

## **STATEMENT OF CONSIDERATIONS**

### **REQUEST BY AIR PRODUCTS AND CHEMICALS, INC. FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN PATENT RIGHTS UNDER DOE COOPERATIVE AGREEMENT NO. DE-FC36-94GO10004; W(A)-94-034; CH-0844**

The Petitioner, Air Products and Chemicals, Inc. has requested a waiver of domestic and foreign patent rights for all subject inventions arising from its participation under the above referenced cooperative agreement entitled "Development of Advanced Membrane Devices."

The objective of the cooperative agreement is to develop advanced membrane technology for the energy efficient separation of carbon dioxide and hydrogen sulfide from methane. The agreement includes two phases. Phase I will further develop and refine membrane technology, and phase II will demonstrate commercial membrane fabrication process. The work includes identifying and validating advanced membrane materials; optimizing process designs incorporating advance membranes; developing scale-up procedures for fabricating membranes; and developing commercially feasible devices.


The total anticipated cost of the cooperative agreement, over the course of its two phases, is \$13.5 million, with the Petitioner's share being \$5.7 million, for approximately 42% cost sharing. As proposed in the agreement, the cost sharing for the two phases is 30% and 50% respectively. The continuation of the waiver is contingent upon the Petitioner maintaining the above cost sharing percentages during the course of the agreement.

As noted in its waiver petition, Petitioner has an established non-governmental commercial position in the above technology with over 100 membrane systems in operation worldwide. Since 1981, Petitioner has made substantial investment in facilities and internal research in membrane technology to include the purchase of its subsidiary, Permea, which possesses a worldwide reputation and market position in the development and manufacture of membranes and membrane systems. Further, in addition to the cost sharing in this cooperative agreement, Petitioner plans to continue making substantial investment in its internal membrane research over the next several years. Considering Petitioner's technical expertise, established market position, and significant investment in this technology including sizable cost sharing in this cooperative agreement, it is reasonable to conclude that Petitioner will continue to develop and ultimately commercialize the technology and products which may arise from this cooperative agreement.


Petitioner has agreed that this waiver shall be subject to the march-in and preference for U.S. industry provisions, as well as the U.S. Government license, comparable to those set out in 35 U.S.C. 202-204. Further, Petitioner has agreed to the U.S. competitiveness provisions as attached to this Statement. In brief, Petitioner has agreed that products embodying any waived invention or produced through the use of any waived invention will be manufactured substantially in the United States unless Petitioner can show to the satisfaction of DOE that it is not commercially feasible to do so. Further, Petitioner has agreed that it will not license, assign or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements.

Referring to item 10 of the waiver petition, granting this waiver is not anticipated to have any adverse impact on competition. There are currently numerous designs, as well as competitors, in the field of membrane separation technology. The success of this cooperative agreement can be expected to stimulate investment, not only in this technology, but also in other competing technologies as well.

Considering the foregoing, it is believed that granting this waiver will provide Petitioner with the necessary incentive to invest its resources in the commercialization of the results of the cooperative agreement in a fashion which will make the above technology available to the public in the shortest practicable time. Therefore, upon evaluation of the waiver petition and in view of the objectives and considerations set forth in 41 CFR 9-9.109-6, all of which have been considered, it is recommended that the requested waiver be granted.

  
Thomas G. Anderson  
Assistant Chief Counsel  
Intellectual Property Law  
Division

Date: 4/3/95

  
Daniel D. Park  
Patent Attorney  
Intellectual Property Law  
Division

Date: 4/3/95


Based upon the foregoing Statement of Considerations and representations in the attached waiver petition, it is determined that the interests of the United States and the general public will best be served by a waiver of patent rights of the scope described above, and therefore the waiver is granted. This waiver shall not apply to any modification or extension of the cooperative agreement, where through such modification or extension, the purpose, scope or cost of the cooperative agreement has been substantially altered.

CONCURRENCE:

  
Ehr-Ping Huang Fu  
Deputy Assistant Secretary  
for Industrial Technologies  
Office of Industrial Process, HQ

Date: 8-22-95

APPROVAL:

  
Paul Gottlieb  
Assistant General Counsel  
for Technology Transfer and  
Intellectual Property, HQ

Date: 8-28-95

(ix) U.S. Competitiveness

The Contractor agrees that any products embodying any waived invention or produced through the use of any waived invention will be manufactured substantially in the United States unless the Contractor can show to the satisfaction of the DOE that it is not commercially feasible to do so. In the event that DOE agrees to foreign manufacture, there will be a requirement that the Government's support of the technology be recognized in some appropriate manner, e.g., recoupment of the Government's investment, etc. The Contractor agrees that it will not license, assign or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements. Should the Contractor or other such entity receiving rights in the invention undergo a change in ownership amounting to a controlling interest, then the waiver, assignment, license or other transfer of rights in the waived invention is suspended until approved in writing by the DOE.

***WAIVER ACTION - ABSTRACT***

***W(A)-94-034***

REQUESTOR

Air Products and Chemicals,  
Inc.

CONTRACT SCOPE OF  
WORK

Development of advanced  
membrane devices

RATIONALE FOR DECISION

42% cost sharing

DISPOSITION

Recommended