

Annex to the Implementing Arrangement Between  
the United States Department of Energy and  
the Japan Atomic Energy Research Institute on  
Cooperation in Research and Development in the  
Area of High Temperature Gas-Cooled Reactors.

Annex 3. Collaborative Program for  
Graphite Materials Development Testing

1.0 Introduction and Terms of Reference

Pursuant to Article III-2 of the Implementing Arrangement between the United States Department of Energy (DOE) and the Japan Atomic Energy Research Institute (JAERI) on Cooperation in Research and Development in the area of High Temperature Gas-Cooled Reactors (HTGRs) of September 27, 1985 (hereinafter referred to as the "DOE-JAERI Implementing Arrangement"), DOE and JAERI (hereinafter referred to as the "Parties") agree to establish this Annex to define the detailed provisions of a collaborative program for the testing of graphites for HTGRs (hereinafter referred to as the "Collaborative Program") in accordance with the provisions of the DOE-JAERI Implementing Arrangement, as follows:

2.0 Collaborative Program

2.1 The objective of the Collaborative Program is for each Party to supplement its graphite materials database through the exchange of needed graphite property data efficiently and in a cost-saving manner. Specific activities shall include the exchange of test specimens, incorporation of them in on-going or planned testing programs and exchange of the test results.

2.2 The Collaborative Program is intended to include testing activities (hereinafter referred to as "Test Projects") identified by either Party, developed and agreed to mutually, and approved by the Coordinating Committee (Section 3.4). Testing activities presently identified for development into Test Projects include the generation of data in the areas of irradiation-induced creep, multiaxial strength and fracture mechanics. Additional Test Projects may be added as identified and appropriately developed and approved.

2.3 The details of the Test Projects shall be described in Test Project Plans, which shall be mutually agreed to in writing and approved by the Coordinating Committee. The information provided in the Test Project Plan shall include the following: title, objective, background, description, projected schedule and costs, and management plan.

2.4 For the purpose of technical coordination and management, each Party shall designate a Test Project Manager for each Test Project and both shall be identified in the Test Project Plan.

2.5 The test specimens which are provided by one party (hereinafter referred to as "the Transmitting Party") to the other (hereinafter referred to as "the Receiving Party") shall be prepared by the Transmitting Party on the basis of specifications that shall be agreed to by the Parties. The number of test specimens to be provided for the Receiving Party shall include a number of spares as agreed to by the Parties.

2.6 Both Parties shall use their best efforts to complete their planned activities according to the projected schedules contained in the Test Project Plans. The Transmitting Party shall be responsible for delivering test specimens to a location agreed by the Parties. The Receiving Party shall be responsible for delivering test specimens from the agreed location to the test facilities and for testing, which includes preparation of the test facilities, installation of test specimens at the facilities, performance of the testing, final disposition of test specimens and other works related to the testing.

2.7 The Receiving Party shall analyze the results of their Test Projects and shall provide the Transmitting Party with the results of all the tests and analyses, including the raw data.

2.8 The Transmitting Party may observe test activities of the Collaborative Program by short-term visits of up to two visitors at any one time. Such visits shall be subject to prior Receiving Party approval on each occasion.

2.9 The Collaborative Program shall be conducted in accordance with the laws and regulations of the countries of the Parties. Compensation for damages incurred during the implementation of the Collaborative Program shall be in accordance with the applicable laws of the countries of the Parties.

### 3.0 Management

3.1 The Parties agree to establish a Coordinating Committee to manage the Collaborative Program.

3.2 The Coordinating Committee shall be composed of two members, one being designated by each Party. Each member shall have one vote and all decisions of the Coordinating Committee shall be by unanimity.

3.3 The Coordinating Committee shall meet annually or as required on a date and at a location as agreed to by the Parties.

3.4 The functions of the Coordinating Committee shall be to:

- 1) Review and approve the Test Project Plans for the Collaborative Program.
- 2) Review, update, and revise the Test Project Plans as needed.
- 3) Review the implementation of the Collaborative Program and recommend corrective actions to resolve any problems.
- 4) Review the costs and projections of expenditures.
- 5) Review and approve plans for personnel visits.

3.5 The Coordinating Committee shall coordinate its activities with the Joint Steering Committee established by the DOE-JAERI Implementing Arrangement.

#### 4.0 Finance

4.1 Each Party shall be responsible for all costs of its own activities in each Test Project Plan.

4.2 The selection of Test Projects for the Collaborative Program shall be made with the objective of achieving a long-term balance in the total incremental costs incurred by the Parties.

4.3 An assessment of the balance in costs incurred by the Parties for work completed, and to be incurred for work planned under the Collaborative Program shall be made annually by the Coordinating Committee.

4.4 It is understood that the ability of the Parties to carry out their obligations under this Annex is subject to the availability of appropriated funds.

#### 5.0 Information

5.1 Under each Test Project, the Transmitting Party shall use its best efforts to provide the Receiving Party with all required information concerning the identification and description of the specimens being transmitted. This information shall include the supplier, heat number, composition, product form, heat treatment and any other information necessary for the Receiving Party to conduct their tests.

5.2 Under each Test Project, the Receiving Party shall use its best efforts to complete the specified work as planned and provide the Transmitting Party with all of the data, analyses and reports identified in the Test Project Plan.

5.3 Each Party shall have all right to use, disclose, publish, or disseminate information provided by the other Party as specified in Section 5.1 and 5.2 above, for any and all purposes whatsoever.

5.4 Under each Test Project, the Receiving Party shall use its best efforts to send the Transmitting Party all information resulting from the testing and analyses prior to the release of such information to any third party.

5.5 Proprietary information as defined in Article VI of the DOE-JAERI Implementing Arrangement shall not be accepted for or utilized in the Collaborative Program without the express mutual written agreement of the Parties setting forth the terms and conditions for such acceptance or utilization.

## 6.0 Patents

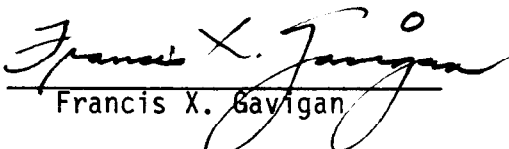
6.1 With regard to inventions or discoveries made or conceived by the Receiving Party in the course of or under the testing of the Transmitting Party's graphite specimens that are improvements to the graphite materials, the Transmitting Party shall acquire all right, title, and interest in and to such inventions or discoveries in its country, subject to a nonexclusive, irrevocable, royalty-free license to the Receiving Party, its Government, and its nationals designated by it. The Receiving Party shall acquire all right, title, and interest in and to such inventions or discoveries in its country and third countries, subject to a nonexclusive, irrevocable, royalty-free license to the Transmitting Party, its Government, and its nationals designated by it. The Parties shall each assume the responsibility to pay awards or compensation required to be paid to its own nationals according to its own laws. The Parties shall each, without prejudice to any rights of inventors under its national laws, take all necessary steps to provide the cooperation from its inventors required to carry out the provisions of this paragraph.

## 7.0 Duration

7.1 The Collaborative Program shall remain in force for the period the DOE-JAERI Implementing Arrangement remains in force.

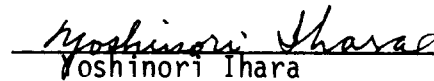
Concluded in Tokyo this 22nd day of May 1987.

For THE UNITED STATES DEPARTMENT  
OF ENERGY

By:   
Francis X. Gavin

Title: Director of Advanced  
Reactor Programs

For THE JAPAN ATOMIC ENERGY  
RESEARCH INSTITUTE

By:   
Yoshinori Ihara

Title: President