

Amendment 4 of Annex I
to the DOE - Monbusho Exchange of Letters
on Cooperation in Fusion Research and Development

Whereas the United States Department of Energy and the Monbusho of Japan have entered into the MONBUSHO - DOE COLLABORATION IN FUNDAMENTAL STUDIES OF IRRADIATION EFFECTS IN FUSION MATERIALS UTILIZING FISSION REACTORS, July 20, 1987, Annex I to the January 25, 1983, DOE - Monbusho Exchange of Letters on Cooperation in Fusion Research and Development, and

Whereas the Parties have established a productive and harmonious partnership of collaboration, and

Whereas the collaboration in fundamental studies of irradiation effects in fusion blanket materials utilizing fission reactors has made significant progress in understanding the dynamic behavior of materials under operating conditions of fusion reactors, such as the response of structural materials to the variable and complex fusion reactor environment, and

Whereas the Parties recognize that the collaborative program has made significant contributions to the development of fusion blanket materials, and

Whereas the Parties recognize the need for and benefits of further studies on the integrated behavior of blanket structural materials in combination with other blanket materials operating under conditions of fusion reactors, such as interactive neutron irradiation effects in materials combinations, high temperature coolant flow phenomena in magnetic fields, heat and mass transport in gaseous, solid and fluid blanket materials, tritium production and transport, and coolant chemistry and interactions with surrounding materials, and

Whereas the Parties recognize that they share strong common interests in the study of the behavior and performance limits of integrated materials combinations for the self-cooled liquid blanket and high-temperature gas-cooled blanket concepts, in developing these advanced blanket concepts utilizing fission reactors and other appropriate facilities mutually agreed upon by the Steering Committee, and in developing computational models;

Therefore, in order to expand this collaboration to a new phase on the integrated behavior of fusion blanket materials, pursuant to Paragraph 6.4 of Annex 1, the Parties hereby agree to amend Annex I as follows:

- (1) This Amendment 4 to Annex I is subject to the Annex entitled, "Protection and Distribution of Intellectual Property Rights and Other Rights of a Proprietary Nature" of the Agreement Between the Government of the United States of America and the Government of Japan on Cooperation in Research and Development in Energy and Related Fields, as amended by the Protocol Extending and Amending the Agreement Between the Government of the United States of America and the Government of Japan on Cooperation in Research and Development in Energy and Related Fields, signed on April 18, 2000. The Agreement, as amended by the provisions of Article II of the Protocol, was extended for a period of five years from May 1, 2000.
- (2) In accordance with Article II, subparagraph 4 (iii) (a), of the Protocol Extending and Amending the Agreement between the Government of the United States of America and the Government of Japan on Cooperation in Research and Development in Energy and Related Fields, which states that "Rights to an Invention made as a result of joint research and allocation of benefits derived therefrom shall be agreed between the Parties prior to the commencement of the joint research and shall be contained in the arrangements setting forth the terms and conditions of the joint research." Paragraph 3, Inventions, of the above-referenced Annex to the Agreement provides the terms and conditions as agreed upon by the Parties for Rights to an Invention made as a result of joint research.

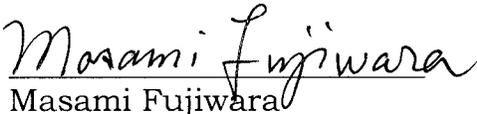
The Steering Committee shall provide for the mutually agreed upon disposition, on an equitable basis, of the rights to an Invention made as a result of joint research project activities.

Furthermore, pursuant to Paragraph 6.2 of Annex 1, the Parties further agree to extend the Collaborative Program for six (6) additional years to July 19, 2007, or until expiration of the Monbusho-DOE Exchange of Letters, whichever occurs first.

This Amendment 4 to Annex I shall become effective April 1, 2001, upon signatures of both Parties. This document is prepared in duplicate, one for each Party.

Done at Nagoya, Japan

on January 17, 2001


Masami Fujiwara

The Director-General of the
National Institute for Fusion
Science,
a designee by the
Ministry of Education, Culture,
Sports, Science and Technology
of Japan

Done at Washington, DC, U.S.A.

on January 16, 2001


N. Anne Davies

Associate Director for Fusion Energy
Sciences, Office of Science
a designee for the Department of Energy
of the United States of America