No. 18160

UNITED STATES OF AMERICA
and
BELGIUM

Arrangement for exchange of technical information in regulatory matters and in co-operation in safety research and in standards development (with appendices). Signed at Washington on 6 June 1978

Authentic texts: English, French and Dutch.

Registered by the United States of America on 5 December 1979.

ÉTATS-UNIS D'AMÉRIQUE
et
BELGIQUE

Accord pour l'échange d'informations techniques dans le domaine de la réglementation, de la coopération dans la recherche sur la sécurité nucléaire et dans l'élaboration de normes (avec appendices). Signé à Washington le 6 juin 1978

Textes authentiques : anglais, français et néerlandais.

Enregistré par les États-Unis d'Amérique le 5 décembre 1979.

ARRANGEMENT[1] BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION (U.S.N.R.C.) AND THE BELGIAN GOVERNMENT FOR EXCHANGE OF TECHNICAL INFORMATION IN REGULATORY MATTERS AND IN COOPERATION IN SAFETY RESEARCH AND IN STANDARDS DEVELOPMENT

The United States Nuclear Regulatory Commission (U.S.N.R.C.) and the Belgian Government, considering the desirability of a continuing exchange of technical information pertaining to regulatory matters and cooperation in safety research and in standards development of the type required or recommended by these parties for the regulation of safety and environmental impact of nuclear facilities and in further implementation of the Agreement between the United States of America and the European Atomic Energy Commission in Co-operation for peaceful applications of atomic energy[2] conclude the following cooperation agreement:

I. Scope of the Agreement

I.1. *Technical Information Exchange*

The U.S.N.R.C. and the Belgian Government agree to exchange, as available, the following types of technical information related to the regulation of safety and environmental impact of designated nuclear energy facilities and to safety research of designated types of nuclear facilities:

a. Topical reports concerned with technical safety and environmental effects written by or for the parties as a basis for, or in support of, regulatory decisions and policies.

b. Significant licensing actions and safety and environmental decisions affecting these facilities.

c. Detailed documents on the U.S.N.R.C. regulatory procedures, decisions, and other actions concerning U.S. facilities designated by the Belgian Government as the prototypes of certain facilities being built in Belgium and reciprocal documents on these Belgian counterpart facilities.

d. Information in the field of reactor safety research which the parties have the right to disclose, either in the possession of one of the parties or available to it, including light water safety information from the technical areas described in appendices A and B. Each party will transit immediately to the other information concerning research results, indicating significant safety implications.

e. Reports on operating experience, such as reports on incidents, accidents and shutdowns, and compilations of operating experience and historical reliability data, on components and systems.

f. Regulatory procedures for safety and environmental impact evaluation of these nuclear facilities.

[1] Came into force on 6 June 1978 by signature.
[2] United Nations, *Treaty Series*, vol. 335, p. 161.

g. Each party will make special efforts to give early advice to the other of important events, such as serious operating incidents and government-directed reactor shutdowns, that are of immediate interest to the other.

I.2. *Cooperation in Safety Research*

The execution of joint programs and projects of safety research and development, or those programs and projects under which activities are divided between the two parties including the use of tests facilities and/or computer programs owned by either party, will be agreed upon on a case-by-case basis. Temporary assignments of personnel by one party in the other party's agency will also be considered on a case-by-case basis.

I.3. *Collaboration in Development of Regulatory Standards*

The U.S.N.R.C. and the Belgian Government further agree to cooperate in the development of regulatory standards applicable to the designated nuclear facilities:

a. Each party will inform the other of specific subjects on which regulatory standards development work is underway, or is planned, and approximate schedules for moving work forward on those subjects.

b. As is practicable, agreement will be reached from time to time on the standards for which each party will take the lead in developing, in order to avoid unnecessary duplication of effort. These would normally relate to standards that could serve both countries.

c. Copies of regulatory standards required to be used, or proposed for use, by the regulatory organizations of the respective countries will be made available by each party on a timely basis.

II. ADMINISTRATION

a. The exchange of information under this Arrangement will be accomplished through letters, reports, and other documents, and visits and meetings arranged in advance on a case-by-case basis.

A meeting will be held annually or at such other times as mutually agreed, to review the exchange activity, to recommend revisions, and to discuss topics coming within the scope of the exchange. The time, place, and agenda for such meetings shall be agreed upon in advance. Visits which take place under the Arrangement, including their schedules, shall have the prior approval of the administrators.

b. An administrator will be designated by each party to coordinate its participation in the overall exchange. The administrators shall be the recipients of all documents transmitted under the exchange, including copies of all letters unless otherwise agreed. Within the terms of the exchange, the administrators shall be the main contact points for developing the scope of the exchange, including agreement on the designation of the nuclear energy facilities subject to the exchange, on specific documents and standards to be exchanged, and on standards work to be coordinated.

These detailed arrangements are intended to assure, among other things, that a reasonably balanced exchange giving access to equivalent available information is achieved and maintained.

c. The administrators shall determine the number of copies to be provided of the documents exchanged. Each document will be accompanied by an abstract in English, less than 250 words, describing its scope and content.

d. In general, information received by each party to the agreement may be disseminated freely without further permission of the other party.

Privileged information, including information supplied by the sending party in confidence and on condition that the receiving party protect the information from unauthorized disclosure, will be clearly identified by the sending party with special stamps or other bold lettering. The receiving party will refrain from disseminating, without approval of the sending party, such confidential or privileged information,

i. On the U.S. side, outside the U.S.N.R.C. and consultants and assisting agencies of the Federal Government, and U.S.N.R.C. licensees and contractors for use only within the terms of their licenses and contracts;

ii. On the Belgian side, outside the Belgian Government and its consultants, and assisting agencies, and its contractors for use only within the terms of their contracts.

The parties to this agreement will restate in common the procedures to ask for such an authorization, if necessary, and to meet, so far as the rules of their own country allow it, the application of divulgation from the recipient party. Nevertheless, if the recipient party, pursuant to its national legislation, receives an application of divulgation without obtaining the authorization of the sending party, the recipient party undertakes to advise immediately the sending party thereof and, if necessary, to put forward, before the competent authorities, the appropriate arguments which are opposed to the dissemination.

e. Information exchanged under this Arrangement shall be subject to the patent provisions in the Patent Addendum of this document.

f. Nothing contained in this Arrangement will require either party to do anything which would be inconsistent with its laws and regulations. Should any concern arise about a possible conflict between the terms of this Arrangement and those laws and regulations, the parties will consult regarding the basis of the concern.

g. This agreement shall have a term of five years and may be further extended by mutual written agreement. It may be terminated by either party upon thirty-day notice.

h. The application or use of any information exchanged or transferred between the parties under this Arrangement shall be the responsibility of the party receiving it, and the transmitting party does not warrant the suitability of such information for any particular use or application.

i. Recognizing that some information of the type covered in this agreement is not available directly from the Belgian Government or its contractors or within the U.S.N.R.C. or its contractors which are parties to this Agreement but is available from other institutions or agencies of the governments of the parties, each party will assist the other to the maximum extent possible by organizing visits and directing inquiries concerning such information to appropriate agencies of the government concerned. The foregoing shall not constitute a commitment

of other institutions or agencies to furnish such information or to receive such visitors.

DONE at Washington, D.C., on June 6, 1978, in three original copies, one in the English language, one in the French language, and one in the Dutch language, the three texts being equally authentic.

[*Signed*][1]	[*Signed*][2]
On behalf of the Belgian Government	On behalf of the U.S. Nuclear Regulatory Commission

APPENDIX A

NRC-BELGIAN GOVERNMENT REACTOR SAFETY RESEARCH EXCHANGE AREAS IN WHICH THE NRC IS PERFORMING LWR SAFETY RESEARCH

1. Primary Coolant System Rupture Studies.
2. Heavy Section Steel Technology Program.
3. LOFT Program.
4. Power Burst Facility—Sub assembly Testing Program.
5. Separate Effects Testing—Loss-of-Coolant Accident Studies.
6. Loss-of-Coolant Accident Analyses—Analytical Model Development.
7. Design Criteria for Piping, Pumps, and Valves.
8. Alternate ECCS Studies.
9. Core Meltdown Studies.
10. Fission Product Release and Transport Studies.
11. Probabilistic Studies.
12. Zirconium Damage.
13. All computer codes applicable to the above at whatever stage of development they may be.*
14. Data from all experiments applicable to the above.*

APPENDIX B

USNRC-BELGIUM REACTOR SAFETY RESEARCH EXCHANGE AREAS IN WHICH BELGIUM IS PERFORMING LIGHT WATER NUCLEAR REACTOR SAFETY RESEARCH

1. In pile safety experiments in test reactor loops and rigs (still to be defined).
2. Accident analysis computer codes:

   —Whole core accident code.

   —Code for the evaluation of forces on pipes resulting from steam line breaks.

[1] Signed by W. Van Cauwenberg.
[2] Signed by Joseph Hendrie.
* Data and computer codes will be "as is" at the time of the request. NRC or contractor manpower will generally not be available for interpretation of uncompleted work.

—Codes for estimating the pressurization, following a loss-of-coolant accident of the containments surrounding the primary system.

3. Fuel elements behaviour under irradiation (densification, power ramp capabilities, accidental conditions...; experimental and theoretical work).

4. Surveillance of light water nuclear reactor vessels:

—Evolution of the mechanical properties of pressurized water reactor vessels including the characterization of the neutron environment.

—Detection of faults in plates and vessels by acoustic emission.

—Ultrasonic testing of austenitic steel welds and castings and of heavy ferritic steel sections.

5. Instrumentation (experimental work):

—Medium and long term behaviour of chromel-alumel thermocouples in reactor cores.

—Vibratory behaviour of structural components in confined spaces (fluid-structure interaction).

—Early detection of operational anomalies:

—surveillance of rotating machinery.
—analysis of temperature fluctuations of the coolant.

6. Quality control in general:

—Quality control of nuclear fuel (more particularly neutronography of Pu fuel).

7. Radioecology:

—Atmospheric diffusion of gaseous and particulate discharges from nuclear power plants.

—Radiological surveillance of nuclear power plant sites:

—Surveillance of air.
—Surveillance of river waters and sediments.
—Surveillance of soils.

—Radioactivity biological cycles studies.

—Relations between radiation doses and biological effects.

8. Intervention in case of a nuclear accident:

—Organisation of an emergency plan and coordination with the intervention means.

—Medical intervention in nuclear accidents.

APPENDIX C

PATENT ADDENDUM

A. If in the course of or under this technical exchange and cooperative arrangement between the U.S. Nuclear Regulatory Commission and the Belgian Government an invention is made by an inventor of one party (Inventor Party) as a direct result of information acquired from the other party (Recipient Party) while in attendance at meetings or using information which has been communicated under this exchange arrangement, the Inventor Party obtains all rights to the invention, including the right to obtain a patent in all countries, except the country of the Recipient Party. The Recipient Party receives all rights to the invention in its own country, including the right to obtain a patent. With regard to patent

applications and patents acquired in its own country, each party grants the other party a royalty-free, nonexclusive, irrevocable license with the right to grant sublicenses for atomic energy uses. With regard to patent applications and patents acquired in third countries, the Inventor Party grants such a license in all third countries.

B. Each party shall assume the responsibility to pay awards or compensation required to be paid to its own nationals according to its own laws.