

STATEMENT OF CONSIDERATIONS

REQUEST BY NOVOZYMES NORTH AMERICA FOR AN ADVANCE WAIVER OF
PATENT RIGHTS TO INVENTIONS MADE UNDER DOE COOPERATIVE
AGREEMENT NO. DE-FC26-07NT43804, SUBCONTRACT QZ001; W(A) 2008-031 ;
CH-1430

As set out in the attached waiver petition and in subsequent discussions with DOE Patent Counsel, Novozymes North American (Novozymes) has requested an advance waiver of domestic and foreign patent rights for all subject inventions made under its subcontract to Carbozymes under the above subject cooperative agreement: "Development of Biomimetic Membranes for Near Zero PC Power Plant Emissions". The overall project objective is to develop a carbon dioxide capture technology that can achieve performance meeting the DOE CO₂ capture technology targets of a 90% capture rate and less than a 20% increase in the cost of energy by 2012. Further details of the project, including petitioner's specific task under its subcontract, are found in response to question 2 of the waiver petition. The waiver will apply to inventions made by Novozymes employees.

The work under this subcontract is expected to take place for a one year period, within the overall cooperative agreement period of March 28, 2007 to May 31, 2008. The cost of petitioner's task under this subcontract is \$548,315, with Novozymes cost-sharing 50%, or \$274,158. DOE is providing the remaining cost share of \$274,158.

In view of the cost sharing and other equities provided by Novozymes, it is anticipated that the parties will develop an appropriate allocation of patent rights among the participants to facilitate the expeditious development of the technology forming the subject matter of the agreement. Accordingly, DOE will waive title to all subject inventions made by Novozymes employees.

Referring to items 5 and 6 in Novozyme's waiver petition, Novozymes states it is the world leader in development and commercialization of industrial enzymes and microorganisms. Novozymes has listed patents relevant to this technology. Novozymes is the world's largest vertically-integrated researcher, developer and producer of industrial enzymes with sales of over one billion dollars of enzyme products annually. Novozymes' latest annual report can be viewed at <http://www.report2006.novozymes.com>. This, coupled with Novozyme's cost sharing, demonstrates the likelihood that Novozymes will continue development and commercialization of the results of this agreement.

Referring to item 10 of the waiver petition, granting this waiver is not anticipated to have any adverse impact on competition as there are numerous different technologies that are under development for carbon dioxide capture.

This advance waiver of the Government's rights in inventions is subject to the usual advance patent waiver licensing provisions, and the government license, march-in rights, and preference for U.S. industry provisions set out in 35 U.S.C. 202-204. The advance patent waiver also includes the attached, modified, U.S. Competitiveness clause (paragraph t) which requires products embodying any waived invention or produced through the use of any 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. This modification has been negotiated with the petitioner, and agreed to by the undersigned Field Patent Counsel and Fossil Energy Program Director. In addition, the contractor further agrees to make the above condition binding on any assignee, licensee or other entity acquiring rights to any waived

invention, including subsequent assignees or licensees. Should the Contractor or other such entity receiving rights in any 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 invention is suspended until approved in writing by DOE.

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 subcontract 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 Part 784, all of which have been considered, it is recommended that the requested waiver be granted.

[REDACTED]
Mark P. Dvorscak
Assistant Chief Counsel
Intellectual Property Law Division

Date: July 16, 2008

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 will not apply to any modification or extension of the subcontract, where through such modification or extension, the purpose, scope or cost of the subcontract has been substantially altered.

CONCURRENCE:

[REDACTED]
Clarence L. Miller
Director
Office of Sequestration, Hydrogen
and Clean Coal Fuels
FE-24

Date: AUGUST 6 2008

APPROVAL:

[REDACTED]
Paul A. Gottlieb
Assistant General Counsel
Intellectual Property, GC-62

Date: 8/19/08

(t) U.S. Competitiveness (*as modified for DE-FC26-07NT43084, Novozymes, W(A) 20008-005*)

The Contractor agrees that any products or processes embodying any waived invention or practiced through the use of any waived invention will be manufactured or practiced substantially in the United States unless the Contractor can show to the satisfaction of the DOE that it is not commercially practicable to do so. It is recognized, in part based on the Attachment to the waiver petition, that it may not be commercially practicable to manufacture a commercial scale enzyme catalyst in the United States. DOE agrees that Novozymes has an established and expanding presence in the U.S., and that it is committed to carrying out business in the U.S. Further, Novozymes' ability to implement in the U.S. products embodying any waived inventions will be accelerated if it has the ability to produce products at any of its world-wide locations. 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. DOE written approval, which shall not be unreasonably withheld, is required to maintain the waiver, assignment, license or other transfer of rights, should the Contractor undergo a change in ownership amounting to a controlling interest.