#### STATEMENT OF CONSIDERATIONS

#### REQUEST BY ALLEGHENY TECHNOLOGIES WAH CHANG DIVISION FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN INVENTION RIGHTS UNDER DOE COOPERATIVE AGREEMENT NO. DE-FC26-05NT42513; W(A)-05-053, CH-1340

The Petitioner, Allegheny Technologies, Wah Chang Division (ATI) was awarded a cooperative agreement for the performance of work entitled, "Evaluation of a Functional Interconnect for Solid Oxide Fuel Cells." The purpose of the project is the creation of a materials system for a solid oxide fuel cell interconnect. Work will focus on metallic materials such as ferritic stainless steels and nickel-base alloys in various combinations and configurations. Testing will focus on the elevated temperature degradation of surfaces in simulated fuel cell environments. This award is a Core Technology Program under the Solid State Energy Conversion Alliance (SECA). The Core Technology Program provides a focused applied research and development component of SECA – research that is typically longer term in nature, and thus not the focus of sustained industry investment. It focuses on the R&D efforts of universities, national laboratories, and other research institutions. The Core Technology Program participants perform work subject to the exceptional circumstance made for the SECA program: this patent waiver requires ATI to offer to each of the SECA Industrial Teams the option to enter into a non-exclusive license for subject inventions developed under the Core Program, upon terms that are reasonable under the circumstances, including royalties.

As stated in ATI's attached amended response to question 3, the total estimated cost of the cooperative agreement is \$390,362 with the DOE share being \$305,939 or 78%. ATI is cost sharing 22% or \$84,423. The period of performance is one year from July 1, 2005 through June 30, 2006.

In its response to question 5 of the attached waiver petition, ATI has described its technical competence in the field of solid oxide fuel cells (SOFCs). It is an established manufacturer of the alloys used for SOFCs (ferritic stainless steels and nickel-base superalloys. ATI Wah Chang offers hydrogen separation /purification membranes, which are commonly used in fuel cell applications. ATI has attached a technical data sheet presented on this technology, and stated that several U.S. Patent applications in the area of materials and processes for solid oxide fuel cell applications have been filed. ATI has also submitted several technical papers it has presented in this technological area. Cover pages of these papers are attached. ATI's response demonstrates its technical competency in the field of solid oxide fuel cell materials.

In its response to question 10 of the attached waiver petition, ATI states that substantial competition exists in several areas, including ferritic stainless steels, nickel-base superalloys, and ceramic interconnects. ATI states there is also an alternative technology which uses seal-less all ceramic components not incorporating metallic materials. Therefore grant of the waiver should have a positive effect on competition and market concentration.

The subject subcontract will be modified to add the Patent Rights--Waiver clause in conformance with 10 CFR 784.12, wherein ATI 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 ATI agrees to substantial U.S. manufacture of subject inventions (attached hereto). Additionally, ATI agrees not to transfer subject inventions to any other entity unless that other entity agrees to these same requirements. And as mentioned above, the waiver clause will contain language requiring ATI to offer to each of the SECA Industrial Teams the option to enter into a non-exclusive license for subject inventions developed under the Core Program, upon terms that are reasonable under the circumstances, including royalties. The field of use of the license could be limited to solid oxide fuel cell applications, although greater rights could be offered at the discretion of ATI. The offer must be held open for at least one year after the U.S. Patent issues and ATI must

agree to negotiate in good faith with any and all Industrial Teams or Team members that indicate a desire to obtain at least a non-exclusive license. Exclusive licensing may be considered if only one Industrial Team or Team member expresses an interest in licensing the invention. Partially exclusive licenses in a defined field of use may be granted to an Industrial Team, as long as doing so would not preclude any other Industrial Team that indicates a desire to license the invention from being granted at least a non-exclusive license. However, the Government will not require ATI to grant any exclusive or partially exclusive licenses. ATI must enter into good faith negotiations with the individual industrial team or team member. In the event the parties to the negotiation cannot reach agreement on the terms of the license, as set forth above, within nine months of initiating good faith negotiations, the Industrial Team Members shall have the right of a third party beneficiary to maintain an action in a court competent jurisdiction to force licensing on reasonable terms and conditions. Any assignment of the invention must be made subject to these 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 agreement in a fashion which will make the 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 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 Assistant Chief Counsel

Office of Intellectual Property Law

Date Mm 21, 2006

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, and therefore the waiver is granted. This waiver shall not apply to any modification or extension of this agreement, where through such modification or extension, the purpose, scope, or cost of the agreement is substantially altered.

CONCURRENCE://

Beorge Rudins Deputy Assistant Secretary for Clean Coal, Office of Fossil Energy, FE-20

Date April 10, 2000

APPROVAL:

Property, GC-62

Paul A. Gottleb Assistant/General Counsel for Technology Transfer and Intellectual

Date <u>4-13-00</u>

(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.

# *WAIVER ACTION - ABSTRACT* W(A)-05-053 (CH-1340)

#### REQUESTOR

#### CONTRACT SCOPE OF WORK

## **RATIONALE FOR DECISION**

### **DISPOSITION**

Allegheny Technologies Wah Chang Division under DOE contract No. DE-FC26-05NT42513 Evaluation of a Functional Interconnect for Solid Oxide Fuel Cells

22% cost sharing