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IMPLEMENTING AGREEMENT XVI TO THE MEMORANDUM OF UNDERSTANDING BETWEEN

THE DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA

THE MINISTRY OF ENERGY AND MINES **OF THE REPUBLIC OF**VENEZUELA

IN THE AREA OF OIL AND PETROCHEMISTRY ECOLOGY AND ENVIRONMENTAL RESEARCH.

Whereas the United States Department of Energy (hereinafter "DOE") and the Ministry of Energy and Mines of the Republic of Venezuela (hereinafter "MEM") conclude an Agreement in the Field of Energy Research and Development of March 6, 1980;

Whereas the Panics believe that the cooperative activities in the field of energy research and development undertaken pursuant to the Agreement were mutually beneficial to both Parties, a new Agreement was signed on the 8th day of September, 1993 (hereinafter "Agreement (1993)");

Whereas the Parties have a common interest in continuing certain implementing Agreements under ARTICLE XIII of the Agreement (1993) and in undertaking new cooperative activities in the field of energy research;

The parties agree as follows:

ARTICLE 1

The Six Tasks to be carried out under "Implementing Agreement XVI, Oil and Petrochemistry Ecology and Environmental, are:

Task I: Information Exchange

- **a)** Periodic exchanges of data of past and on-going Ecological and Environmental projects conducted in their respective countries will be performed as per Project Managers' agreement.
- Available data for **the** compilation prepared by the United States shall mean non-confidential data from government funded, cost-shared Research, Development, and Demonstration (RD&D) activities in the area of Ecology and Environment **associated to** the Oil and Petrochemical **Industry**.
- c) Available data for the compilation prepared by Venezuela shall mean non-confidential data.
- d) United States personnel will obtain rhe data, make the assessments, and report the results.

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e) MEM personnel will obtain the data, make the assessments, and report the results.

Task 2: Biotechnology Updates and Development

a) The Project Managers shall cooperate in implementing and developing new biotechnological tools which incorporate biotreatment practices for the mitigation Of spills or undesired storage of oil. refined and petrochemical products/waste.

Task 3: Analysis of Industrial and Environmental Trends Updates

Both parties will exchange information and updates regarding environmental laws and regulations as they develop, which could provide insights related to industrial trends throughout their countries or regional area of influence (North and Latin America., respectively) particularly targeting Oil and Petrochemical markets.

Task 4: Waste Disposal Practices and Treatment Costs

- a) Mutual cooperation will include exchange of information, in the area of characterization, treatment and disposal of industrial waste, as well as their associated costs.
- b) Mutual cooperation will include exchange of information, in the area of oilfield produced water and the associated costs to handle and <u>disposing</u> of such waters.

Task 5: Sensitive Environments

a) Both parties will exchange information regarding the protection and restoration of sensitive environments such as Savannah and wetlands. **Information** on topics such as mitigation, restoration, minimal impact technologies and **applications** of geographic information system technology as well as associated costs would be exchanged.

Task 6: Technical Exchange Meetings

- a) Either party may request meetings to discuss, gain assistance, or receive training in the use and development of ecological and environmental methods, or other aspects of Task 1 through Task S of this implementing Agreement.
- Cooperation will take the form of sharing literature references and new methodologies as they become available.
- c) Both parties will update each other on prudent developments in biotechnology, Industrial waste technology and environmental trends reported in the literature and as developed within their respective research programs.

ARTICLE 2

Implementing Agreement XVI to the Agreement shall become effective when signed by the Appropriate DOE and MEM representatives. The Implementing Agreement, shall remain in effect until September 7, 1998, or until terminated by written notice as provided in Article XIII of the Agreement (1993).

On Behalf of DOE

Member - Donald A. Juckett

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Member - Thomas C. Wesson

Member - Thomas B. Reid

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On Behalf of **MEM**

Member - Juan Quetglas

Membel Ignacio Layrisse

Member - Aquiles Fernandez

Date