PROJECT ANNEX 4

COOPERATION IN THE FIELD OF LOW ENRICHED URANIUM ADVANCED FUELS

The Department of Energy of the United States of America (DOE) and the National Atomic Energy Commission of the Argentine Republic (CNEA) have entered into an Implementing Arrangement for Technical Exchange and Cooperation in the Area of Peaceful Uses of Nuclear Energy on October 16, 1997 (hereinafter referred to as the Implementing Arrangement);

Recognizing that DOE and CNEA (the Parties) desire to promote the exchange of scientific and technological information and cooperation on research, development, testing, and evaluation of technology, equipment, and procedures in order to improve technologies as they pertain to the peaceful uses of nuclear energy; and

Noting that the Parties will mutually benefit from joint research in the important area of Low Enriched Uranium (LEU) Advanced Fuels;

Have agreed as follows, subject to the terms of the Implementing Arrangement as provided in Article 4:

ARTICLE 1
SCOPE

The Parties agree that the scope for cooperation may include, but is not limited to, developing and implementing of joint research relating to:

1. Development and conversion of ANL/DOE DART code into a new portable parallel architecture version;

2. Development of new high density LEU Advanced Fuels, for enhancing 20 percent ^{235}U conversion;

3. Development of new very high density LEU Advanced Fuels for enhancing 20 percent ^{235}U full conversion.

ARTICLE 2
OBJECTIVES

The objectives of this Project Annex are to:

1. Design and develop a new parallelized calculation kernel, new friendly input/output interfaces, new material-under-irradiation database, and new models about super-plasticity, elastoplastic feedback and time transients and/or accident condition. These tasks include in advance a rigorous and general inspection of former ANL/DOE DART code;

2. Develop new high density advanced fuels for the enhancement of conversion to 20 percent ^{235}U fuels, able to be used in new innovative testing reactors. This objective includes fuel qualification and postirradiation examination (PIE) studies;

3. Develop new very high advanced fuels 20 percent ^{235}U, research on different high density ^{235}U alloys, irradiation and PIE studies.

ARTICLE 3
MANAGEMENT

DOE and CNEA shall each name a technical coordinator as necessary to manage specific projects under this Project Annex. Technical Coordinators shall report the progress of activities as necessary to the Principal Coordinators pursuant to Article 5 of the Implementing Arrangement. A detailed Action Sheet will be developed for each specific project. Action Sheets will include schedules, cost estimates, cost sharing, personnel assignments, access to facilities, use and exchange of equipment, and other matters as required by the specific nature of the project.

The Parties may invite other governmental organizations or private institutions in their respective countries to participate in activities under this Project Annex. Such participation shall be coordinated with the Principal Coordinators, and relevant Technical Coordinators, of the Implementing Arrangement and shall be subject to the provisions of the Implementing Arrangement and this Project Annex.

ARTICLE 4
INTELLECTUAL PROPERTY RIGHTS

Rights to intellectual property arising under this Project Annex shall be subject to Article 9 of the Implementing Arrangement.

As set forth in paragraph 3.2(ii)(a) of Article 9 of the Implementing Arrangement, each Party shall be entitled to obtain all rights and interests in its own country to intellectual property arising under this Project Annex. Rights and interests in third countries will be reflected in the Action Sheets.

ARTICLE 5
COSTS AND LEGAL PROVISIONS

Except when otherwise agreed in writing, all costs resulting from cooperation under this Project Annex will be borne by the Party that incurs them. It is understood that the ability of each Party to carry out its obligations under this Project Annex is subject to the availability of appropriated funds and personnel and subject to applicable laws and regulations of the countries of the Parties.

ARTICLE 6
EFFECTIVE DATE AND TERMINATION

This Project Annex enters into effect on the last date of signature and remains in effect as long as the Implementing Arrangement remains in effect. Upon termination of the Implementing Arrangement, this Project Annex shall expire. This Project Annex may be amended or extended by written agreement of the Parties, and may be terminated at any time by either Party upon six (6) months written notice to the other Party.

FOR THE DEPARTMENT OF ENERGY
OF THE UNITED STATES OF AMERICA:

Elizabeth G. Losar

Date: August 18, 1998

FOR THE NATIONAL ATOMIC
ENERGY COMMISSION OF THE
ARGENTINE REPUBLIC:

Date: August 12th, 1998.