

IMPLEMENTING ARRANGEMENT #4

BETWEEN THE

DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA

AND

HER MAJESTY IN RIGHT OF CANADA AS REPRESENTED BY

THE MINISTER OF ENERGY, MINES AND RESOURCES OF CANADA

IN THE AREA OF

COAL/HEAVY OIL COPROCESSING

WHEREAS, the United States Department of Energy (DOE) and the Minister of Energy, Mines and Resources of Canada (DEMR) (hereinafter referred to as the "Parties") desire to cooperate in the field of energy research and development;

WHEREAS, in the furtherance of their mutual interest, DOE and DEMR entered into a Memorandum of Understanding in the field of Energy Research and Development signed on December 4, 1986, (hereinafter referred to as the Energy R&D MOU);

WHEREAS, DOE and DEMR have a mutual interest in joint planning and exchange of information and personnel in the field of coal/heavy oil coprocessing research and development;

It is agreed as follows:

ARTICLE 1 - OBJECTIVE

The objective of this Implementing Arrangement is to establish a framework for collaboration between the Parties in research and development in the field of coal/heavy oil coprocessing.

ARTICLE 2 - TECHNICAL AREAS OF COOPERATION

The areas of mutual interest between the Parties are set forth below. The Parties recognize that the level of and areas of collaboration will be, however, in keeping with the specific interests and capabilities of each Party to this Implementing Arrangement:

1. Feed Characterization and Preparation
2. Catalyst Development and Testing
3. Product Characterization and Upgrading
4. Residue Characterization Processing and/or Utilization
5. Economic and Engineering Evaluation
6. Process Research and Development

ARTICLE 3 - FORMS OF COLLABORATION

Collaboration in accordance with this Implementing Arrangement will include the following elements:

1. Program Coordinating Meetings

Joint program coordinating meetings will be held at least annually to discuss research priorities and new initiatives, and to improve cost-effectiveness and reduce unnecessary duplication of effort between the two Parties and to plan the exchange of technical data, personnel, and/or samples under this Arrangement.

2. Exchange of Samples/Personnel

For specific research investigations, the Parties will participate in the exchange of samples between laboratories. In addition, the Parties may exchange researchers involved in coal/heavy oil coprocessing research.

3. Exchange of Project Specific Technical Data

The exchange of project specific technical data will be achieved by exchange of written reports and workshops. The reports to be exchanged will be selected by the Joint Coordinating Committee (JCC) from those produced normally in the course of each research project. No reports will be written exclusively to meet the requirements of this Arrangement. Workshops will be held at least yearly on subjects determined by the JCC. Presentations at these workshops will be informal.

Other elements may be added upon mutual written agreement of the Parties.

ARTICLE 4 - MANAGEMENT

1. To direct the execution of this Arrangement, a Joint DOE/DEMR Coordinating Committee (JCC) for Coal/Heavy Oil Coprocessing R&D will be

established. Membership of the JCC will consist of designated and equal representation from each Party and will include up to three representatives from each Party. These members will meet at agreed times and places. The Head of Delegation of the receiving Party will act as Chairperson during meetings of the JCC. The JCC will coordinate its activities with the Lead Coordinators designated under Article 5 of the Energy R&D MOU.

2. At its meetings, the JCC will evaluate the status of cooperation under this Arrangement. This evaluation will include an assessment of the balance of exchanges in the various areas of cooperation listed in Article 2, and, if necessary, a consideration of measures required to correct any imbalances.

ARTICLE 5 - EXCHANGE OF PERSONNEL

Article 3, "Exchange of Personnel" of Implementing Arrangement # 1 is hereby incorporated by reference.

ARTICLE 6 - INTELLECTUAL PROPERTY RIGHT PROVISIONS

1. Article 6 "Copyrights" of Implementing Arrangement # 1, is hereby incorporated by reference in its entirety.
2. Article 4 "Exchange of Information" of Implementing Arrangement # 1 is hereby incorporated by reference, in its entirety with the following modification:

Article 4.8.1.ii) will now read as follows:

The term "proprietary information" means information developed prior to or outside this Arrangement which contains trade secrets or commercial or financial information which is privileged or confidential, and may only include such information which:

- a) has been held in confidence by its owner;
- b) is of a type which is customarily held in confidence by its owner;
- c) has not been transmitted by the transmitting Party to other entities (including the receiving Party) except on the basis that it be held in confidence; and
- d) is not otherwise available to the receiving Party from another source without restriction on its further dissemination.

Article 4.8.2.i will now read as follows:

A Party receiving proprietary information pursuant to this Implementing Arrangement will respect the privileged nature thereof. Any document which contains proprietary information will be clearly marked with the following (or substantially similar) restrictive legend:

"This document contains proprietary information furnished in confidence under an Implementing Arrangement (date of signing of Arrangement #4) between the United States Department of Energy and her Majesty in Right of Canada as Represented by the Minister of Energy, Mines and Resources of Canada and will not be disseminated outside these organizations, their contractors, and the concerned departments and agencies of the Governments of the United States and Canada without prior approval of the Party, owning, controlling or providing the information.

This notice will be marked on any reproduction, hereof, in whole or in part. These limitations will automatically terminate when this information is disclosed by the owner without restriction."

3. Article 5 "Patents" under Implementing Arrangement # 1 is hereby incorporated by reference with the inclusion of the following:

"C. With respect to inventions or discoveries made or conceived in the course of or under this Implementing Arrangement which are improvements to samples or equipment provided by a Party under this Implementing Arrangement:

- i) The Providing Party will 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, royalty-free license in all such countries to the other Party, its Government, and its nationals designated by it, in and to any such invention or discovery and any patent application or patent, or other protection relating thereto.
- ii) The Other Party will acquire all right, title and interest in and to any such invention or discovery in its own country, subject to a non-exclusive, irrevocable, royalty-free license to the Providing Party, its Government, and its nationals designated by it in and to any such invention or discovery and any patent application, patent, or other protection relating thereto."

4. The DOE/DEMR Energy R&D MOU, dated December 4, 1986, and Implementing Arrangement # 1, dated December 24, 1986, are hereby attached as reference documents.

ARTICLE 7 - MATERIALS AND SAMPLES

The Parties agree that, unless otherwise agreed in writing, in the event materials or samples are provided by one Party to the other Party, the following provisions will apply with respect to the transportation and use of such materials or samples:

1. All materials or samples provided by the sending Party to the receiving Party will become the property of the receiving Party upon delivery, and will not be returned to the sending Party.
2. Where one Party requests that materials or samples be provided by the other Party, the Party making the request will bear all costs and expenses associated with the transportation of the materials or samples from the location of the sending Party to the final destination.
3. Each Party will promptly disclose to the other Party all information arising from the examination or testing of materials or samples exchanged under this Implementing Arrangement.

ARTICLE 8 - GENERAL PROVISIONS

1. Collaboration under this Implementing Arrangement will be in accordance with the laws and regulations of the respective countries. All questions related to the Implementing Arrangement arising during its term will be settled by the Parties by mutual agreement.
2. Nothing in this Implementing Arrangement is intended to affect arrangements for cooperation or collaboration between the Parties or any other arrangements of the Parties in existence on the date this Implementing Arrangement comes into force.

ARTICLE 9 - FUNDING

Except when otherwise agreed in writing, all costs resulting from cooperation under this Implementing Arrangement will be borne by the Party that incurs them. It is understood that the ability of each Party to carry out its obligations under this Implementing Arrangement is subject to the availability of appropriated funds.

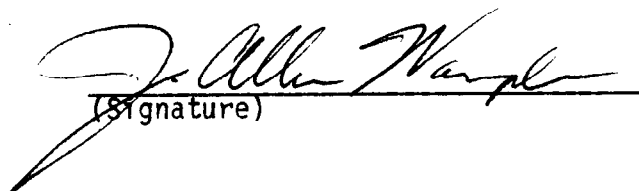
ARTICLE 10 - ENTRY INTO FORCE AND TERMINATION

1. This Implementing Arrangement will enter into force upon the latter date of signature and remain in force until December 4, 1996. This Implementing Arrangement may be amended or extended by mutual written agreement. This Implementing Arrangement may be terminated at any time by either Party upon six (6) months written notice to the other Party.

2. The Parties will take all necessary steps to realize all the activities covered by this Implementing Arrangement. Any disputes arising under this Implementing Arrangement will be settled by consultation between the Parties.

Done in duplicate.

FOR THE DEPARTMENT OF ENERGY
OF THE UNITED STATES OF AMERICA



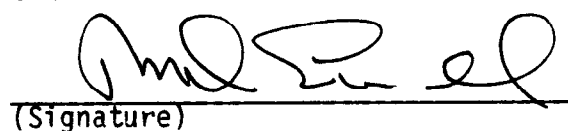
(Signature)

J. Allen Wampler
(Printed Name)

Assistant Secretary
for Fossil Energy
(Title)

JAN 19 1989
(Date)

HER MAJESTY IN RIGHT OF CANADA AS
REPRESENTED BY THE MINISTER OF
ENERGY, MINES AND RESOURCES OF
CANADA



(Signature)

MARC DENIS EVERELL
(Printed Name)

ASSISTANT DEPUTY MINISTER
MINERAL AND ENERGY
(Title) TECHNOLOGY

89/2/14
(Date)