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Draft Memorandum of Understanding between the European Atomic Energy Commission and the Government of the United States of America

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Summary:

This first joint draft memorandum outlining a program of cooperation between the United States and the European Atomic Energy Commission in the construction and installation of large scale prototype power-reactors.

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MEMORANDUM OF UNDERSTANDING BETWEEN THE EUROPEAN ATOMIC ENERGY COMMISSION AND THE GOVERNMENT OF THE UNITED STATES OF AMERICA.

The establishment of the European Atomic Energy Community (Euratom) is another step in the achievement of a United Europe, a goal which has been consistently supported by the United States. The community promises to make a major contribution to the solution of Europe's growing energy shortage.

In recognition of Europe's increasing energy problem and their mutual interest in advancing the application of atomic energy for peaceful purposes, the European Atomic Energy Commission and the Government of the U.S. of America have, on this day, agreed to this Memorandum of Understanding which outlines a program of cooperation designed to foster the construction and installation of large scale prototype power-reactors in the European Atomic Energy Community, within the next few years. This program will be conducted in a manner so as to obtain the maximum support of the participating industries in the Community and the U.S. of America.

The need for a new source of energy in Europe was outlined in the report "A Target for Euratom", which was prepared in April 1957, by the Euratom Committee (Messrs. Armand, Etzel, and Giordani). In view of its fundamental responsibility to rally the Community's resources to achieve a large-scale nuclear power program, the European Atomic Energy Commission proposed the initiation of a joint Euratom-United States program to stimulate the construction of a limited number of full-scale prototype reactors of mutual interest. This proposal was agreed to in principle for further study by the Government of the United States of America. A joint Working Party was appointed by the Commission and the United States Government to outline the proposed program in detail.

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The following paragraphs outline the joint program, indicating the means by which ~~the program~~ it can be carried out and the steps required for its ~~fulfil ment~~ fulfillment. It is understood that the initiation and implementation of the program are subject to appropriate statutory steps, including the authorization by the competent bodies in the European Atomic Energy Community and the Government of the United States of America.

It is the hope and expectation of the Parties to this Memorandum that the proposed program may lead to other forms of close cooperation between the Community and the United States in other fields related to the peaceful uses of atomic energy.

The European Atomic Energy Community and the Government of the United States of America reaffirm their dedication to the objectives of the International Atomic Energy Agency and hope that the results of the program proposed herein ultimately may be of benefit to the Agency and the rest of the world.

1. Objective.

The objective of the joint program will be, by 1963, to bring into operation within the European Atomic Energy Community large-scale nuclear power reactors of proven types, primarily of the pressurized water and boiling water types, having a total installed capacity of approximately one million kilowatts of electricity.

2. Selection and Approval.

The reactor projects to be included in the program will be selected jointly by the European Atomic Energy Commission and the Government of the United States of America in accordance with standards, criteria, and procedures to be agreed upon. Projects may be proposed and constructed by private or governmental organizations participating in the power industry. Reactors now in an advanced state of planning or underway in Member States of the Community shall receive early consideration. However it is anticipated that this program will, in general, supplement the national efforts in this field. Project contracts will be awarded at the earliest practicable

dates and in accordance with schedules to be agreed upon. Appropriate announcements will be made at a later date.

3. Availability of Information

a. Projects selected for inclusion with the proposed program shall serve as prototype facilities for the general benefit of other projects and programs (both private and governmental) within the Community and the United States. Accordingly, all information developed in connection with the selected projects, including research and development information and design, construction, operating, and economic data, shall be made freely and fully available to European Atomic Energy Commission, the Government of the United States of America, and industry in the Community and the United States.

b. Patentable information developed in the course of this program, through design, construction, and operation of reactors, and the supporting research and development work carried out in connection with the program, shall be made available on a non-discriminatory basis for use by the European Atomic Energy Community, the Government of the United States of America, and nationals of the United States and the Member States of Euratom, in accordance with arrangements to be jointly agreed upon.

c. All records of the recipient utility applicable to any project under this program, including operating and cost records, shall be available to both the European Atomic Energy Commission and the Government of the United States of America. Such separate records as are needed will be maintained for this purpose.

4. Capital Costs

The total capital cost of the nuclear power reactors to be constructed under the proposed program, estimated at approximately $ 350,000,000, will be financed in the following proportionate manner :

a. The participating utilities and the European Atomic Energy Community will arrange to obtain funds amounting to approximately $ 250,000,000 in support of the program ;

b. The United States will participate on the basis of long-term line of credit of up to $ 100,000,000.

5. Fuel Cycle

The European Atomic Commission and the United States Government will enter into special arrangements with respect to the fuel cycle, for reactors to be constructed under the proposed program, which are

reasonably consistent with those offered in the domestic reactor program in the United States.

6. Special Nuclear Materials

The Government of the United States of America will make available to the European Atomic Energy Community, as needed, enriched uranium for the nuclear powerreactors to be included within the proposed program, in sufficient quantity to meet inventory and operating requirements for a twenty (20) year operating period. The Government of the United States of America also will provide the Community special nuclear material as may be agreed for research and development and the operation of research and test reactors associated with the proposed power program.

7. Chemical Processing

With respect to the processing of spent fuel elements from nuclear reactors to be included within the present program, the United States Atomic Energy Commission is prepared to perform such processing in its facilities at established U.S. domestic prices.

In addition, the United States Atomic Energy Commission agrees to assist in the development of chemical processing facilities by providing technical advice and assistance in the design and construction of the pilot plant to be located at Mol (Belgium) by the European Company for the Chemical Processing of Irradiated Fuels ("Eurochemic"). It also will provide technical advice and assistance to the Community in the design and construction of any future large-scale chemical processing plant that the Community decides to construct.

8. Research and Development

a. The European Atomic Energy Community and the Government of the United States of America will establish, on a matching financial basis, a joint program of research and development to be conducted both in the United States and in Europe on the types of reactors to be constructed under the present program. This program will have as its primary objective the improvement in performance of these reactors and lowering fuel cycle costs, including the development of processes for the recycle of plutonium. It is estimated that over a period of ten (10) years the financial contribution to the research and development program by each party will approximate $ 100,000,000. The administration of such a

joint program shall be conducted under mutually agreed arrangements. The information obtained will be freely and reciprocally exchanged.

b. In addition, the United States Atomic Energy Commission will extend its present direct program of reactor fuel cycle development for civilian power reactors by increasing its sponsored research work on fuel materials, and on the fabrication, testing, and chemical processing of fuel elements. The result of such research work will be made available to the European Atomic Energy Community on a current basis.

c. Further, the United States Atomic Energy Commission will continue its domestic program of research and development on advanced civilian power reactor types, basic reactor technology, fuels, materials, reactor safety, and other related matters. Information resulting from such research and development will be made available to the European Atomic Energy Community on a current basis.

d. The European Atomic Energy Commission similarly intends to carry out a research and development program in fields related to the advancement of reactor technology. Information resul ting from such research and development will be made available to the United States on a current basis.

9. Cooperative Activities of Industry

It is expected that there will be extensive cooperation between private individuals and organizations in the Community, and private individuals and organizations in the United States in the development of the atomic energy programs of the Community and the United States. The European Atomic Energy Commission and the Government of the United States of America will use their best efforts to foster such cooperation between the respective industries.

10. Training, Information and Materials

Within the framework of the proposed program, (a) the United States Atomic Energy Commission will provide assistance in the training of personnel designated by the European Atomic Energy Commission in nuclear science and technology, (b) the United States and the Community will provide for the full and current exchange of information between the United States and the Community through reports, symposia, and the exchange of personnel, and (c) the United States will arrange to make available source materials, special reactor materials, and other materials under terms and conditions to be agreed on.

11. Safeguards and Controls (to be developed later)

12. Third Party Liability

The European Atomic Energy Commission and the Government of the United States of America recognize that adequate financial arrangements to protect equipment manufacturers and other suppliers against uninsurable risk are a prior condition to the implementation of the joint program. Therefore, the European Atomic Energy Commission, in conjunction with the Council of Ministers and the Member-States, will seek, by the earliest practicable date, enactment of suitable legislation to provide adequate financial protection against third party liability.

13. Tariffs (to be developed later)

14. Working Party

In order to pursue the necessary preparations for the joint program, joint working groups will be formed from time to time to consider specific problems.