

## STATEMENT OF CONSIDERATIONS

REQUEST BY HEADWATERS TECHNOLOGY INNOVATION GROUP FOR AN  
ADVANCE WAIVER OF DOMESTIC AND FOREIGN INVENTION RIGHTS UNDER  
DOE COOPERATIVE AGREEMENT NO. DE-FC26-05NT42448; W(A)-05-023, CH-1287

The Petitioner, Headwaters Technology Innovation Group (HTI) was awarded a cooperative agreement for the performance of work entitled, "Production and Optimization of Coal-Derived High Hydrogen Content Fischer-Tropsch Liquids". The purpose of the cooperative agreement is to select the optimum Fischer-Tropsch (FT) catalyst for producing high-hydrogen content FT liquids based on bench-scale testing of high and medium alpha iron-based catalysts and to produce barrel quantity samples of high-hydrogen content FT liquids in a process demonstration unit. This waiver is only for inventions of HTI made under its cooperative agreement<sup>1</sup>.

The total estimated cost of the cooperative agreement is \$4,295,013 with the DOE share being \$3,000,066 or 69%. The remaining cost-share of \$1,294,947 or 31% will be provided by HTI. The period of performance is twenty-seven months from July 1, 2005.

In its response to question 5 of the attached waiver petition, HTI has described its technical competence in the field of Fischer-Tropsch catalysts. It began developing FT catalysts in 1996 through a collaboration with China's Institute of Coal Chemistry. In 1999-2000 HTI gained full ownership of the technology and has continued research and development since then on its own. For the past 5 years, HTI has done extensive research and development on catalysts for FT processes. It has five issued U.S. patents on this technology (copies of which are attached), 3 U.S. patent applications, and several international patent applications on the relevant technology. Further details of HTI's technology are provided in response to this question. HTI's response demonstrates its technical competency in the field of FT catalysts.

In its response to question 10 of the attached waiver petition, HTI states that other major oil companies are investing in FT technology, and these companies are larger than HTI and in a more dominant position. The waiver should help HTI keep the FT playing field more fair and open to third parties interested in developing their own FT projects. Therefore 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 HTI 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 HTI agrees to substantial U.S. manufacture of subject inventions (attached hereto). Additionally, HTI 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 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.

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<sup>1</sup> See attached e-mail from petitioner indicating FT-Solutions is pursuing this work without subcontractors.

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

Date Oct 11, 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:

[REDACTED]  
Edward Schmetz  
Office of Sequestration, Hydrogen  
& Clean Coal Fuels  
Office of Fossil Energy  
Deputy Assistant Secretary, FE-24

Date OCTOBER 23, 2006

APPROVAL:

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

Date 10-31-06

(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)-05-023 (CH-1287)

### REQUESTOR

Headwaters Technology  
Innovation Group under  
DOE Contract  
No. DE-FC26-05NT42448

### CONTRACT SCOPE OF WORK

Production and Optimization of Coal-  
Derived High Hydrogen Content  
Fischer-Tropsch Liquids

### RATIONALE FOR DECISION

31% cost sharing

### DISPOSITION