized representative of the People's Republic of China on 31 August 2018 and by the Deputy Director General of the IAEA on 10 September 2018.

2. Pursuant to the Article XI of the Agreement, the Agreement entered into force on 10 September 2018, upon signature of the Deputy Director General of the IAEA and by the authorized representatives of Nigeria and China.

# AGREEMENT BETWEEN THE INTERNATIONAL ATOMIC ENERGY AGENCY, THE GOVERNMENT OF THE REPUBLIC OF NIGERIA AND THE GOVERNMENT OF THE PEOPLE'S REPUBLIC OF CHINA FOR ASSISTANCE IN SECURING LOW ENRICHED URANIUM FOR A RESEARCH REACTOR

WHEREAS the Government of the Republic of Nigeria (hereinafter called "Nigeria"), desiring to convert the core of the 30 kW miniature neutron research reactor located at the Center for Energy Research and Training at Zaria in Nigeria (hereinafter called the "reactor") from the use of high enriched uranium fuel to the use of low enriched uranium (hereinafter called "LEU") fuel, has requested the assistance of the International Atomic Energy Agency (hereinafter called the "IAEA") in securing the transfer of LEU fuel for the reactor;

WHEREAS the reactor was acquired by Nigeria through a Project and Supply Agreement among the IAEA, the Government of Nigeria and the Government of the People's Republic of China (hereinafter called "China") concerning the transfer of the reactor and enriched uranium, which entered into force on 29 August 1996;

WHEREAS Nigeria and the IAEA are in the process of making arrangements with a manufacturer in China (hereinafter called the "manufacturer") for the supply of LEU fuel elements for the reactor;

WHEREAS Nigeria concluded with the IAEA an Agreement for the Application of Safeguards in Connection with the Treaty for the Non-Proliferation of Nuclear Weapons, which entered into force on 29 February 1988 (hereinafter called the "Safeguards Agreement");

WHEREAS Nigeria and China reaffirm their support of the objectives of the IAEA 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 IAEA, Nigeria and China (hereinafter called "the Parties") hereby agree as follows:

## ARTICLE I
## Definition of the Project

1. The project which is the subject of this Agreement is the supply by China, through the IAEA, of LEU fuel to Nigeria for the operation of the reactor, which is located at the Center for Energy Research and Training at Zaria in Nigeria.

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

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

## ARTICLE II
## Supply of Low Enriched Uranium

1. The IAEA shall request China to permit the transfer and export to Nigeria of approximately 15 kilograms of uranium enriched to less than 20 per cent by weight in the isotope uranium-235 (hereinafter called the "supplied material") contained in fuel elements for use in the continued operation of the reactor.

2. China shall transfer and export to Nigeria the supplied material and shall issue any required licenses or permits for that purpose.

3. China shall transfer title to the supplied material to the IAEA upon arrival of the material in Nigeria, and the IAEA shall thereafter immediately and automatically transfer the title to Nigeria.

4. The supplied material and any special fissionable material produced through its use, including subsequent generations of produced special fissionable material, shall be used exclusively for the reactor and shall remain at the site of the reactor, unless the Parties otherwise agree.

5. The supplied material and any special fissionable material produced through its use, including subsequent generations of produced special fissionable material, shall be stored or reprocessed 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 otherwise agree.

6. 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 the IAEA, Nigeria and China in implementation of this Agreement.

## ARTICLE III
## Transport, Handling and Use

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

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

## ARTICLE IV
## Safeguards

1. Nigeria undertakes that the supplied material and any special fissionable material 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, or 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 IAEA provided for in Article XII.A of the Statute are relevant to the project and shall be implemented and maintained with respect to the project. Nigeria shall cooperate with the IAEA to facilitate the implementation of the safeguards required by this Agreement.

3. The IAEA safeguards referred to in paragraph 2 of this Article shall, in respect to Nigeria, 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 Nigeria with the provisions of this Agreement.

## ARTICLE V
## Safety Standards and Measures

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

## ARTICLE VI
## IAEA Inspectors

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

## ARTICLE VII
## Scientific Information

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

## ARTICLE VIII
## Languages

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

## ARTICLE IX
## Physical Protection

1. Nigeria undertakes that adequate physical protection measures and systems 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 measures and systems referred to in paragraph 1 above shall, as a minimum, provide the protection set forth in IAEA Nuclear Security Series No. 13, entitled "Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Revision 5)", as it may be revised from time to time, and comply with the following requirements:

(a) Nigeria shall have in place an established physical protection regime for the supplied material and any special fissionable material produced through the use of the supplied material, including subsequent generations of produced special fissionable material, and for any nuclear facility while using or storing such material;

(b) Nigeria shall protect against unauthorized removal of the supplied material and any special fissionable material produced through the use of the supplied material, including subsequent generations of produced special fissionable material, while in use and storage;

(c) Nigeria shall protect against sabotage the supplied material and any special fissionable material produced through the use of the supplied material, including subsequent generations of produced special fissionable material, while in use and storage, and any nuclear facility while using or storing such material; and

(d) Nigeria shall protect against unauthorized removal and sabotage during transport of the supplied material and any special fissionable material produced through the use of the supplied material, including subsequent generations of produced special fissionable material.

## ARTICLE X
## Settlement of Disputes

1. Any decision of the IAEA Board of Governors concerning the implementation of Article IV, V or VI of this Agreement shall, if the decision so provides, be given effect immediately by Nigeria and the IAEA pending the final settlement of any 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 the Director General of the IAEA and by the authorized representatives of Nigeria and China.

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 Nigeria 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 Chinese languages, the texts in both languages being equally authentic.

For the **INTERNATIONAL ATOMIC ENERGY AGENCY:**

(Signed)

Mikhail Chudakov, Deputy Director General

Vienna, 10 September 2018

For the **GOVERNMENT OF THE REPUBLIC OF NIGERIA:**

(Signed)

Prof. Simon Pesco Mallau, Chairman and Chief Executive Officer, Nigeria Atomic Energy Comission

Vienna, 20 August 2018

For the **GOVERNMENT OF THE PEOPLE'S REPUBLIC OF CHINA:**

(Signed)

Zhang Kejian, Chairman, China Atomic Energy Authority

Beijing, China, 31 August 2018

## ANNEX

## SAFETY STANDARDS AND MEASURES

1. The safety standards and measures applicable to the Agreement between the International Atomic Energy Agency, the Government of the Republic of Nigeria and the Government of the People's Republic of China for Assistance in Securing Low Enriched Uranium for a Research Reactor, of which this Annex is an integral part, shall be those defined in IAEA document INFCIRC/18/Rev.l (hereinafter the "Safety Document"), or in any subsequent revision thereof, and as specified below.

2. Nigeria shall, inter alia, apply the Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards (IAEA Safety Standards Series No. GSR Part 3), and Regulations for the Safe Transport of Radioactive Material, 2012 Edition (IAEA Safety Standard Series No. SSR-6) as they may be revised from time to time, and as far as possible Nigeria shall apply them also to any shipment of the supplied material outside the jurisdiction of Nigeria. Nigeria 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. Nigeria 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 Nigeria, 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 following IAEA Safety Guides:

(a) Safety Assessment of Research Reactors and Preparation of the Safety Analysis Report (IAEA Safety Standards Series No. SSG-20);
(b) Safety in the Utilization and Modification of Research Reactors (IAEA Safety Standards Series No. SSG-24);
(c) Commissioning of Research Reactors (IAEA Safety Standards Series No. NS-G-4.1);
(d) Core Management and Fuel Handling for Research Reactors (IAEA Safety Standards Series No. NS-G-4.3); and
(e) Operational Limits and Conditions and Operating Procedures for Research Reactors (IAEA Safety Standards Series No. NS-G-4.4),

including, in 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 Nigeria 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, Nigeria 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 Nigeria 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 Nigeria.

5. Nigeria 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 Nigeria, send safety missions for the purpose of providing advice and assistance to Nigeria 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 Nigeria in accordance with paragraphs 6.2 and 6.3 of the Safety Document.