

STATEMENT OF CONSIDERATIONS

REQUEST FOR ADVANCE WAIVER OF PATENT RIGHTS BY AIR
PRODUCTS AND CHEMICALS, INC., MADE DURING THE
PERFORMANCE OF CONTRACT DE-FE0012065.; W(A)-2014-021, CH-1714

Petitioner, Air Products and Chemicals, Inc (Air Products), has requested a waiver of: (a) domestic and foreign patent rights for all subject inventions conceived solely by Air Products and (b) Air Products' undivided interest, based on its employee's contributions, to joint domestic and foreign patent rights for all subject inventions conceived, arising under the above referenced awards.

The objective of the award is the "Development of Ion Transport Membrane Oxygen Technology for Low-Cost and Low-Emission Gasification and Other Industrial Applications." The scope of work under the award is to advance Ionic Transport Membrane (ITM) technology toward execution of an ITM Oxygen Development Facility. Specifically, the aim of the work is to develop membrane materials with improved performance, optimize fabrication methods, performance testing, trial the membranes in a fabrication facility, and advance the development of ITM Oxygen production processes.

The total anticipated cost of the award is \$22,376,732.00 including Petitioner's contribution of \$11,188,366.00, or about fifty percent (50%) of the total cost of the work under the award. The period of performance is from 01 October 2013 to 31 December 2015.

Referring to items 5-9 of the waiver petition, Petitioner has engaged in the research and development of gas separation technologies. This research and development extends to Petitioner's experience in developing ceramic oxygen ion-conducting membrane materials, as well as membrane testing, fabrication, manufacturing, and process applications over multiple decades. The experience also includes the manufacture and operation of ITM oxygen production facilities. Petitioner has a long history of pursuing protection of developed intellectual property, and the commercialization of that intellectual property. Additionally, Petitioner has partnered with several entities with significant experience in the field in order to fully execute the research under the Award. Accordingly, Petitioner has significant experience in developing technology within this field and will continue to further develop the contracted work.


Petitioner has agreed that this waiver will be subject to the march-in and preference for U.S. industry provisions, as well as the U.S. Government license, set out in 35 U.S.C. 202-204. Further, Petitioner has agreed to the attached U.S. Competitiveness provision (paragraph (t)). The Petitioner further has agreed to the attached revised paragraph (h) to submit annual reports on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by Petitioner and any of its licensee or assignees. If sold or transferred this reporting obligation will pass on to the buyer or transferee.

Petitioner has agreed that products embodying a waived invention or produced through the use of a waived invention will be manufactured substantially in the United States unless the Petitioner can show to the satisfaction of the DOE that it is not commercially feasible to do so.


Petitioner has further agreed to make the above conditions binding on any assignee or licensee or any entity otherwise acquiring rights in the waived inventions, including subsequent assignees and licensees. Should Petitioner or other such entity receiving rights in a waived invention undergo a change in ownership amounting to a controlling interest, then the waiver, assignment, license, or other transfer of rights in the waived inventions is suspended until approved in writing by DOE.

Referring to item 10 of the waiver petition, granting this waiver will not have an adverse impact on competition. Petitioner notes their ITM technology is only one of several approaches to producing atmospheric gases. Competing methods such as pressure swing and vacuum swing absorption are commercially available and will be present in the world market against any developments under the Award. Consequently, granting the Petition will not hinder competition in the field.

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 agreement in a fashion which will make the 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 10 CFR 784, all of which have been considered, it is recommended that the requested waiver be granted.


Jacob A. Heafner
Patent Attorney
Intellectual Property Law Division

Date: 5/7/15


Brian J. Lally
Deputy Chief Counsel
Intellectual Property Division

Date: 5/5/15

Based upon the foregoing Statement of Considerations and representations in the attached waiver petition, it is determined that the interests of the U.S. 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 will not apply to any modification or extension of the award, where through such modification or extension, the purpose, scope or cost of the award has been substantially altered.

CONCURRENCE:



Mark Ackiewicz ✓
Acting Director
Office of Advanced
Fossil Technology Systems, FE-22

Date: 10/8/2015

APPROVAL:



John T. Lucas
Assistant General Counsel for Technology
Transfer and Intellectual Property, GC-62

Date: 10/20/2015

WAIVER ACTION - ABSTRACT

W(A)-2014-021

REQUESTOR

Air Products
and Chemicals,
Inc.

CONTRACT SCOPE

Development of Ion Transport Membrane
Oxygen Technology for Low-Cost and
Low-Emission Gasification and Other
Industrial Applications.

RATIONALE FOR DECISION

Air Products has experience in
developing ceramic oxygen ion-
conducting membrane
materials, as well as membrane
testing, fabrication,
manufacturing, and process
applications, and will continue
to invest in designing and
commercialization of ceramic
materials and membrane
modules.

(h) Reporting on utilization of subject inventions

The Contractor agrees to submit annual reports on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the Contractor and any of its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the Contractor, and such other data and information as DOE may reasonably specify. The Contractor also agrees to provide additional reports as may be requested by DOE in connection with any march-in proceedings undertaken by DOE in accordance with paragraph (j) of this clause. To the extent data or information supplied under this paragraph is considered by the Contractor, its licensee or assignee to be privileged and confidential and is so marked, DOE agrees that, to the extent permitted by law, it shall not disclose such information to persons outside the Government.

(t) 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 the 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.