

## STATEMENT OF CONSIDERATIONS

REQUEST BY AIR PRODUCTS AND CHEMICALS, INC. (AIR PRODUCTS)  
FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN PATENT RIGHTS  
TO INVENTIONS MADE UNDER A CONTRACT ENTITLED "DYNAMIC  
EXPERT SYSTEMS CONTROL FOR OPTIMAL OXY-FUEL MELTER  
PERFORMANCE" - DOE CONTRACT DE-FC02-98CH10919; W(A)-98-021,  
CH-0989

Air Products and Chemicals, Inc. (Air Products) has requested an advance waiver of domestic and foreign patent rights to inventions of its employees and of its subcontractors other than those eligible to obtain title pursuant to P.L. 96-517, as amended, or National Laboratories.

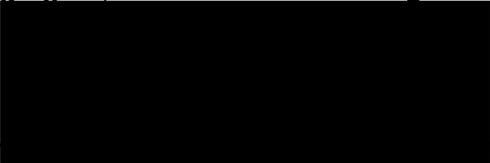
As brought out in the attached waiver petition, Air Products is leading what is essentially a teaming arrangement for the development and demonstration of a dynamic control system which will allow oxy-fuel glass melting furnaces to operate more efficiently on a continuous basis. As a result of the improved control system, Air Products anticipates a reduction of about 10 percent in the operating costs of a typical oxy-fuel glass melting furnace, as well as a substantial reduction in CO<sub>2</sub> and NO<sub>x</sub> emissions. The total cost of this work under the contract is \$2,180,290 of which Air Products is committed to cost share \$1,132,151, or about fifty-two percent (52%) of the cost of the work under the contract.

Referring to paragraphs 5, 6 and 7 of Air Products petition, Air Products has been actively involved in the development of oxygen-enriched or oxy-fueled burner combustion technology for the last 40 years. Typically, Air Products spends about \$1 million per year for the development of industrial gases technology in the glass industry. This coupled with Air Products established market share, clearly demonstrates its commitment to the long term development and commercialization of the technology forming the subject matter of this agreement.

Air Products has agreed to the terms of the usual advanced patent waiver and background data licensing provisions. Those advance patent waiver provisions include a Government license, march-in rights and preference for U.S. industry provisions comparable to 35 U.S.C. 202-204, as well as the attached U.S. competitiveness clause, which requires that products embodying a waived invention or practiced through the use of a waived invention be manufactured substantially in the United States unless the participant can show to the satisfaction of DOE that it is not commercially feasible to do so. In the event 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. Air Products has also agreed to make that above conditions binding on any assignee or licensee or any entity otherwise acquiring rights to any waived invention, including subsequent assignees or licensees. Additionally, should Air Products or other entity receiving rights in any waived invention undergo a change in ownership amounting to a controlling interest, the waiver, assignment, license or other transfer of rights in the waived invention is suspended until approved in writing by DOE.

The grant of this waiver is not anticipated to result in any adverse effects on competition or the public health, safety and welfare. Rather, it should broaden the commercial alternatives available to the glass making industry while at the same time reducing adverse atmospheric emissions.

Considering the foregoing, and in view of the statutory objectives to be obtained and the factors to be considered, it has been determined that this advance waiver of patent rights will serve the interest of the United States and the general public. Under the terms of the waiver, subcontractors' inventions other than those of subcontractors eligible to obtain title pursuant to P.L. 96-517, as amended, or National Laboratories, may be waived to Air Products upon the subcontractor acknowledging its rights to request a waiver separately and agreeing to the terms of this waiver. Subject to Air Products maintaining at least fifty percent (50%) cost sharing, in aggregate, over the term of this agreement, it is recommended that the waiver be granted.

  
Thomas G. Anderson  
Assistant Chief Counsel  
Office of Intellectual Property Law

Date 3/31/99

  
Joy A. Atwan  
Patent Attorney  
Office of Intellectual Property Law

Date 30 March 99

Based on the foregoing Statement of Consideration, it is determined that the interest of the United States and the general public will best be served by a waiver of United States and foreign rights as set forth therein, and therefore the waiver is granted. This waiver shall not affect any waiver previously granted.

CONCURRENCE:

  
Douglas Kaempf, Director  
Office of Industrial Process  
Systems

Date 8/16/99

APPROVAL

  
for Paul A. Gottlieb  
Assistant General Counsel for Technology  
Transfer and Intellectual Property

Date 8/20/99

WAIVER ACTION - ABSTRACT

REQUESTOR: AIR PRODUCTS AND CHEMICALS, INC.  
DE-FC02-98CH10919

CONTRACT SCOPE OF WORK: Development and demonstration of a dynamic control system for oxy-fuel glass melting furnaces.

RATIONAL FOR DECISION: Granting of the waiver will provide the incentive to commercialize the inventions in a fashion which will benefit the public in the shortest practical time.

DISPOSITION: