

STATEMENT OF CONSIDERATIONS

REQUEST BY QUESTAIR TECHNOLOGIES INC. (QUESTAIR) FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN RIGHTS TO INVENTIONS MADE UNDER A SUBCONTRACT UNDER COOPERATIVE AGREEMENT NUMBER DE-FC04-02AL67613, DOE WAIVER NO. W(A) 02-046.

The Petitioner, QuestAir, has requested a waiver of all domestic and foreign patent rights to inventions that it may conceive or first reduce to practice in the course of QuestAir's work as a subcontractor under Cooperative Agreement Number DE-FC04-02AL67613 entitled "Development of a Turnkey Commercial Hydrogen Fueling Station" with the U.S. Department of Energy (DOE).

The work to be done under the prime cooperative agreement will be the development of a turnkey hydrogen fueling station for fuel cell vehicles. Individual research and development taskings include the development of a low-cost natural gas to hydrogen reformer system, the purification of the hydrogen stream, and the storage, metering and dispensing of highly purified hydrogen into commercial vehicles. Petitioner has been tasked to design an improved Pressure Swing Adsorption (PSA) hydrogen purification system. Petitioner will research advanced adsorption materials and novel process cycles to obtain effective hydrogen gas purification. The research and work to be performed under this agreement will not adversely impact public health, safety or welfare—on the contrary, the results of this research should lead to a substantial health benefit since hydrogen fuel cell sources have zero emissions of pollutants such as carbon dioxide, sulfur dioxide, and particulates. Better air quality and lowered dependence on unstable overseas oil sources would be the intended impact of this research.

The cooperative agreement covers a period from January 1, 2002 through December 31, 2004 at a total cost to DOE of \$4,580,000. The money to be provided as follows: FY02 - \$1,088,000; and FY03 -- \$3,492,000. The prime contractor, Air Products and Chemicals, Inc., will provide at least \$3,455,00 as a cost share over the life of this agreement (43%). Petitioner's portion of this project shall amount to \$409,580. Petitioner shall receive \$233,459 from the prime contractor and shall itself provide \$176,121 as a cost share (43%). The government contribution will be made by the DOE Hydrogen Fuel Cells and Infrastructure Technologies Program.

QuestAir is a privately owned, Canadian-based, business with no U.S. manufacturing base. QuestAir has over 27 years of experience in the design and commercialization of gas separation and gas purification technologies. QuestAir developed and is the patent holder on various PSA technologies that they will be tasked to improve upon and incorporate into the overall hydrogen fueling station. The grant of this waiver will aid in the swift, thorough and worldwide commercialization and implementation of functional hydrogen refueling stations for fuel cell powered vehicles at the industrial and consumer

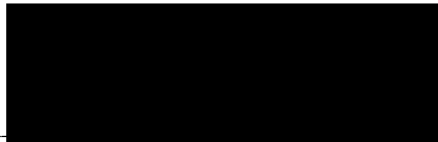
QuestAir has agreed to abide by 35 U.S.C. §§ 202, 203 and 204, as well as the provisions of the Standard Patent Rights clause for an Advance Waiver. Despite being a modest-sized business without a U.S. manufacturing base, QuestAir has agreed to the standard U.S. Competitiveness Clause (attached). QuestAir will abide by the Export Control laws and will require its licensees, if any, to do the same. QuestAir will expend such sums as may be required to maintain the necessary patent protection and provide incentive for commercial development of subject inventions. Additionally, QuestAir has affirmatively agreed to the background data rights clause, as it applies to the technology being developed under the subcontract, as found in 48 CFR 952.227-14, Alternate VI (February 1998) (attached).

Considering Petitioner's status as a global leader in and patent holder of PSA hydrogen purification technologies, it is concluded that the grant of the requested waiver is most likely to help achieve the commercialization success and actual implementation on a national and potential global scale of the overall hydrogen fueling station that is the goal of the prime contract.

Jim C. Durkis
Patent Attorney
DOE, Albuquerque Operations Office

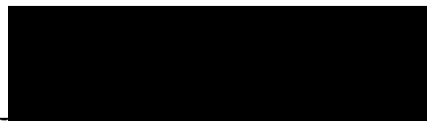
Based on the foregoing Statement of Considerations and the representations of the attached Waiver Petition, it is determined that the interests of the United States and the general public will best be served by a waiver of patent rights of the scope described above and, therefore, the waiver is granted.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

CONCURRENCE:



Steven G. Chalk
Program Manager, Office of Hydrogen
& Fuel Cells Infrastructure
Technologies Program, E1-2H

Date: 7/29/03



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

Date: 8-1-03

DOE Headquarters Project Manager: Peter R. Devlin

U.S. Competitiveness Provision

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 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 technology be recognized in some appropriate manner, e.g., recoupment of Government investment, etc. The Contractor further agrees to make the above condition binding on any assignee or licensee or any entity otherwise 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 any waived invention is suspended until approved in writing by DOE.