

ARRANGEMENT  
BETWEEN  
THE UNITED STATES NUCLEAR REGULATORY COMMISSION  
(US NRC)  
AND  
THE ISRAEL ATOMIC ENERGY COMMISSION  
(IAEC)  
FOR THE EXCHANGE OF TECHNICAL INFORMATION  
AND  
COOPERATION IN NUCLEAR SAFETY AND RESEARCH MATTERS

The United States Nuclear Regulatory Commission (US NRC) and the Israel Atomic Energy Commission (IAEC) and;

Having a mutual interest in a continuing exchange of information pertaining to regulatory matters and of standards required or recommended by their organizations for the regulation of safety and environmental impact of nuclear facilities;

Having similarly cooperated under the terms of a five-year Arrangement for the exchange of technical information and cooperation in nuclear safety matters, originally signed at Bethesda May 9 and at Tel Aviv May 19, 1978, such Arrangement including provision for its extension as mutually agreed upon by the Parties;

Having already renewed such Arrangements for five-year periods on April 11, 1983, July 11, 1988, July 30, 1993, September 23, 1998, and April 7, 2005, as amended on March 31, 2008;

Having indicated their mutual desire to continue the cooperation so established for another five years;

Have agreed as follows:

I. SCOPE OF THE ARRANGEMENT

A. Technical Information Exchange

To the extent that the US NRC and the IAEC are permitted to do so under the laws, regulations, international nuclear non-proliferation commitments, and policy directives of their respective countries, they will continue the exchange of technical information relating to the regulation of safety, safeguards, waste management, and environmental impact of designated nuclear facilities. The following types of technical information may be exchanged, on the understanding that the US NRC may lawfully provide to the IAEC unclassified, non-proprietary information with the exception of computer codes.

1. Topical reports concerning safety, safeguards, waste management, and environmental effects written by or for one of the Parties as a basis for, or in support of, regulatory decisions and policies.
2. Documents relating to significant licensing actions and safety and environmental decisions affecting nuclear facilities. These may include, but are not limited to, documents relating to site licensing principles and problems, with specific emphasis on principles and guidelines for site safety evaluations regarding:
  - (a) the proximity of capable faulting;
  - (b) the proximity of a potential earthquake focus; and
  - (c) the site response to a nearby earthquake and principles and guidelines for using probabilities in safety evaluations of seismic and tectonic events, tsunamis and like phenomena, and meteorological and hydrological phenomena.
3. Detailed documents describing the US NRC process for licensing and regulating certain U.S. facilities designated by the IAEC as similar to certain facilities being built or planned in Israel and equivalent documents on such Israeli facilities.
4. 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 reactor safety information from the technical areas described in Addenda A and B, attached hereto and made a part hereof. Cooperation in these itemized research areas may require a separate agreement as determined to be necessary by the research organizations of one or both of the Parties. Each Party will transmit to the other urgent information concerning research results that require early attention in the interest of public safety, along with an indication of significant implications.

5. Reports on operating experience, such as reports on nuclear incidents, accidents and shutdowns, and compilations of historical reliability data on components and systems.
6. Regulatory procedures for the safety, safeguards, waste management, and environmental impact evaluation of nuclear facilities.
7. Early advice of important events, such as serious operating incidents and government-directed reactor shutdowns that are of immediate interest to the Parties.
8. Copies of regulatory standards required to be used, or proposed for use by the regulatory organizations of the Parties.

B. 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 test facilities and/or computer programs owned by either Party, will be agreed upon on a case-by-case basis and may be the subject of a separate agreement, as determined to be necessary by one or both of the Parties. Other times, it may be accomplished by an exchange of letters between the Parties, subject at least to the terms and conditions of the present agreement. Technical areas specified by such exchanges of letters may be modified subsequently by mutual consent. Temporary assignments of personnel by one Party in the other Party's agency will also be considered on a case-by-case basis.

C. Training and Assignments

Within the limits of available resources and subject to the availability of appropriated funds, the US NRC will try to assist the IAEC in providing certain training and experience for IAEC safety personnel. Costs of salary, allowances, and travel of IAEC participants will be paid by the IAEC. The following are typical of the categories of such training and experience that may be provided:

1. Participation by IAEC employees in US NRC staff training courses.
2. Assignment of IAEC experts for 6-24 month periods within the US NRC staff to work on US NRC staff duties and gain on-the-job experience.

D. Additional Safety Advice

To the extent that the documents and other information provided by the US NRC as described in Section I. SCOPE OF THE ARRANGEMENT, above, are not adequate to meet IAEC needs for technical advice, the Parties will consult on the best means for fulfilling such needs. The US NRC will attempt, within the limitations of appropriated resources and legislative authority, to assist the IAEC in meeting its needs. For example, within these limitations, the US NRC will attempt to meet requests that come through the International Atomic Energy Agency (IAEA) for technical assistance missions to Israel by US NRC safety experts.

E. Limitations

Information provided to Israel under this Arrangement is limited to unclassified, non-proprietary information that is provided for use in operation of safeguarded facilities and will be used for that purpose.

II. ADMINISTRATION

- A. The exchange of information under this Arrangement will be accomplished through letters, reports, and other documents and by 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 of information and cooperation under this Arrangement, to recommend revisions to the Arrangement, and to discuss topics coming within the scope of the cooperation. The time, place, and agenda for such meetings will be agreed upon in advance. Visits which take place under the Arrangement, including their schedules, will have the prior approval of the two administrators referred to in paragraph II.B.
- B. An administrator will be designated by each Party to coordinate its participation in the overall exchange. The administrators will 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 will be responsible for developing the scope of the exchange, including agreement on the designation of the nuclear energy facilities subject to the exchange, and on specific documents and standards to be exchanged. One or more technical coordinators may be appointed as direct contacts for specific disciplinary areas. These technical coordinators will assure that both administrators receive copies of all transmittals. 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 will determine the number of copies to be provided of the documents exchanged. Each document will be accompanied by an abstract in English, in 250 words or less, describing its scope and content.
- D. The application or use of any information exchanged or transferred between Parties under this Arrangement will be the responsibility of the receiving Party, and the transmitting Party does not warrant the suitability of such information for any particular use or application.
- E. Recognizing that some information of the type covered in this Arrangement is not available within the agencies which are Parties to this Arrangement but is available from other 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 its Government. The foregoing will not constitute a commitment of other agencies to furnish such information or to receive such visitors.
- F. Nothing contained in this Arrangement will require either Party to take any action, which would be inconsistent with its existing laws, regulations, and policy directives. No nuclear information related to proliferation-sensitive technologies will be exchanged under this Arrangement. Should any conflict arise between the terms of this Arrangement and those laws, regulations, and policy directives, the Parties agree to consult before any action is taken.
- G. If, for any reason, one of the parties becomes aware that it shall be or may reasonably be expected to become unable to meet the nondissemination provisions of this Arrangement, it will immediately inform the other party. The parties will thereafter consult to define an appropriate course of action
- H. Cooperation under this Arrangement will be governed by the laws and regulations of the respective Parties. Any dispute or questions between the Parties concerning the interpretation or application of this arrangement arising during its term will be settled by mutual agreement of the Parties.
- I. Unless otherwise agreed, all costs resulting from cooperation pursuant to the Arrangement will be the responsibility of the Party that incurs them. The ability of the Parties to carry out their obligations is subject to the appropriation of funds by the appropriate governmental authority and to laws and regulations applicable to the Parties.

III. EXCHANGE AND USE OF INFORMATION

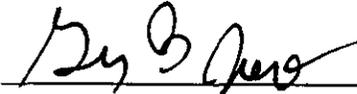
- A. The Parties support the widest possible dissemination of information provided or exchanged under this Arrangement, subject to the provisions of the Intellectual Property Addendum, which is an integral part of this Arrangement.
- B. For the purposes of this Arrangement, the term "information" means nuclear energy-related regulatory, safety, safeguards, waste management, scientific, or technical data, results or methods of research and development, and any other knowledge intended to be provided or exchanged under this Arrangement.

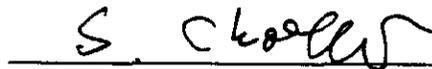
IV. DURATION

- A. This Arrangement will enter into force upon signature and, subject to paragraph B of this Article, will remain in force for a period of five years. It may be extended for a further period of time by written agreement of the Parties.
- B. Either Party may terminate this Arrangement after providing the other Party written notice 180 days prior to its intended date of termination.

FOR THE UNITED STATES NUCLEAR  
REGULATORY COMMISSION:

FOR THE ISRAEL ATOMIC ENERGY  
COMMISSION:

  
\_\_\_\_\_  
Gregory B. Jaczko, Chairman

  
\_\_\_\_\_  
Shaul Chorev, Director General

DATE: 5/22/11

DATE: July, 3 2011

PLACE: Rockville, Maryland

PLACE: Tel Aviv, Israel



**Addendum A**

**US NRC-IAEC Reactor Safety Research Exchange**  
**Areas in Which the US NRC Is Performing LWR Safety Research**

1. Digital Instrumentation and Control
2. Reactor and Electrical Equipment Qualification
3. Environmental Transport
4. Radionuclide Transport and Waste Management
5. Dry Cask Storage and Transport
6. Fire Safety Research
7. Nuclear Fuel Analysis
8. Severe Accident Analysis
9. Operating Experience and Generic Issues
10. Human Factors Engineering
11. Organizational Factors/Safety Culture
12. Human Reliability Analysis (HRA)
13. Probabilistic Risk Assessments
14. Radiation Protection and Health Effects
15. Seismic Safety
16. State of the Art Risk Consequences
17. Reactor Containment Structural Safety
18. Reactor Vessel and Piping Integrity
19. Regulatory Guide Update
20. New and Advanced Reactor Designs
21. Decommissioning
22. Thermal Hydraulic Code Applications and Maintenance
23. Uncertainty Analysis for Thermal Hydraulic Kinetics
24. Coupled 3D Neutronic and Plant Thermal Hydraulics
25. Medical Isotope Production
26. Long-term Operational Management
27. Plant and Systems Operations

**Addendum B**

**US NRC-IAEC Safety Research**

**Areas in Which the IAEC Is Performing Research**

1. Methods and Criteria for Assessment of the Safety of Research Reactors
2. Seismic Risk Assessment
3. Safety and Security of Radioactive Sources
4. Vulnerability of Nuclear Facilities to External Events
5. Probabilistic Risk Assessment and Accident Management
6. Health Physics and Radiation Protection
7. Regulatory Activities Related to Radiation Protection
8. Improvements in TLD (Thermal Luminescence Dosimetry)
9. Non Destructive Testing of Complex Geometries for Safety Purposes

**INTELLECTUAL PROPERTY ADDENDUM**

Pursuant to Section III of this Arrangement:

**I. General Obligation**

The Parties will ensure adequate and effective protection of intellectual property created or furnished under this Arrangement and relevant implementing arrangements. Rights to such intellectual property will be allocated as provided in this Addendum.

**II. Scope**

- A. This Addendum is applicable to all cooperative activities undertaken pursuant to this Arrangement, except as otherwise specifically agreed by the Parties or their designees.
- B. For purposes of this Arrangement, "intellectual property" will mean the subject matter listed in Article 2 of the Convention Establishing the World Intellectual Property Organization, done at Stockholm, July 14, 1967, and may include other subject matter as agreed by the Parties.
- C. Each Party will ensure, through contracts or other legal means with its own participants, if necessary, that the other Party can obtain the rights to intellectual property allocated in accordance with this Addendum. This Addendum does not otherwise alter or prejudice the allocation between a Party and its nationals, which will be determined by that Party's laws and practices.
- D. Except as otherwise provided in this Arrangement, disputes concerning intellectual property arising under this Arrangement will be resolved through discussions between the concerned participating institutions, or, if necessary, the Parties or their designees. Upon mutual agreement of the Parties, a dispute will be submitted to an arbitral tribunal for binding arbitration in accordance with the applicable rules of international law. Unless the Parties or their designees agree otherwise in writing, the arbitration rules of the United Nations Commission on International Trade Law (UNCITRAL) will govern.
- E. Termination or expiration of this Arrangement will not affect rights or obligations under this Addendum.

**III. Allocation of Rights**

- A. Each Party will be entitled to a non-exclusive, irrevocable, royalty-free license in all countries to translate, reproduce, and publicly distribute scientific and technical journal articles, reports, and books directly arising from cooperation under this Arrangement. All publicly distributed copies of a copyrighted work prepared under this provision will indicate the names of the authors of the work unless an author explicitly declines to be named.
- B. Rights to all forms of intellectual property, other than those rights described in Section II. A above, will be allocated as follows:
- (1) Visiting researchers will receive rights, awards, bonuses and royalties in accordance with the policies of the host institution.
  - (2)(a) Any intellectual property created by persons employed or sponsored by one Party under cooperative activities other than those covered by Section III.B(1) will be owned by that Party. Intellectual property created by persons employed or sponsored by both Parties will be jointly owned by the Parties. In addition, each creator will be entitled to awards, bonuses and royalties in accordance with the policies of the institution employing or sponsoring that person.
    - (b) Unless otherwise agreed in an implementing or other arrangement, each Party will have within its territory a right to exploit or license intellectual property created in the course of the cooperative activities.
    - (c) The rights of a Party outside its territory will be determined by mutual agreement considering the relative contributions of the Parties and their participants to the cooperative activities, the degree of commitment in obtaining legal protection and licensing of the intellectual property, and such other factors deemed appropriate.
    - (d) Notwithstanding Section III.B(2)(a) and (b) above, if either Party believes that a particular project is likely to lead to or has led to the creation of intellectual property not protected by the laws of the other Party, the Parties will immediately hold discussions to determine the allocation of rights to the intellectual property. If an agreement cannot be reached within three months of the date of the initiation of the discussions, cooperation on the project in question will be terminated at the request of either Party. Creators of intellectual property will nonetheless be entitled to awards, bonuses and royalties as provided in Section III.B(2)(a).
    - (e) For each invention made under any cooperative activity, the Party employing or sponsoring the inventor(s) will disclose the invention promptly to the other Party

together with any documentation and information necessary to enable the other Party to establish any rights to which it may be entitled. Either Party may ask the other Party in writing to delay publication or public disclosure of such documentation or information for the purpose of protecting its rights in the invention. Unless otherwise agreed in writing, the delay will not exceed a period of six months from the date of disclosure by the inventing Party to the other Party.

**IV. Business Confidential Information**

In the event that information identified in a timely fashion as business-confidential is furnished or created under this Arrangement, each Party and its participants will protect such information in accordance with applicable laws, regulations, and administrative practices. Information may be identified as "business-confidential" if a person having the information may derive an economic benefit from it or may obtain a competitive advantage over those who do not have it, and the information is not generally known or publicly available from other sources, and the owner has not previously made the information available without imposing in a timely manner an obligation to keep it confidential.