

STATEMENT OF CONSIDERATIONS

REQUEST BY UNITED TECHNOLOGIES RESEARCH CENTER FOR WAIVER OF U.S. AND FOREIGN RIGHTS IN AN IDENTIFIED INVENTION MADE UNDER LAWRENCE BERKELEY NATIONAL LABORATORY SUBCONTRACT NO. 6911373 WITH UNITED TECHNOLOGY RESEARCH CENTER. W(I) 2012-009; CH-1609

The Petitioner, United Technologies Research Center (UTRC), has requested a waiver of domestic and foreign patent rights in the following invention and any related patent applications:

DOE Docket No.: S-127,171

Title: "Fuel-Flexible Fuel Injector"

Abstract: a fuel injector and pre-mixer for an industrial gas turbine.

The above-identified subject invention was made under subcontract 6911373 between UTRC and Lawrence Berkeley National Laboratory (LBNL), which is managed and operated by The University of California under the prime contract DE-AC02-05CH11231. The invention was conceived and reduced to practice solely by UTRC employees. The purpose of this waiver is to vest UTRC with clear title to the invention to enable UTRC (and its affiliated companies) to commercialize the technology forming the subject matter of the work under the subcontract with LBNL.

Referring to item 3 in the waiver petition, the invention arose out of UTRC's participation in low swirl burner concept development and testing for high hydrogen, medium hydrogen and natural gas fired F class gas turbine engines. The Subcontract value is \$900,000 and ended on September 30, 2011.

Referring to items 5-9 of the waiver petition, United Technology Corporation (UTC) is a United States based corporation with recognized expertise and high quality products in many markets such as gas turbine engines for jet propulsion and power applications by Pratt & Whitney, a wholly-owned subsidiary UTC. UTRC is a central research and development center that supports all of the UTC business units. UTRC

has been a leader in developing technology for fuel injection and combustion and has been pivotal in developing low swirl burner technology for other business units within UTC for other applications. With UTC's work for Pratt & Whitney, UTC's experience has focused heavily on fuel injection and fuel/air mixing concepts similar to those that will be necessary for the development of HHS/LSI (High Hydrogen Fuel/Low Swirl Injector) combustors.

The grant of this waiver will help ensure that UTRC can realize a fair return on its current and future investments thus motivating a more rapid introduction into the commercial market place. UTC has invested 10's of millions of dollars into the development of gas turbine combustor technology. It is expected that this technology will help Pratt & Whitney Power System's industrial gas turbine business. However, that market share is less than 5% of either dollar sales or number of units and therefore will not produce any anticompetitive effects. See Petition, item 10.

The 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)). All of these provisions will be contained in the Confirmatory License to be executed by the Petitioner when a U.S. patent is filed. In brief, 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. The 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 the Petitioner or other such entity receiving rights in the waived invention undergo a change in ownership amounting to a controlling interest, then the waiver, assignment, license,

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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 subject invention 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.





Gary Drew
Assistant Chief Counsel
Intellectual Property Law Division

Date: 8/15/12

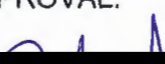

Based upon the foregoing Statement of Considerations and representations in the attached waiver petition, it is determined that the interests of the United States and the general public will best be served by a waiver of patent rights of the scope described above, and therefore the waiver is granted.

CONCURRENCE:



Peter Rozelle
Turbines Program Manager

Date: 15 Aug 12

APPROVAL:



John Lucas
Assistant General Counsel for
Technology Transfer and Intellectual
Property

Date: 8/15/2012