

No. 19243

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**UNITED STATES OF AMERICA  
and  
EUROPEAN ATOMIC ENERGY COMMUNITY**

**Arrangement in the field of nuclear safety research (with  
addenda). Signed at Washington on 19 March 1979**

*Authentic text: English.*

*Registered by the United States of America on 7 November 1980.*

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**ÉTATS-UNIS D'AMÉRIQUE  
et  
COMMUNAUTÉ EUROPÉENNE  
DE L'ÉNERGIE ATOMIQUE**

**Accord dans le domaine de la recherche sur la sûreté des  
réacteurs nucléaires (avec additifs). Signé à Washington  
le 19 mars 1979**

*Texte authentique : anglais.*

*Enregistré par les États-Unis d'Amérique le 7 novembre 1980.*

ARRANGEMENT<sup>1</sup> BETWEEN THE UNITED STATES NUCLEAR REGULATORY COMMISSION AND THE EUROPEAN ATOMIC ENERGY COMMUNITY (hereafter called EURATOM) REPRESENTED BY THE COMMISSION OF THE EUROPEAN COMMUNITIES IN THE FIELD OF NUCLEAR SAFETY RESEARCH

The Contracting Parties,

Considering that the United States Nuclear Regulatory Commission (USNRC) and the Commission of the European Communities

- (a) Have a mutual interest in co-operation in the field of nuclear safety information;
- (b) Wish to initiate co-operation in the field of reactor safety research;
- (c) Are confident that their efforts under this Arrangement are consistent with the objective of the International Nuclear Fuel Cycle Evaluation, namely, that effective measures can and should be taken at the national level and through international agreements to minimize the danger of the proliferation of nuclear weapons without jeopardizing energy supplies or the development of nuclear energy for peaceful purposes;

Have agreed as follows:

*Article I. OBJECTIVE*

The USNRC and EURATOM, in accordance with the provisions of this Arrangement and subject to applicable laws and regulations in force in the USA and in the Member States of EURATOM, shall establish co-operation between them in the field of nuclear safety research on the basis of mutual benefit and reasonable equality and reciprocity.

*Article II. FORM OF CO-OPERATION*

Co-operation in accordance with this Arrangement may take the following forms:

1. The exchange of technical information in the form of reports, experimental data, computer codes, correspondence, news letters and oral discussions.
2. The organization of meetings on specific agreed topics; such meetings normally to be held alternately in the U.S. and the member states of EURATOM for each topic.
3. Short visits by specialist teams or individuals to the facilities of the other Party.
4. Possible temporary assignment of personnel of one Party to the laboratory or facilities of the other Party, each such assignment to be considered on a case-by-case basis and be the subject of a separate attachment of staff agreement between the Parties.
5. The execution of joint programmes and co-operative research projects, or those programmes and projects under which activities are divided between both Parties, including the use of test facilities and/or computer programmes owned or sponsored by either Party. Such joint programmes and projects shall be agreed on a case-by-case basis and shall be the subject of separate agreements between the Parties.
6. The use by one Party of facilities owned or operated by the other Party. Such use of facilities shall be the subject of separate agreements between the Parties and may be subject to commercial terms and conditions.

<sup>1</sup> Came into force on 19 March 1979 by signature, in accordance with article VIII (1).

7. If either Party wishes to visit, assign personnel or use the facilities owned or operated by Government entities other than the Parties to this Arrangement, such governmental entities must give their prior written approval to the terms upon which such visit, assignment or use shall be made.
8. Any other form agreed between the Parties.

#### *Article III. SCOPE OF INFORMATION EXCHANGE*

1. The USNRC will make available to EURATOM information in the field of nuclear safety research which it has the right to disclose, either in its possession or available to it, in the technical areas listed in addendum A and in which the USNRC is performing nuclear safety research. The scope of the USNRC program covers the full range of applicable fuel cycles of fast reactor concepts.

2. EURATOM will make available to the USNRC information in the field of nuclear safety research arising out of the activities of the Joint Research Centre, which it has the right to disclose, either in its possession or available to it, in the technical areas listed in addendum B and in which the Joint Research Centre is performing nuclear safety research.

3. Each Party will promptly transmit and call to the other Party's attention any information on its research results appearing to have significant safety implications.

4. The Parties may also exchange information on any other topic by agreement.

#### *Article IV. ADMINISTRATION OF THE ARRANGEMENT*

Each Party will designate as Administrator a senior representative to co-ordinate its participation in the overall exchange. A review meeting of the Administrators or their representatives will be held at agreed-upon intervals to review the status of exchange and co-operation established under this Arrangement, to recommend revisions for improving and developing the co-operation, and to discuss topics within the scope of the co-operation. The time, place and agenda for such meetings shall be agreed upon in advance.

#### *Article V. EXCHANGE AND USE OF INFORMATION*

1. The Parties support the widest possible dissemination of information provided or exchanged under this Arrangement, subject to the need to protect proprietary information as may be exchanged hereunder, and to the provisions of article VII, Patents.

2. As used in this Arrangement, the following definitions apply:

(i) The term "information" means scientific or technical data, results or methods of research and development, and any other information intended to be provided or exchanged under this Arrangement.

(ii) The term "proprietary information" means information which contains trade secrets or other privileged or confidential commercial information, and may only include information which:

- (a) Has been held in confidence by its owner; and
- (b) Is of a type which is customarily held in confidence by its owner; and
- (c) Has not been transmitted by the transmitting Party to other entities (including the receiving Party) except on the basis that it be held in confidence; and
- (d) Is not otherwise available to the receiving Party from another source without restriction on its further dissemination.

3. The Party receiving proprietary information pursuant to this Arrangement shall respect the privileged nature thereof, provided such proprietary information is clearly

marked with the appropriate legend of the transmitting party and with the following (or substantially similar) restrictive legend:

“This document contains proprietary information furnished in confidence under an Arrangement dated ..... between the United States Nuclear Regulatory Commission and EURATOM and shall not be disseminated outside these organizations, their consultants, contractors, and licensees, and concerned departments and agencies of the Governments of the United States and of the member states of EURATOM without the prior approval of ..... This notice shall be marked on any reproduction hereof, in whole or in part. These limitations shall automatically terminate when this information is disclosed by the owner without restriction.”

4. In regard to the dissemination and use of proprietary information received in confidence under this Arrangement, the Parties agree that:

- (i) Such information may be disseminated by the receiving Party to persons within or employed by the receiving Party, and to:
  - (a) concerned government departments and government agencies in the country or member states of the receiving Party;
  - (b) prime or sub-contractors or consultants of the receiving party located within the geographical limits of the receiving party's country or member states, for use only within the framework of their contracts with the receiving party in work relating to the subject matter of the proprietary information;
  - (c) organizations permitted or licensed by the receiving Party in the field of development, design, construction and operation of nuclear production or utilization facilities for use only within the terms of such permit or license;
  - (d) contractors of organizations identified in Item 4 (i)(c) above for use only within the scope of the permit or license granted to such organizations;provided that any proprietary information so disseminated under subparagraphs (b), (c) and (d) above shall be pursuant to an agreement of confidentiality and shall be marked with a restrictive legend substantially identical to that appearing in paragraph 3 above.
- (ii) With the prior written consent of the Party providing proprietary information under this Arrangement, the receiving Party may disseminate such proprietary information more widely than otherwise permitted in the foregoing subsection (i). The Parties shall co-operate with each other in developing procedures for requesting and obtaining approval for such wider dissemination and each Party will grant such approval to the extent permitted by its national policies, regulations and laws.
- (iii) Each Party shall exercise its best efforts to ensure that proprietary information received by it under this Arrangement is controlled as provided herein. If one of the Parties becomes aware that it will be, or may reasonably be expected to become, unable to meet the nondissemination provisions of this article, it shall immediately inform the other Party. The Parties shall thereafter consult to define an appropriate course of action.
- (iv) Non-documentary proprietary information provided in seminars and other meetings organized under this Arrangement, or information arising from the attachments of staff, use of facilities or joint projects, shall be treated by the Parties in accordance with the principles specified in this article, provided, however, that the Party communicating such proprietary information places the recipient on notice as to the character of the information communicated.
- (v) Nothing contained in this Arrangement shall preclude the use or dissemination of information received by a Party from sources outside of this Arrangement.

- (vi) Information given by one Party to the other under this Arrangement shall be accurate to the best knowledge and belief of the Party giving it, but neither Party gives any warranty as to the accuracy of such information or shall have any responsibility for the consequences of any use to which such information may be put by the other Party or by any third party.

#### *Article VI. COSTS*

Except when otherwise specifically agreed upon by the Parties, all costs arising in the implementation of this Arrangement shall be borne by the Party that incurs them. It is understood that the ability of the Parties to carry out their obligations is subject to the availability of appropriated funds.

#### *Article VII. PATENTS*

1. As set forth in this article, "Country" shall be taken to mean:
  - (i) The United States of America for the USNRC Party;
  - (ii) The member states of EURATOM for the EURATOM Party.
2. With respect to any invention or discovery made or conceived in the course of or under this Arrangement:
  - (i) If made or conceived by personnel of one Party (the Assigning Party) or its contractors while assigned to the other Party (Recipient Party) or its contractors:
    - (a) The Recipient Party shall acquire all right, title, and interest in and to any such invention or discovery in its own Country and in third countries, subject to a non-exclusive, irrevocable, royalty-free license in all such countries to the Assigning Party, with the right to grant sub-licenses, under any such invention or discovery and any patent application, patent or other protection relating thereto, for use in the production or utilization of special nuclear material or atomic energy; and
    - (b) The Assigning Party shall acquire all right, title, and interest in and to any such invention or discovery in its own Country, subject to a non-exclusive, irrevocable, royalty-free license to the recipient party, with the right to grant sub-licenses under any such invention or discovery and any patent application, patent or other protection relating thereto for use in the production or utilization of special nuclear material or atomic energy.
  - (ii) If made or conceived by personnel other than the personnel referred to in paragraph (i) above, as a result of attendance at meetings or as a result of employing information which had been communicated under this Arrangement by one Party or its contractors to the other Party or its contractors, the Party of such personnel making the invention shall acquire all right, title, and interest in and to any such invention or discovery in all countries, subject to the grant to the other Party of a royalty-free non-exclusive, irrevocable license, with the right to grant sub-licenses, in and to any such invention or discovery and any patent application, patent or other protection relating thereto in all countries, for use in the production or utilization of special nuclear material or atomic energy.
  - (iii) With regard to other specific forms of co-operation, including loans or exchanges of materials, instruments and equipment for special joint research projects, the Parties shall provide for appropriate distribution of rights to inventions or discoveries resulting from such co-operation. In general, however, each Party should normally own the rights to such inventions or discoveries in its own Country with a royalty-free, non-exclusive, irrevocable license to the other Party, and the rights to such

inventions or discoveries in other countries should be agreed by the Parties on an equitable basis.

3. Neither Party shall discriminate against citizens of the Country of the other Party with respect to granting any license or sub-license under any invention or discovery pursuant to paragraph 1 above. It is understood that the licensing policies and practices of each Party may be affected because of the rights of both Parties to grant licenses within a single jurisdiction. Accordingly, either Party may request, in regard to a single invention or discovery or class of inventions or discoveries, that the Parties consult in an effort to lessen or eliminate any detrimental effect that the parallel licensing authorities may have on the policies and practices of the Parties.

4. Neither Party will assume the responsibility to pay awards or compensation required to be paid to the nationals of the other Party according to the laws of the other Country.

#### Article VIII. FINAL PROVISIONS

1. This Arrangement shall enter into force upon the later of the two dates on which it is signed and, subject to paragraph 2 of this article, shall remain in force for a period of 5 years, unless previously extended by agreement between the Parties.

2. Either Party may withdraw from the present Arrangement after providing the other Party written notice 6 months prior to its intended date of withdrawal.

3. The Parties agree that all discussions, meetings, exchange of documents or other acts of co-operation between them and prior to the entry into force of this Arrangement which, if they had occurred subsequent to the entry into force of this Arrangement, would have been subject to this Arrangement shall be subject to the terms hereof.

For the United States Nuclear  
Regulatory Commission:

For EURATOM:

Commission of the European  
Communities,

By: [Signed — Signé]<sup>1</sup>  
Title: Chairman, U.S.N.R.C.  
Date: March 19, 1979

By: [Signed — Signé]<sup>2</sup>  
Title: Commissioner, EC  
Date: March 19, 1979

#### ADDENDUM A

##### AREAS IN WHICH THE USNRC IS PERFORMING SAFETY RESEARCH

##### 1. Water Reactor Safety Research

- 1.1. Primary Coolant System Rupture Studies
- 1.2. Heavy Section Steel Technology Program
- 1.3. LOFT Program
- 1.4. Power Burst Facility—Subassembly Testing Program
- 1.5. Separate Effects Testing—Loss-of-Coolant Accident Studies
- 1.6. Loss-of-Coolant Accident Analyses—Analytical Model Development
- 1.7. Design Criteria for Piping, Pumps, and Valves
- 1.8. Alternate ECCS Studies
- 1.9. Core Meltdown Studies
- 1.10. Fission Product Release and Transport Studies

<sup>1</sup> Signed by Joseph Hendrie — Signé par Joseph Hendrie.

<sup>2</sup> Signed by G. Brunner — Signé par G. Brunner.

- 1.11. Probabilistic Studies
- 1.12. Zirconium Damage
- 2. *Fast Reactor Safety Research*
  - 2.1. Molten Fuel-Coolant Interactions
  - 2.2. Post-Accident Heat Removal
  - 2.3. Accident Analysis, Delineation and Model Development
  - 2.4. Aerosol Generation, Release and Transport
  - 2.5. Safety Test Facility Studies and Concept Development
  - 2.6. In-Pile Data Acquisition Methods Related to Experiment Diagnostics
  - 2.7. Analysis of Extended Core Motion in Core Disruptive Accidents
  - 2.8. Systems Integrity Studies

## ADDENDUM B

### AREAS IN WHICH THE JRC IS PERFORMING SAFETY RESEARCH

- 1. *Reliability and Risk Assessment,*
  - For LWR:
    - 1.1. Implementation of a European Reliability Data System
    - 1.2. Probabilistic Accident Analysis
    - 1.3. Nuclear Pressure Vessel Testing and Reliability
  - For LMFBR:
    - 1.4. Whole Core Accident Code
- 2. *LWR Loss-of-Coolant Accidents,*
  - 2.1. Integral System Tests with Loop Blowdown Investigation Test Facility
  - 2.2. In-Pile Simulation of LOCA
- 3. *LMFBR Subassembly Thermohydraulics,*
  - 3.1. Subassembly Thermohydraulics Code Development and Validation
  - 3.2. Subassembly Thermohydraulics Sodium Boiling Studies
- 4. *Fuel-Coolant Interaction and Core Melts,*
  - For LWR and LMFBR:
    - 4.1. Fuel-Coolant Interaction
    - 4.2. Core Melts, Post Accident Heat Removal
- 5. *Dynamic Structures Loading and Response,*
  - For LMFBR:
    - 5.1. Dynamic Structure Loading and Response Code Development and Validation
    - 5.2. Materials Constitutive Laws
- 6. *Structural Failure Prevention,*
  - For LMFBR:
    - 6.1. Fracture Mechanics
    - 6.2. Creep and Fatigue Crack Growth
  - For LWR and LMFBR:
    - 6.3. Non-Destructive Testing