

INTERNATIONAL ENERGY AGENCY

**IMPLEMENTING AGREEMENT
FOR A PROGRAMME OF RESEARCH
AND DEVELOPMENT ON RADIATION DAMAGE
IN FUSION MATERIALS**

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The Contracting Parties

CONSIDERING that the Contracting Parties, being either governments of International Energy Agency ("Agency") countries, governments of other countries invited by the Governing Board of the Agency to be Contracting Parties, international organizations or parties designated by their respective governments, wish to take part in the establishment and operation of a Programme of Research and Development on Radiation Damage in Fusion Materials (the "Programme") as provided in the Agreement;

CONSIDERING that the Contracting Parties which are governments of Agency countries and the governments of Agency countries which have designated Contracting Parties (referred to collectively as the "Governments") have agreed in Article 41 of the Agreement on an International Energy Program (the "I.E.P. Agreement") to undertake national programmes in the areas set out in Article 42 of the I.E.P. Agreement, including energy research and development in controlled thermonuclear fusion;

CONSIDERING that in the Governing Board of the Agency on 28th July, 1975, the Governments approved the Programme as a special activity under Article 65 of the I.E.P. Agreement;

CONSIDERING that the Agency has recognized the establishment of the Programme as an important component of international co-operation in the field of radiation damage in fusion materials research and development;

HAVE AGREED as follows:

Article 1

OBJECTIVES

(a) *Scope of Activity.* The Programme to be carried out by the Contracting Parties within the framework of this Agreement shall consist of co-operative research, development, demonstrations and exchanges of information regarding radiation damage in all fusion materials. This shall include design and construction of radiation facilities, neutron radiation experiments and plasma radiation experiments when related to the materials discipline for long-term studies.

(b) *Method of Implementation.* The Contracting Parties shall implement the Programme by undertaking one or more tasks (the "Task" or "Tasks") each of which will be open to participation by two or more Contracting Parties as provided in Article 2 hereof. The Contracting Parties which participate in a particular Task are, for the purposes of that Task, referred to in this Agreement as "Participants".

(c) *Task Co-ordination and Co-operation.* The Contracting Parties shall co-operate in co-ordinating the work of the various Tasks and shall endeavour, on the basis of an appropriate sharing of burdens and benefits, to encourage co-operation among Participants engaged in the various Tasks with the objective of advancing the research and development activities of all Contracting Parties in the field of radiation damage in fusion materials.

Article 2

IDENTIFICATION AND INITIATION OF TASKS

(a) *Identification.* The Tasks undertaken by Participants are identified in the Annexes to this Agreement. At the time of signing this Agreement, each Contracting Party shall confirm its intention to participate in one or more Tasks by giving the Executive Director of the Agency a Notice of Participation in the relevant Annex or Annexes and the Operating Agent for each Task shall give the Executive Director of the Agency a Notice of Acceptance of the Task Annex. Thereafter, each Task shall be carried out in accordance with the procedures set forth in Articles 2 to 11 hereof, unless otherwise specifically provided in the applicable Annex.

(b) *Initiation of Additional Tasks.* Additional Tasks may be initiated by any Contracting Party according to the following procedure:

- (1) A Contracting Party wishing to initiate a new Task shall present to one or more Contracting Parties for approval a draft Annex, similar in form to the Annexes attached hereto containing a description of the scope of work and conditions of the Task proposed to be performed;

- (2) Whenever two or more Contracting Parties agree to undertake a new Task, they shall submit the draft Annex for approval by the Executive Committee pursuant to Article 3(e)(2) hereof; the approved draft Annex shall become part of this Agreement; Notice of Participation in the Task by Contracting Parties and acceptance by the Operating Agent shall be communicated to the Executive Director of the Agency in the manner provided in paragraph (a) above;
- (3) In carrying out the various Tasks, Participants shall co-ordinate their activities in order to avoid duplication of activities.

(c) *Application of Task Annexes.* Each Annex shall be binding only upon the Participants therein and upon the Operating Agent for that Task, and shall not affect the rights or obligations of other Contracting Parties.

Article 3

THE EXECUTIVE COMMITTEE

(a) *Supervisory Control.* Control of the Programme shall be vested in the Executive Committee constituted under this Article.

(b) *Membership.* The Executive Committee shall consist of one member designated by each Contracting Party; each Contracting Party shall also designate an alternate member to serve on the Executive Committee in the event that its designated member is unable to do so.

(c) *Responsibilities.* The Executive Committee shall:

- (1) Adopt for each year, acting by unanimity, the Programme of Work and Budget, if foreseen, for each Task, together with an indicative Programme of Work and Budget for the following two years; the Executive Committee may, as required, make adjustments within the framework of the Programme of Work and Budget;
- (2) Make such rules and regulations as may be required for the sound management of the Tasks, including financial rules as provided in Article 6 hereof;
- (3) Carry out the other functions conferred upon it by this Agreement and the Annexes hereto; and
- (4) Consider any matters submitted to it by any of the Operating Agents or by any Contracting Party.

(d) *Procedure.* The Executive Committee shall carry out its responsibilities in accordance with the following procedures:

- (1) The Executive Committee shall each year elect a Chairman and one or more Vice-Chairmen;
- (2) The Executive Committee may establish such subsidiary bodies and rules of procedure as are required for its proper functioning. A representative of the Agency and a representative of each Operating Agent (in its capacity as such) may attend meetings of the Executive Committee and its subsidiary bodies in an advisory capacity;
- (3) The Executive Committee shall meet in regular session once each year; a special meeting shall be convened upon the request of any Contracting Party which can demonstrate the need therefor;
- (4) Meetings of the Executive Committee shall be held at such time and in such office or offices as may be designated by the Committee;
- (5) At least twenty-eight days before each meeting of the Executive Committee notice of the time, place and purpose of the meeting shall be given to each Contracting Party and to other persons or entities entitled to attend the meeting; notice need not be given to any person or entity otherwise entitled thereto if notice is waived before or after the meeting;
- (6) The quorum for the transaction of business in meetings of the Executive Committee shall be one-half of the members plus one (less any resulting fraction) provided that any action relating to a particular Task shall require a quorum as aforesaid of members or alternate members designated by the Participants in that Task.

(e) Voting.

- (1) When the Executive Committee adopts a decision or recommendation for or concerning a particular Task, the Executive Committee shall act:
 - (i) When unanimity is required under this Agreement: by agreement of those members or alternate members which were designated by the Participants in that Task and which are present and voting;
 - (ii) When no express voting provision is made in this Agreement: by majority vote of those members or alternate members which were designated by the Participants in that Task and which are present and voting;
- (2) In all other cases in which this Agreement expressly requires the Executive Committee to act by unanimity, this shall require the agreement of each member or alternate member present and voting, and in respect of all other decisions and recommendations for which no express voting provision is made in this Agreement, the Executive Committee shall act by a majority vote of the members or alternate members present and voting.

- (3) If a government has designated more than one Contracting Party to this Agreement or more than one Participant for an Annex, those Contracting Parties or Participants may cast only one vote under this paragraph (e).
- (4) The decisions and recommendations referred to in sub-paragraphs (1) and (2) above may, with the agreement of each member or alternate member entitled to act thereon, be made by mail, telex or cable without the necessity for calling a meeting. Such action shall be taken by unanimity or majority of such members as in a meeting. The Chairman of the Executive Committee shall ensure that all members are informed of each decision or recommendation made pursuant to this sub-paragraph.

(f) *Reports.* The Executive Committee shall, at least annually, provide the Agency with periodic reports on the progress of the Programme.

Article 4

THE OPERATING AGENTS

(a) *Designation.* Participants shall designate in the relevant Annex an Operating Agent for each Task. References in this Agreement to an Operating Agent shall apply to each Operating Agent in respect of the Task for which it is responsible.

(b) *Scope of Authority to Act on Behalf of Participants.* Subject to the provisions of the applicable Annex:

- (1) All legal acts required to carry out each Task shall be performed on behalf of the Participants by the Operating Agent for the Task;
- (2) The Operating Agent shall hold, for the benefit of the Participants, the legal title to all property rights which may accrue to or be acquired for the Task.

The Operating Agent shall operate the Task under its supervision and responsibility, subject to this Agreement, in accordance with the law of the country of the Operating Agent or the law of the country where the Task is carried out if the Operating Agent is an international organization.

(c) *Reimbursement of Costs.* The Executive Committee may provide that expenses and costs incurred by an Operating Agent in acting as such pursuant to this Agreement shall be reimbursed to the Operating Agent from funds made available by the Participants pursuant to Article 6 hereof.

(d) *Replacement.* Should the Executive Committee wish to replace an Operating Agent with another government or entity, the Executive Committee may, acting by unanimity and with the consent of such government or entity, replace the initial Operating Agent. References in this Agreement to the "Operating Agent" shall include any government or entity appointed to replace the original Operating Agent under this paragraph.

(e) *Resignation.* An Operating Agent shall have the right to resign at any time, by giving six months written notice to that effect to the Executive Committee, provided that:

- (1) A Participant, or entity designated by a Participant, is at such time willing to assume the duties and obligations of the Operating Agent and so notifies the Executive Committee and the other Participants to that effect, in writing, not less than three months in advance of the effective date of such resignation; and
- (2) Such Participant or entity is approved by the Executive Committee acting by unanimity.

(f) *Accounting.* An Operating Agent which is replaced or which resigns as Operating Agent shall provide the Executive Committee with an accounting of any monies and other assets which it may have collected or acquired for the Task in the course of carrying out its responsibilities as Operating Agent.

(g) *Transfer of Rights.* In the event that another Operating Agent is appointed under paragraph (d) or (e) above, the Operating Agent shall transfer to such replacement Operating Agent any property rights which it may hold on behalf of the Task.

(h) *Information and Reports.* Each Operating Agent shall furnish to the Executive Committee such information concerning the Task as the Committee may request and shall each year submit, not later than two months after the end of the financial year, a report on the status of the Task.

Article 5

ADMINISTRATION AND STAFF

(a) *Administration of Tasks.* Each Operating Agent shall be responsible to the Executive Committee for implementing its designated Task in accordance with this Agreement, the applicable Task Annex, and the decisions of the Executive Committee.

(b) *Staff.* It shall be the responsibility of the Operating Agent to retain such staff as may be required to carry out its designated Task in accordance with rules determined by the Executive Committee. The Operating Agent may also, as required, utilise the services of personnel employed by other Participants (or organizations or other entities designated by Contracting Parties) and made available to the Operating Agent by secondment or otherwise. Such personnel shall be remunerated by their respective employers

and shall, except as provided in this Article, be subject to their employers' conditions of service. The Contracting Parties shall be entitled to claim the appropriate cost of such remuneration or to receive an appropriate credit for such cost as part of the Budget of the Task, in accordance with Article 6(f)(6) hereof.

Article 6

FINANCE

(a) *Individual Obligations.* Each Contracting Party shall bear the costs it incurs in carrying out this Agreement, including the costs of formulating or transmitting reports and of reimbursing its employees for travel and other per diem expenses incurred in connection with work carried out on the respective Tasks, unless provision is made for such costs to be reimbursed from common funds as provided in paragraph (g) below.

(b) *Common Financial Obligations.* Participants wishing to share the costs of a particular Task shall agree in the appropriate Task Annex to do so. The apportionment of contributions to such costs (whether in the form of cash, services rendered, intellectual property or the supply of material) and the use of such contributions shall be governed by the regulations and decisions made pursuant to this Article by the Executive Committee.

(c) *Financial Rules, Expenditure.* The Executive Committee, acting by unanimity, may make such regulations as are required for the sound financial management of each Task including, where necessary:

- (1) Establishment of budgetary and procurement procedures to be used by the Operating Agent in making payments from any common funds which may be maintained by Participants for the account of the Task or in making contracts on behalf of the Participants;
- (2) Establishment of minimum levels of expenditure for which Executive Committee approval shall be required, including expenditure involving payments of monies to the Operating Agent for other than routine salary and administrative expenses previously approved by the Executive Committee in the budget process.

In the expenditure of common funds, the Operating Agent shall take into account the necessity of ensuring a fair distribution of such expenditure in the Participants' countries, where this is fully compatible with the most efficient technical and financial management of the Task.

(d) *Crediting of Income to Budget.* Any income which accrues from a Task shall be credited to the Budget of that Task.

(e) *Accounting.* The system of accounts employed by the Operating Agent shall be in accordance with accounting principles generally accepted in the country of the Operating Agent and consistently applied.

(f) *Programme of Work and Budget, Keeping of Accounts.* Should Participants agree to maintain common funds for the payment of obligations under a Programme of Work and Budget of a Task, the following provisions shall be applicable unless the Executive Committee, acting by unanimity, decides otherwise:

- (1) The financial year of the Task shall correspond to the financial year of the Operating Agent;
- (2) The Operating Agent shall each year prepare and submit to the Executive Committee for approval a draft Programme of Work and Budget, together with an indicative Programme of Work and Budget for the following two years, not later than three months before the beginning of each financial year;
- (3) The Operating Agent shall maintain complete, separate financial records which shall clearly account for all funds and property coming into the custody or possession of the Operating Agent in connection with the Task;
- (4) Not later than three months after the close of each financial year the Operating Agent shall submit to auditors selected by the Executive Committee for audit the annual accounts maintained for the Task; upon completion of the annual audit, the Operating Agent shall present the accounts together with the auditors' report to the Executive Committee for approval;
- (5) All books of account and records maintained by the Operating Agent shall be preserved for at least three years from the date of termination of the Task;
- (6) Where provided in the relevant Annex, a Participant supplying services, materials or intellectual property to the Task shall be entitled to a credit, determined by the Executive Committee, acting by unanimity, against its contribution (or to compensation, if the value of such services, materials or intellectual property exceeds the amount of the Participant's contribution); such credits for services of staff shall be calculated on an agreed scale approved by the Executive Committee and include all payroll-related costs.

(g) *Contribution to Common Funds.* Should Participants agree to establish common funds under the annual Programme of Work and Budget for a Task, any financial contributions due from Participants in a Task shall be paid to the Operating Agent in the currency of the country of the Operating Agent at such times and upon such other conditions as the Executive Committee, acting by unanimity, shall determine, provided however that:

- (1) Contributions received by the Operating Agent shall be used solely in accordance with the Programme of Work and Budget for the Task;
- (2) The Operating Agent shall be under no obligation to carry out any work on the Task until contributions amounting to at least fifty per cent (in cash terms) of the total due at any one time have been received.

(h) *Ancillary Services.* Ancillary services may, as agreed between the Executive Committee and the Operating Agent, be provided by that Operating Agent for the operation of a Task and the costs of such services, including overheads connected therewith, may be from budgeted funds of that Task.

(i) *Taxes.* The Operating Agent shall pay all taxes and similar impositions (other than taxes on income) imposed by national or local governments and incurred by it in connection with a Task, as expenditure incurred in the operation of that Task under the Budget; the Operating Agent shall, however, endeavour to obtain all possible exemptions from such taxes.

(j) *Audit.* Each Participant shall have the right, at its sole cost, to audit the accounts of any work in a Task for which common funds are maintained on the following terms:

- (1) The Operating Agent shall provide the other Participants with an opportunity to participate in such audits on a cost-shared basis;
- (2) Accounts and records relating to activities of the Operating Agent other than those conducted for the Task shall be excluded from such audit, but if the Participant concerned requires verification of charges to the Budget representing services rendered to the Task by the Operating Agent, it may at its own cost request and obtain an audit certificate in this respect from the auditors of the Operating Agent;
- (3) Not more than one such audit shall be required in any financial year;
- (4) Any such audit shall be carried out by not more than three representatives of the Participants.

Article 7

INFORMATION AND INTELLECTUAL PROPERTY

It is expected that for each Task agreed to pursuant to this Agreement, the applicable Annex will contain information and intellectual property provisions. The general Guidelines Concerning Information and Intellectual Property, approved by the Governing Board of the Agency on 21st November, 1975, shall be taken into account in developing such provisions.

Article 8

LEGAL RESPONSIBILITY AND INSURANCE

(a) *Liability of Operating Agent.* The Operating Agent shall use all reasonable skill and care in carrying out its duties under this Agreement in accordance with all

applicable laws and regulations. Except as otherwise provided in this Article, the cost of all damage to property, and all expenses associated with claims, actions and other costs arising from work undertaken with common funds for a Task shall be charged to the Budget of that Task; such costs and expenses arising from other work undertaken for a Task shall be charged to the Budget of that Task if the Task Annex so provides or the Executive Committee, acting by unanimity, so decides.

(b) *Insurance.* The Operating Agent shall propose to the Executive Committee all necessary liability, fire and other insurance, and shall carry such insurance as the Executive Committee may direct. The cost of obtaining and maintaining insurance shall be charged to the Budget of the Task.

(c) *Indemnification of Contracting Parties.* The Operating Agent shall be liable, in its capacity as such, to indemnify Participants against the cost of any damage to property and all legal liabilities, actions, claims, costs and expenses connected therewith to the extent that they:

- (1) Result from the failure of the Operating Agent to maintain such insurance as it may be required to maintain under paragraph (b) above; or
- (2) Result from the gross negligence or wilful misconduct of any officers or employees of the Operating Agent in carrying out their duties under this Agreement.

Article 9

LEGISLATIVE PROVISIONS

(a) *Accomplishment of Formalities.* Each Participant shall request the appropriate authorities of its country (or its Member States in the case of an international organization) to use their best endeavours, within the framework of applicable legislation, to facilitate the accomplishment of formalities involved in the movement of persons, the importation of materials and equipment and the transfer of currency which shall be required to conduct the Task in which it is engaged.

(b) *Applicable Laws.* In carrying out this Agreement and its Annexes, the Contracting Parties shall be subject to the appropriation of funds by the appropriate governmental authority, where necessary, and to the constitution, laws and regulations applicable to the respective Contracting Parties including, but not limited to laws establishing prohibitions upon the payment of commissions, percentages, brokerage or contingent fees to persons retained to solicit governmental contracts and upon any share of such contracts accruing to governmental officials.

(c) *Decisions of Agency Governing Board.* Participants in the various Tasks shall take account, as appropriate, of the Guiding Principles for Co-operation in the Field of Energy Research and Development, and any modification thereof, as well as other decisions of the Governing Board of the Agency in that field. The termination of the

Guiding Principles shall not affect this Agreement, which shall remain in force in accordance with the terms hereof.

(d) *Settlement of Disputes.* Any dispute among the Contracting Parties concerning the interpretation or the application of this Agreement, which is not settled by negotiation or other agreed mode of settlement, shall be referred to a tribunal of three arbitrators to be chosen by the Contracting Parties concerned who shall also choose the Chairman of the tribunal. Should the Contracting Parties concerned fail to agree upon the composition of the tribunal or the selection of its Chairman, the President of the International Court of Justice shall, at the request of any of the Contracting Parties concerned, exercise those responsibilities. The tribunal shall decide any such dispute by reference to the terms of this Agreement and any applicable laws and regulations, and its decision on a question of fact shall be final and binding on the Contracting Parties. Operating Agents which are not Contracting Parties shall be regarded as Contracting Parties for the purpose of this paragraph.

Article 10

ADMISSION AND WITHDRAWAL OF CONTRACTING PARTIES

(a) *Admission of New Contracting Parties: Agency Countries.* Upon the invitation of the Executive Committee, acting by unanimity, admission to this Agreement shall be open to the government of any Agency Participating Country (or a national agency, public organization, private corporation, company or other entity designated by such government), which signs or accedes to this Agreement, accepts the rights and obligations of a Contracting Party, and is accepted for participation in at least one Task by the Participants in that Task, acting by unanimity. Such admission of a Contracting Party shall become effective upon the signature of this Agreement by the new Contracting Party or its accession thereto and its giving Notice of Participation in one or more Annexes and the adoption of any consequential amendments thereto.

(b) *Admission of New Contracting Parties: Other OECD Countries.* The government of any Member of the Organisation for Economic Co-operation and Development which does not participate in the Agency may, on the proposal of the Executive Committee, acting by unanimity, be invited by the Governing Board of the Agency to become a Contracting Party to this Agreement (or to designate a national agency, public organization, private corporation, company or other entity to do so), under the conditions stated in paragraph (a) above.

(c) *Admission of New Participants in Tasks.* Any Contracting Party may, with the agreement of the Participants in a Task, acting by unanimity, become a Participant in that Task. Such participation shall become effective upon the Contracting Party's giving the Executive Director of the Agency a Notice of Participation in the appropriate Task Annex and the adoption of consequential amendments thereto.

(d) *Contributions.* The Executive Committee may require, as a condition to admission to participation, that the new Contracting Party or new Participant shall contribute (in the form of cash, services or materials) an appropriate proportion of the prior budget expenditure of any Task in which it participates.

(e) *Replacement of Contracting Parties.* With the agreement of the Executive Committee, acting by unanimity, and upon the request of a government, a Contracting Party designated by that government may be replaced by another party. In the event of such replacement, the replacement party shall assume the rights and obligations of a Contracting Party as provided in paragraph (a) above and in accordance with the procedure provided therein.

(f) *Withdrawal.* Any Contracting Party may withdraw from this Agreement or from any Task either with the agreement of the Executive Committee, acting by unanimity, or by giving twelve months written Notice of Withdrawal to the Executive Director of the Agency, such Notice to be given not less than one year after the date hereof. The withdrawal of a Contracting Party under this paragraph shall not affect the rights and obligations of the other Contracting Parties: except that, where the other Contracting Parties have contributed to common funds for a Task, their proportionate shares in the Task Budget shall be adjusted to take account of such withdrawal.

(g) *Change of Status of Contracting Party.* A Contracting Party other than a government or an international organization shall forthwith notify the Executive Committee of any significant change in its status or ownership, or of its becoming bankrupt or entering into liquidation. The Executive Committee shall determine whether any such change in status of a Contracting Party significantly affects the interests of the other Contracting Parties; if the Executive Committee so determines, then, unless the Executive Committee, acting upon the unanimous decision of the other Contracting Parties, otherwise agrees:

- (1) That Contracting Party shall be deemed to have withdrawn from the Agreement under paragraph (f) above on a date to be fixed by the Executive Committee; and
- (2) The Executive Committee shall invite the government which designated that Contracting Party to designate, within a period of three months of the withdrawal of that Contracting Party, a different entity to become a Contracting Party; if approved by the Executive Committee, acting by unanimity, such entity shall become a Contracting Party with effect from the date on which it signs or accedes to this Agreement and gives the Executive Director of the Agency a Notice of Participation in one or more Annexes.

(h) *Failure to Fulfil Contractual Obligations.* Any Contracting Party which fails to fulfil its obligations under this Agreement within sixty days after its receipt of notice specifying the nature of such failure and invoking this paragraph, may be deemed by the Executive Committee, acting by unanimity, to have withdrawn from this Agreement.

Article 11

FINAL PROVISIONS

(a) *Term of Agreement.* This Agreement shall remain in force for an initial period of five years from the date hereof, and shall continue in force thereafter unless and until the Executive Committee, acting by unanimity, decides on its termination.

(b) *Legal Relationship of Contracting Parties and Participants.* Nothing in this Agreement shall be regarded as constituting a partnership between any of the Contracting Parties or Participants.

(c) *Termination.* Upon termination of this Agreement, or any Annex to this Agreement, the Executive Committee, acting by unanimity, shall arrange for the liquidation of the assets of the Task or Tasks. In the event of such liquidation, the Executive Committee shall, so far as practicable, distribute the assets of the Task, or the proceeds therefrom, in proportion to the contributions which the Participants have made from the beginning of the operation of the Task, and for that purpose shall take into account the contributions and any outstanding obligations of former Contracting Parties. Disputes with a former Contracting Party about the proportion allocated to it under this paragraph shall be settled under Article 9(d) hereof, for which purpose a former Contracting Party shall be regarded as a Contracting Party.

(d) *Amendment.* This Agreement may be amended at any time by the Executive Committee, acting by unanimity, and any Annex to this Agreement may be amended at any time by the Executive Committee, acting by unanimity of the Participants in the Task to which the Annex refers. Such amendments shall come into force in a manner determined by the Executive Committee, acting under the voting rule applicable to the decision to adopt the amendment.

(e) *Deposit.* The original of this Agreement shall be deposited with the Executive Director of the Agency and a certified copy thereof shall be furnished to each Contracting Party. A copy of this Agreement shall be furnished to each Agency Participating Country and to each Member country of the Organisation for Economic Co-operation and Development.

Done in Paris, this 21st day of October, 1980.

For the NATIONAL RESEARCH
COUNCIL OF CANADA
(designated by the Government of Canada):

For the EUROPEAN ATOMIC ENERGY
COMMUNITY (EURATOM):

For the JAPAN ATOMIC ENERGY
RESEARCH INSTITUTE
(designated by the Government of Japan):

For the FEDERAL OFFICE
FOR EDUCATION AND SCIENCE
for and on behalf of
the Government of Switzerland:

For the UNITED STATES DEPARTMENT
OF ENERGY
for and on behalf of the
Government of the
United States of America:

Annex I

FUSION MATERIALS IRRADIATION TEST FACILITY

1. *Objectives*

The Participants agree to co-operate in co-operative research activities associated (a) with the design, development, construction and preparation for use of the Fusion Materials Irradiation Test Facility (FMIT) at Hanford Engineering Development Laboratory (HEDL) which is operated by the Westinghouse Corporation under a contract with the United States Department of Energy (USDOE) and (b) with the design and related research and development of a prototype accelerator for FMIT at the Los Alamos Scientific Laboratory (LASL) which is operated by the University of California under a contract with USDOE, both activities collectively referred to as the "Programme". Special emphasis will be placed on the following disciplines:

- (a) Ion source development;
- (b) Linear accelerator development;
- (c) Target physics and development including target neutronics;
- (d) Lithium systems engineering;
- (e) Irradiation facility and test engineering;
- (f) Neutron physics including dosimetry, activation and shielding; and
- (g) Preparation of the radiation damage programme.

2. *Means*

Co-operation between the Participants in the activities to be conducted under this Task shall include:

- (a) Exchange of information between the Participants in the areas set forth in paragraph 1;
- (b) Assignments of scientists, engineers and other technical personnel to work at HEDL or LASL in the field or fields of their expertise; and conduct of joint experimental or theoretical projects in research and development by assigned personnel.

All co-operative activities involving assignments of personnel shall be carried out in accordance with specific arrangements between the sending Party and LASL or HEDL.

3. *Assignment of Personnel*

- (a) *Assignment of Experts.* The Participants may assign up to a total of three experts at LASL and five experts at HEDL in the fields set forth in paragraph 1 to work at LASL or HEDL in accordance with agreements between USDOE and the assigning Party. Such agreements will specify the work plan to be followed by such experts.
- (b) *Assigning Procedures.* The procedures to be followed in assigning experts shall be as follows:
 - (1) Each Participant desiring to assign an expert shall submit its nomination(s) to USDOE at least four months prior to the expected assignment date. Each such nomination shall specify the qualifications of the expert and the intended work plan to be followed by the expert at HEDL or LASL;
 - (2) USDOE shall, as soon as possible, notify the nominating Participant of the acceptability of the assignment; and
 - (3) The nominating Participant and USDOE shall, as required, attempt to reach agreement upon the specific terms applicable to such assignments, after which the assignment may be implemented.
- (c) *Duration of Assignment.* The duration of each assignment shall normally be one year, except as may otherwise be agreed by the respective Participants.
- (d) *Publications.* Publications resulting from theoretical or experimental investigations carried out in connection with the Programme shall normally be issued in the form of joint reports of the Participants or individuals who contributed to the investigations.
- (e) *Expenses.* All personal expenses associated with an assignment shall be borne by the assigning Participant. Such expenses shall include, but not be limited to, costs of salary, travel, insurance and living expenses of the assigned personnel. Assigned personnel shall not, by virtue of their assignment, be deemed to be employees of LASL or HEDL or of USDOE.
- (f) *Indemnification.* The assigning participant agrees to indemnify and hold harmless USDOE, and any person acting on their behalf for any damages, liabilities, or costs arising out of fault or negligence of personnel assigned under an agreement entered into in accordance with sub-paragraph (b)(3) of this paragraph; provided, however, that this provision shall not apply to damages, liabilities, or costs insofar as and to the extent that they arise out of fault or negligence of USDOE, or persons acting on their behalf.

4. *Exchange of Information*

- (a) *Information Furnished by Assigned Experts.* Each Participant which assigns personnel to LASL or HEDL in accordance with paragraph 3

hereof shall provide to LASL or HEDL all experimental and theoretical data in its possession which is relevant to the activities to be conducted in the Programme by such personnel, and which it is in a position to furnish.

(b) *Proprietary Information.* In general, information exchanged in connection with this Task may be made available for public dissemination at the discretion of the Participants. However, it is recognized that certain information made available pursuant to sub-paragraph (a) of this paragraph 4 may include industrial property of a proprietary nature. Such property, which may include trade secrets, inventions, patent information and “know-how”, and which was acquired by a Participant prior to or outside the course of activities conducted under this Task shall be defined for the purposes of this Task as information which:

- (1) Is of a type customarily held in confidence by commercial firms;
- (2) Is not generally known or publicly available from sources other than the Programme;
- (3) Has not previously been made available to others by the Participant supplying it except under an agreement protecting its confidentiality; and
- (4) Is not already in the possession of the recipient Participant or its contractor.

(c) *Dissemination of Available Proprietary Information.* Industrial property of a proprietary nature, as defined above, shall be respected by the recipient Participant, shall not be used for commercial purposes, and shall not, except as may be mandatory under the laws applicable to the respective Participants, be made public without the consent of the Participant originating such industrial property. Industrial property of a proprietary nature which is exchanged shall be clearly marked by the sending Participant, and shall be used only in furtherance of the Participants’ research and development programme in fusion materials irradiation. Dissemination of such information will be limited to:

- (1) Persons within or employed by the recipient Participant and to other concerned agencies of the recipient Participant’s government; and
- (2) Prime or sub-contractors of the recipient Participant or of its government for use only within the framework of its contracts relating to the subject-matter of the information so disseminated.

Each Participant shall exercise its best efforts to ensure that dissemination of industrial property of a proprietary nature received under this Task is controlled as prescribed herein.

(d) *Introduction of Proprietary Information to the Programme.* Neither the Participants nor experts designated by them shall introduce into the

Programme proprietary information unless such information is specifically identified and its introduction agreed upon by the United States Government. The Participants shall take all necessary steps to protect proprietary information introduced into the Programme in accordance with this subparagraph and in accordance with the laws of their respective countries and with international law. "Proprietary information" shall mean information of a confidential nature as defined in paragraph 4(b).

- (e) *Arising Information.* All experimental data and results of analyses developed in connection with, and during co-operative activities carried out under assignments, shall be made available to the Participant assigning the personnel involved in such activities, and to such personnel.

5. Patents

- (a) *Patent Approval from the Operating Agent.* The Participants support the widest possible dissemination of information generated by or made a part of the Programme ("Programme Results") to all Agency Participating Countries, subject only to the need to retain information concerning patentable inventions in confidence until appropriate action can be taken to protect such inventions. In order that public disclosure of inventions will not adversely affect the patent interest of the Participants, patent approval for release or publication of Programme Results shall be obtained from the United States Government prior to any release or publication.
- (b) *Licensing.* With respect to any invention or discovery which is made or conceived during the period of, and in the course of or under the Programme, the USDOE on behalf of the United States Government, as recipient Participant, and each other Participant, as assigning Participant, hereby agree that:
 - (1) If made or conceived by personnel of an assigning Participant or its contractors while assigned to LASL or HEDL or their contractors:
 - (i) The United States Government shall acquire all right, title and interest in and to any such invention or discovery, or patent application or patent thereon, in its own country and in all third countries, provided however that the assigning Participant, and nationals of its country designated by it, shall be granted a non-exclusive, irrevocable, paid-up licence;
 - (ii) The assigning Participant shall acquire all right, title and interest in and to any such invention or discovery, or patent application or patent thereon, in its own country, provided however that the United States Government, and its nationals designated by it, shall receive a non-exclusive, irrevocable, paid-up licence.
 - (2) If made or conceived by personnel of a Participant other than in accordance with sub-paragraph (1) above when employing information which has been communicated under the Programme, the Participant

making the invention shall acquire all right, title and interest in and to any such invention or discovery, or patent application or patent thereon, in all countries, provided however that the United States Government shall be granted a non-exclusive, irrevocable, paid-up licence.

- (c) *Compensation to Inventors and Authors.* Each Participant shall assume the responsibility to pay awards or compensation required to be paid to its employees according to the laws of its country.
- (d) *Co-operation to Inventors and Authors.* Each Participant shall, without prejudice to any rights of authors and inventors under its national law, provide all necessary co-operation from its authors and inventors required to carry out the provisions of this paragraph.
- (e) *Determination of "National".* The Executive Committee may establish guidelines to determine what constitutes a "national" of a Participant provided, however, in recognition of the fact that all the fusion power research and development programmes of the individual Member States of the European Atomic Energy Community (EURATOM), Switzerland and Sweden are carried out jointly in the framework of EURATOM, and that EURATOM acts on behalf of itself and its fusion power research and development associated national organizations in the EURATOM Member Countries and Sweden only, and therefore the countries referred to in this paragraph shall, with respect to EURATOM, be understood to be the countries of the Member States of EURATOM and Sweden.

6. *Operating Agent*

The United States Department of Energy (USDOE). In addition to the responsibilities stated above, USDOE shall provide, at least annually, to the Executive Committee periodic reports on the progress of the Programme. Notwithstanding the provisions of the Implementing Agreement, USDOE shall be solely responsible for the content and management of the Programme.

7. *Funding*

- (a) USDOE will bear all costs associated with the Programme at HEDL and LASL.
- (b) The Participants will bear all costs associated with their participation in this Task, including the aforementioned costs for assignment of personnel.

8. *Schedule*

This Annex will remain in force for a period of five years as from 21st October, 1980. It may be extended by agreement of the Participants. An extension shall apply only to Participants who agree to the extension or notify the IEA Secretariat of their decision to continue to participate.

9. *Results*

A final report will be produced by the Operating Agent containing a description of the FMIT facility, specifications of its performances and outlines of its operation programme. This report will be circulated by the Operating Agent to all the Participants.

10. *Participants*

The Contracting Parties which are Participants in this Task are the following:

The European Atomic Energy Community (EURATOM),

The Japan Atomic Energy Research Institute,

The Federal Office for Education and Science (Switzerland),

The United States Department of Energy (USDOE).

Annex II

EXPERIMENTATION ON RADIATION DAMAGE IN FUSION MATERIALS

1. *Background and Objectives*

- (a) *Background.* It is recognized by the scientific community working in the field of radiation damage that no one facility exactly duplicates the fusion reactor radiation environment. Facilities such as the Fusion Materials Irradiation Test Facility (FMIT), the Rotating Target Neutron Source (RTNS-II), deuterium-beryllium and deuterium-tritium sources partially approximate the fusion reactor environment and are useful for fundamental studies and for limited engineering tests. However, the large quantity of radiation damage data needed for materials assessment, development of new alloys and engineering design have to be generated using large volume fission reactors and charged particle accelerators with the results tied to the fusion reactor environment via damage analysis and testing in high energy neutron sources.
- (b) *Objectives.* The objectives of this Task are:
 - (1) To design and conduct joint radiation experiments to gain an understanding of the influence of radiation on potential fusion reactor materials;
 - (2) To jointly develop correlation procedures for using the radiation data obtained in the test facilities of the Participants to predict materials' behaviour in the fusion environment;
 - (3) To establish a common pool of relevant data on radiation damage in fusion materials obtained from experiments designed in the fusion programme and executed on existing or future facilities;
 - (4) To assign experts on radiation damage in fusion materials to laboratories and radiation facilities of other Participants.

2. *Means*

- (a) *Programme.* The Participants shall, as their principal task, develop a programme of joint experiments as set forth in paragraph 3, sub-paragraphs (c) and (g) below. The initial programme shall be developed within one year after the signature and implemented in subsequent Annexes to the Agreement within fifteen months after the signature.
- (b) *Working Group.* The Participants shall establish a Working Group to be composed of one representative designated by each Participant. In addition, each Participant may have additional technical advisers

attend the meetings of the Working Group, including persons from appropriate facilities. Representatives for the Working Group shall be specialists in radiation damage. The Working Group, which shall be convened by the Operating Agent at least annually or at intervals mutually agreed upon, shall report to the Executive Committee through the Operating Agent. Decisions of the Working Group shall be made by unanimity except that where unanimity is not achieved each Participant's representative on the Working Group shall be entitled to have his views presented to the Executive Committee.

3. *Responsibilities of the Participants and the Working Group*

- (a) *Exchange of Information.* Each Participant shall provide to the Operating Agent for transmission to the Working Group information dealing with radiation damage working units. Based on such information, the Working Group shall review and adopt a common set of radiation damage working units to be utilised in the work of each Participant undertaken pursuant to this Annex.
- (b) *Reference Materials.* Each Participant shall provide to the Operating Agent for transmission to the Working Group information dealing with reference materials for radiation damage on fusion materials. Using this information the Working Group shall adopt reference materials to provide a common basis for comparison of experimental results in the areas of radiation damage on fusion materials.
- (c) *Survey Report.* Each Participant shall, as a priority task, provide to the Working Group information on existing radiation facilities in its country. Based on this information, the Working Group shall provide to the Operating Agent by November, 1980 a report surveying radiation facilities including fission reactors, high energy neutron sources, high voltage electron microscopes, accelerator and dual beam facilities. The report shall also indicate the availability of such facilities for future joint experiments as agreed by the Participants and as set forth in subsequent Annexes to the Agreement.
- (d) *Resulting Information.* The Participant shall exchange information on radiation damage in fusion materials arising from their fusion programmes.
- (e) *Symposia.* The Participants shall arrange symposia when mutually agreed to discuss selected topics in radiation damage in fusion materials.
- (f) *Exchange of Experts.* The Participants shall assign experts in radiation damage in fusion materials to facilities of Participants in accordance with agreements between the concerned Participants. The procedures to be followed in assigning experts shall be as follows:
 - (1) Each Participant desiring to assign an expert shall through the Operating Agent submit its nomination to the Participant in whose country the facility is located, as a rule, at least four months prior to the

expected assignment date. Each such nomination shall specify the qualifications of the expert, his work during the assignment and the length of the assignment. The Participant in whose country the facility is located shall, as soon as possible, notify the nominating Participant of the acceptability of the assignment. The nominating Participant and the Participant in whose country the facility is located shall, in consultation with the Operating Agent, as required, attempt to reach agreement upon the specific terms applicable to such assignments, after which the assignments may be implemented.

- (2) The duration of each assignment shall normally be one year, except as may otherwise be agreed between the concerned Participants.
 - (3) Publication resulting from theoretical or experimental investigation carried out in connection with this Annex and the assignment hereunder shall normally be issued in the form of joint reports of the concerned Participants or individuals who contributed to the investigation.
 - (4) All personal expenses associated with an assignment shall be borne by the assigning Participant. Such expenses shall include, but not be limited to, costs of salary, travel, insurance and living expenses of the assigned personnel. Assigned personnel shall in no way be deemed to be employees of the Participant in whose country the facility is located by virtue of their assignment. Assigned personnel shall adhere to all safety and other operating procedures of the Participant in whose country the facility is located.
- (g) *Further Co-operation.* The Working Group shall, through the Operating Agent, recommend to the Participants other joint co-operative efforts, including experiments. The Participants shall on the basis of these efforts decide upon joint experiments in conjunction with sub-paragraph (c) above.

4. *Specific Responsibilities of the Working Group*

In addition to the responsibilities mentioned above, the Working Group shall provide to the Operating Agent annual reports on the progress of work under this Annex. A Chairman selected by the Working Group on an annually rotating basis shall also attend the meetings of the Executive Committee. The Working Group shall be responsible for the overall management of the work under the Annex.

5. *Information and Intellectual Property*

- (a) *Executive Committee's Powers.* The publication, distribution, handling, protection and ownership of information and intellectual property arising from activities conducted under this Annex shall be determined by the Executive Committee, acting by unanimity, in conformity with this Agreement.

- (b) *Right to Publish.* Subject only to the patents and copyright restrictions of this Annex, the Participants in this Annex (referred to in this Annex as the "Participants") shall have the right to publish all information provided to or arising from this Annex except proprietary information, but they shall not publish it with a view to profit, except as agreed by the Executive Committee, acting by unanimity.
- (c) *Proprietary Information.* The Participants shall take all necessary measures in accordance with this Annex, the laws of their respective countries and international law to protect proprietary information. For the purposes of this Annex, proprietary information shall mean information of a confidential nature such as trade secrets and know-how (for example, computer programmes, design procedures and techniques, chemical composition of materials, or manufacturing methods, processes, or treatments) which is appropriately marked, provided such information:
- (1) Is not generally known or publicly available from other sources;
 - (2) Has not previously been made available by the owner to others without obligation concerning its confidentiality; and
 - (3) Is not already in the possession of the recipient Participants without obligation concerning its confidentiality.

It shall be the responsibility of each Participant supplying proprietary information to identify the information as such and to ensure that it is appropriately marked.

- (d) *Production of Relevant Information by Governments.* The Operating Agent should encourage the governments of all Agency Participating Countries to make available or to identify to the Operating Agent all published or otherwise freely available information known to them that is relevant to the Task. The Participants should notify the Operating Agent of all pre-existing information, and information developed independently of the Task known to them which is relevant to the Task and which can be made available to the Task without contractual or legal limitations.
- (e) *Reports on Programme Work.* Reports containing all arising information and pre-existing information necessary for and used in the Task, including proprietary information, shall be provided to each Participant by the Participants performing the Task. It shall be the responsibility of each Participant to identify information which qualifies as proprietary information under this Annex and ensure that it is appropriately marked. The Operating Agent shall provide summary reports of work performed under this Annex and results thereof (arising information), including reports and results of the efforts of the Working Group, but excluding proprietary information, to the Executive Committee.
- (f) *Licensing of Inventions.* With respect to any invention or discovery made or conceived in the course of or under this Annex:

- (1) If made or conceived by personnel of one Participant (the Assigning Participant) or its contractors while assigned to the other Participant (Recipient Participant) or its contractors in connection with exchanges of scientists, engineers and other specialists:
 - (i) The Recipient Participant 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, paid-up licence in all such countries to the Assigning Participant, and to its nationals designated by it;
 - (ii) The Assigning Participant 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, paid-up licence to the Recipient Participant, and to its nationals designated by it.
- (2) If made or conceived during the course of or under this Annex by personnel of a Participant other than in accordance with subparagraph (1), the Participant making the invention shall acquire all right, title and interest in and to any such invention or discovery in all countries, provided however that the other Participants and its nationals designated by it shall be granted a non-exclusive, irrevocable, paid-up licence in all countries.
- (g) *Copyright.* The Operating Agent may take appropriate measures necessary to protect copyrightable material generated under the Task. Participants may reproduce and distribute such material, but shall not publish it with a view to profit.
- (h) *Inventor and Authors.* Each Participant shall, without prejudice to any rights of inventors or authors under its national laws, take all necessary steps to provide the co-operation from its authors and inventors required to carry out the provisions of this paragraph. Each Participant will assume the responsibility to pay awards or compensation required to be paid to its employees according to the laws of its country.
- (i) *Determination of "National".* The Participants may establish guidelines to determine what constitutes a "national" of a Participant provided, however, in recognition of the fact that all fusion power research and development programmes of the individual Member States of the European Atomic Energy Community (EURATOM) Switzerland and Sweden are carried out jointly in the framework of EURATOM, and that EURATOM acts on behalf of itself its fusion power research and development associated national organizations in the EURATOM Member States and Sweden only, and the countries referred to in this paragraph shall, with respect to EURATOM, be understood to be the countries of the Member States of EURATOM and Sweden.

6. *Operating Agent*

The European Atomic Energy Community (EURATOM).

7. Funding

Each Participant will bear the costs of its participation in the Annex, including the aforementioned costs associated with the assignment of personnel and costs of its representatives in the Working Group. The host Participant for any symposium in its country shall bear the costs of the symposium.

8. Schedule

This Annex will remain in force for a period of five years as from 21st October, 1980. It may be extended by agreement of the Participants, acting by unanimity. An extension shall apply only to Participants who agree to the extension or notify the IEA Secretariat of their decision to continue to participate.

9. Participants

The Contracting Parties which are Participants in this Task are the following:

The National Research Council of Canada,

The European Atomic Energy Community (EURATOM),

The Japan Atomic Energy Research Institute,

The United States Department of Energy (USDOE).

