

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 1. Collaborative Program for Fission Chamber Test

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1.0 Introduction and Terms of Reference

Pursuant to Article III-2 of the Implementing Arrangement between the U.S. 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 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 two fission chambers in the Fort St. Vrain (FSV) reactor of the Public Service Company (PSC) of Colorado (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 DOE shall test two fission chambers in the FSV reactor of the PSC of Colorado to verify the technique for measuring power distribution in a High Temperature Gas-Cooled Reactor.
- 2.2 JAERI shall provide to DOE two fission chambers for the test. These chambers shall be manufactured in accordance with a design specification agreed to by the Parties.
- 2.3 The ability of DOE to conduct the Collaborative Program is subject to the approval of the U.S. Nuclear Regulatory Commission and the PSC of Colorado.
- 2.4 DOE shall be responsible for any modifications to and any instrumentation for the FSV reactor that may be necessary to carry out these tests.
- 2.5 DOE shall be solely responsible for testing the fission chambers, which includes preparation of the chamber insertion assembly at the GA Technologies (GA) facility in San Diego, California; installation of the assembly at FSV, performance of the test, and transfer of the assembly to the FSV hot cells for examination and disposal. Short-term visits for observation of test activities are restricted, for this collaboration, to the chamber insertion assembly preparation at the GA facility.
- 2.6 JAERI shall use its best efforts to deliver the fission chambers to the Los Angeles International Airport by November 1986 for transfer to DOE.
- 2.7 DOE shall use its best efforts to begin testing by March 1987, but the schedule shall be dependent upon the generating schedule of the FSV reactor as determined by the PSC of Colorado.

- 2.8 DOE shall analyze the results of the test in the FSV reactor and shall provide to JAERI all results of the tests and analyses, including raw data.
 - 2.9 Final disposition of the fission chambers used in the test program shall be carried out by DOE.
 - 2.10 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.
 - 2.11 For the purpose of this effort, the Parties shall each designate, by letter, contact points.
- 3.0 Finance
 - 3.1 Each Party shall be responsible for all costs and expenses necessary to carry out its own task.
 - 3.2 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.
- 4.0 Information
 - 4.1 JAERI shall use its best efforts to provide DOE information concerning the two fission chambers, which is required to enable DOE to obtain the necessary regulatory license and to carry out the test of the chambers in FSV reactor, subject to Article 2.3.
 - 4.2 The Parties shall each have all right to use, disclose, publish, or disseminate information provided to DOE by JAERI and the results of testing and analyses for any and all purposes whatsoever.
 - 4.3 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.
 - 4.4 DOE shall use its best efforts to send JAERI all information obtained from the testing prior to the release of such information to any third party.

5.0 Patents

With regard to inventions or discoveries made or conceived by DOE in the course of or under the testing of the fission chambers that are improvements to the chambers, JAERI shall acquire all right, title, and interest in and to such inventions or discoveries in Japan, subject to a nonexclusive, irrevocable, royalty-free license to DOE, its Government, and its nationals designated by it. DOE shall acquire all right, title, and interest in and to such inventions or discoveries in the United States and third countries, subject to a nonexclusive, irrevocable, royalty-free license to JAERI, 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.

6.0 Duration

The Collaborative Program shall enter into force upon the latter date of signature of this Annex by the Parties and shall remain in force for a period of 4 years.

For THE UNITED STATES
DEPARTMENT OF ENERGY

BY: J. H. Gargan

TITLE: _____

DATE: 1/14/86

For THE JAPAN ATOMIC ENERGY
RESEARCH INSTITUTE

BY: Tsuneo Fujinami

TITLE: President

DATE: March 19, 1986