

COOPERATIVE ARRANGEMENT

between the

UNITED STATES DEPARTMENT OF ENERGY

and the

NUCLEAR ENERGY AGENCY

of the

ORGANISATION FOR ECONOMIC COOPERATION AND DEVELOPMENT

in the field of

NUCLEAR DATA AND COMPUTER PROGRAMS

WHEREAS

The United States Department of Energy (hereinafter referred to as DOE) and the Nuclear Energy Agency (hereinafter referred to as NEA) of the Organisation for Economic Cooperation and Development, hereinafter called the Parties, have participated in an exchange of nuclear data and computer programs under the terms of a Cooperative Arrangement in the field of Nuclear Data and Computer Programs that became effective on December 16, 1985, as extended (hereinafter called the Cooperative Arrangement); and by an exchange of letters between DOE and NEA on December 17 and 20, 1990.

The Parties wish to continue the activities conducted under the Cooperative Arrangement.

THE PARTIES HAVE AGREED AS FOLLOWS:

ARTICLE 1 - OBJECTIVE

The aim of cooperation under this Arrangement is to exchange nuclear data and related information and computer program packages pertinent to civilian nuclear science and technology collected by the following Centers operated by the Parties: the NEA Data Bank (NEA-DB) at Issy-les-Moulineaux, France, a data bank whose functions include the classification, computer storage, and distribution to customer Centers of large quantities of information in the form of basic numerical and bibliographical nuclear physics data and of large computer programs for a wide range of applications in nuclear power reactor technology; the U.S. National Nuclear Data Center at Brookhaven National Laboratory (NNDC); the U.S. Energy Science and Technology Software Center (ESTSC) at Oak Ridge, Tennessee, a software collection and dissemination activity; and the U.S. Engineering Physics Information Center at Oak Ridge National Laboratory (EPIC). The collective function of the U.S. Centers are essentially similar to those of the NEA-DB.

ARTICLE 2 - NUCLEAR CROSS SECTION REFERENCES

- 2.1 NNDC and NEA-DB shall exchange, at agreed intervals and at least semiannually, new entries to the index of nuclear cross section references (CINDA reference base) such that both NNDC and NEA-DB may maintain a complete and up-to-date index of the CINDA entries compiled.
- 2.2 To facilitate such exchanges, copies of information data bases shall be available at the NNDC and NEA-DB Centers. Both NNDC and NEA-DB shall use compatible systems for obtaining, storing, and disseminating bibliographic indexing information and shall transmit at agreed intervals all available data placed on appropriate memory devices for which they shall use the same format.
- 2.3 NNDC and NEA-DB shall attempt to correlate the above CINDA reference base with the microscopic nuclear cross section data base and the data base of evaluated nuclear data.

ARTICLE 3 - MICROSCOPIC NUCLEAR CROSS SECTION DATA AND CONNECTED INFORMATION

- 3.1 NDC and NEA-DB shall exchange, in their capacities as points of contact, information on measured microscopic nuclear cross section data, together with direct connected documentation describing measurement techniques, procedures, facilities, data reduction, corrections, error assessments, standards, and other relevant matters.
- 3.2 To this end, both NNDC and NEA-DB shall use the same exchange format and shall transmit to each other all data placed on their appropriate memory devices at agreed intervals, and at least semiannually, after it is made available to them.

ARTICLE 4 - EVALUATED SETS OF NUCLEAR CROSS SECTION DATA

- 4.1 NNDC and NEA-DB shall distribute to customers within their service areas (Article 7), in their capacities as points of contact, evaluated sets of nuclear cross section data and processed group cross section libraries derived from such evaluated sets of nuclear cross section data that have been provided to them by the other Centers.
- 4.2 NNDC and NEA-DB shall transmit to each other evaluated data on appropriate memory devices as soon as possible after such data are made available to them.
- 4.3 NNDC and NEA-DB shall collect, to the extent possible, appropriate supporting documentation for the evaluations on which libraries of evaluated data are based and shall provide such documentation to each other on a continuing basis.

- 4.4 All information on evaluated sets of nuclear cross section data exchanged under the terms of this Article, when disseminated by the recipient Center to the countries within its service area (Article 7), shall bear a suitable legend agreed to by the sending Center and the appropriate authorities, specifying that the data have been obtained under the terms of this Arrangement.

ARTICLE 5 - COMPUTER PROGRAM PACKAGES PERTINENT TO NUCLEAR SCIENCE AND TECHNOLOGY

- 5.1 ESTSC and NEA-DB shall distribute within their service areas (Article 7), in their capacities as points of contact, computer program packages pertinent to nuclear science and technology that are provided to them by the other Center. The exchange shall include a complete citation and an abstract of each computer program available for distribution. Each Center may establish charges, if appropriate, for the corresponding computer program packages inclusive of documentation, operating instructions, and computer media containing source and executable computer program modules and sample problems.
- 5.2 Computer program documentation shall be transmitted in their original languages. Translations, if any, shall also be transmitted. Computer program abstracts shall be in English.
- 5.3 Each Center shall undertake to assure that the computer program packages to be exchanged are written in accordance with the rules of good programming practice and that these computer program packages, to the extent possible, are complete and properly documented.
- 5.4 EPIC and NNDC shall serve as supplemental DOE points of contact, subject to the provisions of Article 4 and of this Article 5, for the following information:
- a. EPIC for the exchange of computer programs and data sets pertinent to radiation shielding.
 - b. NNDC for evaluated nuclear data and processing codes.
- 5.5 The Centers shall annually exchange statistics on the utilization of the other Center's computer program packages.

ARTICLE 6 - COMMUNICATION

In order to ensure the fullest possible exchange of information, each of the Centers referred to in this Arrangement shall endeavor to keep close contact with their respective users and producers.

ARTICLE 7 - SERVICE AREAS AND THIRD PARTIES

- 7.1 The service area of NEA-DB shall comprise Austria, Belgium, Denmark, Germany, Finland, France, Greece, Italy, Japan, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, and the United Kingdom. International organizations, such as the International Atomic Energy Agency or the Organization of Petroleum Exporting Countries, shall not be included in the NEA-DB service area.
- 7.2 The service areas of NNDC, ESTSC and EPIC shall comprise the U.S. and Canada.
- 7.3 Requests from countries outside the service areas described above for NEA-DB computer programs will be filled by NEA, and requests from such countries for U.S. computer programs will be filled by ESTSC or the appropriate U.S. Center. Each Center may transmit programs to Japan. Information received by one of the Centers shall not, except as may be required by the laws of its country, be transmitted by that Center to countries outside its own service area without the prior written consent of the transmitting Center. However, this restriction does not apply to nuclear cross section references (CINDA references) and microscopic nuclear cross section data (measured values).

ARTICLE 8 - LEGISLATIVE PROVISIONS

Each party, and its respective Centers, shall conduct the activities provided for in this Arrangement subject to the constitution, laws, regulations, and licensing requirements applicable to each Party and to each Center. Each Party shall bear the costs of its participation in the activities under this Arrangement. The obligations of the Parties under this Arrangement are subject to the availability of appropriated funds.

ARTICLE 9 - PUBLICATIONS

- 9.1 Publications resulting from this Arrangement issued by any Center shall be transmitted to the other Centers, in quantities to be agreed upon, for distribution without charge.
- 9.2 All information, data, and computer programs subject to this Arrangement shall be in the public domain. This Arrangement does not cover the exchange of proprietary, sensitive, or classified information or information to which the developer has claimed a copyright.

ARTICLE 10 - VISITS AND EXCHANGES OF PERSONNEL

In order to facilitate the implementation of this Arrangement, visits and exchanges of personnel between the Centers may be arranged. Periodic meetings of the heads of the Centers are encouraged. Such visits and personnel exchanges shall be subject to the prior approval of the Parties.

ARTICLE 11 - SEMINARS

Seminars to facilitate the use or exchange of information may be organized jointly by the Centers within the scope of this Arrangement and shall be subject to the prior approval of the Parties.

ARTICLE 12 - COORDINATION

To supervise the execution of the obligations of ESTSC and NEA-DB under this Arrangement, ESTSC and the NEA each shall designate coordinators through an exchange of written correspondence. At the conclusion of the first year of this Arrangement, and periodically thereafter, the coordinators shall review the program and consider any necessary adjustments.

ARTICLE 13 - AMENDMENTS

This Arrangement may be amended by written agreement of the Parties. An amendment shall enter into force upon the date stipulated therein.

ARTICLE 14 - DURATION AND TERMINATION

- 14.1 This Arrangement shall be executed in duplicate and shall enter into force upon signature for both Parties, with effect from September 16, 1991, and shall remain in force for five years.
- 14.2 This Arrangement may be terminated at any time by either Party, upon three months advance notification in writing by the Party seeking to terminate the Arrangement. Such termination shall be without prejudice to the rights which may have accrued under this Arrangement to either Party up to the date of such termination.

FOR THE UNITED STATES

DEPARTMENT OF ENERGY

FOR THE NUCLEAR ENERGY AGENCY

OF THE ORGANISATION FOR ECONOMIC

COOPERATION AND DEVELOPMENT

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October 1, 1992.....

Date

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Date