

STATEMENT OF CONSIDERATIONS

REQUEST BY PRAXAIR INC. FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN INVENTION RIGHTS UNDER DOE COOPERATIVE AGREEMENT NO. DE-NT0005341, W(A)-09-020; CH-1484

The Petitioner, Praxair, Inc. (Praxair) was awarded a cooperative agreement from the Department of Energy for the performance of work entitled, "Near Zero Emissions Oxy-Combustion Flue Gas Purification." The purpose of the cooperative agreement is to reduce the cost of CO₂ capture and achieve greater than 95% CO₂ recovery with oxy-combustion in existing pulverized coal (PC) power plants with high air ingress. Further objectives are to develop processes for reducing atmospheric emissions of SO_x and mercury by greater than 99% and NO_x emissions by greater than 90% and to recover CO₂ stream contain very low concentrations of trace impurities for sequestration or enhanced oil recovery. Further details of the projects objectives are provided in response to question 2 of the waiver petition. This waiver is for inventions of Praxair.

The total estimated cost of the cooperative agreement is \$5,400,745, with Praxair providing \$2,160,298 or 40%, while the remaining cost share of 60%, or \$3,240,447, will be provided by DOE. The period of performance is from January 1, 2009 through December 31, 2011.

In its response to questions 5 and 6 of the attached waiver petition, Praxair has described its technical competence in the field of industrial gases. Praxair states that it is one of the world's largest suppliers of industrial gases in North and South America and the second largest world wide. It is one of the world's largest suppliers of merchant CO₂ and a technical leader in CO₂ purification. Praxair has successfully designed, engineered, and constructed a variety of CO₂ purification systems for a broad range of industrial and natural CO₂ sources including hydrogen and ammonia plants, ethylene oxide plants, ethanol plants, natural gas processing facilities and natural wells. Praxair further details its experiences and relationships in the electrical power generating industry that place it in a unique position to develop and commercialize technology in this area. Praxair's response demonstrates its technical competency in the field of hydrogen purification.

In its response to questions 9 and 10 of the attached waiver petition, Praxair states that grant of the waiver will provide a competitive alternative to the four major worldwide industrial gas suppliers. Praxair states that grant of the waiver will increase the incentive to rapidly commercialize the technology to benefit the U.S. economy and create an additional option in the market place for power producers to meet the anticipated greenhouse gas legislation. Grant of the waiver will have a positive effect on competition and market concentration.

The subject cooperative agreement will be modified to add the Patent Rights--Waiver clause in conformance with 10 CFR 784.12, wherein Praxair has agreed to the provisions of 35 U.S.C §§ 202, 203, and 204. This waiver clause will also include a paragraph entitled U.S. Competitiveness, in which Praxair agrees to substantial U. S. manufacture of subject inventions (attached hereto). Additionally, Praxair agrees not to transfer subject inventions to any other entity unless that other entity agrees to these same requirements.

Considering the foregoing, it is believed that granting the waiver will provide the Petitioner with the necessary incentive to invest resources in the commercialization of the results of the cooperative agreement in a fashion which will make the cooperative agreement's benefits available to the public in the shortest practicable time. In addition, it would appear that grant of the above requested waiver would not result in an adverse effect on competition nor result in excessive

available to the public in the shortest practicable time. In addition, it would appear that grant of the above requested waiver would not result in an adverse effect on competition nor result in excessive market concentration. Therefore, 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, as set forth above, be granted.



Mark P. Dvorscak
Deputy Chief Counsel
Intellectual Property Law Division

Date: April 14, 2009

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

CONCURRENCE:



Randy Pennington
Division of Clean Coal Energy Research
Office of Fossil Energy, FE-221

Date: _____

APPROVAL:



Paul A. Gottlieb
Assistant General Counsel
for Technology Transfer and
Intellectual Property, GC-62

Date: _____

(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.