

STATEMENT OF CONSIDERATIONS

REQUEST BY CATERPILLAR, INC. FOR AN ADVANCE WAIVER OF PATENT RIGHTS TO INVENTIONS MADE UNDER COOPERATIVE AGREEMENT DE-FC26-07NT43277; W(A) 09-018; CH-1482

As set out in the attached waiver petition and in subsequent discussions with DOE Patent Counsel, Caterpillar, Inc. (Caterpillar) has requested an advance waiver of domestic and foreign patent rights for all subject inventions made under the above subject cooperative agreement, "Multi-Component Nanoparticle Based Lubricant Additive to Improve Efficiency and Durability in Engines". The waiver will apply to inventions made only by Caterpillar employees.

Referring to item 2 of Caterpillar's petition, the purpose of this agreement is to develop nanoparticle based additive technology applicable to engine lubricants. This will involve investigation of the various chemical components that positively impacts wear friction behavior in engine environments and utilization of this knowledge to develop functional nanoparticle based additive compositions for a hydrocarbon-based lubricant system. The work under this agreement is expected to take place from October 1, 2007 through September 30, 2009 at a total cost of \$823,216. Caterpillar will be obligated to cost share \$331,665 or 40%, of the total cost of the project. DOE is providing the remaining cost share of about 60% or \$491,551, \$100,000 of which will be directed toward a Federally Funded Research and Development center (FFRDC) through an Interentity Work Order.

Referring to questions 5 and 6 in Caterpillar's waiver petition, Caterpillar states it has experience in making single and multi-component nanoparticle composites using a special chemo-mechanical process involving a high energy ball milling method. Caterpillar is currently engaged in a Research and Development program with the University of Arkansas to develop multi-component active nanoparticle additive to improve friction and wear characteristics in highly loaded systems using metal sulfide and other specialty chemicals that are effective in boundary lubrication regime. Caterpillar has filed a provisional patent application jointly with the University of Arkansas on the process for making surface stabilized multicomponent MoS₂ nanoparticles that are effective in boundary lubrication. Caterpillar has developed a communications system integrating a fleet manager in the mine office and a remote manager at a work site. Caterpillar is a global company, and the world's largest manufacturer of earthmoving, materials handling, construction and mining equipment and is a world leader in the design, development, production and marketing of medium and heavy duty diesel engines, gas engines, and industrial gas turbine engines. Caterpillar has demonstrated its competency in the field nanoparticle composites.

Referring to question 10 of the waiver petition, granting this waiver is not anticipated to have any adverse impact on competition, as there are several large, global, and very competitive manufacturers that serve the domestic diesel engine market. Caterpillar points out that the subject matter of this cooperative agreement is only one of many technology development projects being pursued by Caterpillar, and the many diesel engine manufactures have various technology development programs serving to keep the balance of competition relatively stable. Grant of the waiver will therefore not have an adverse impact on competition.

This advance waiver of the Government's rights in inventions is subject to the usual advance patent waiver licensing provisions, and the government license, march-in rights, and preference for U.S. industry provisions set out in 35 U.S.C. 202-204. The advance patent waiver also includes the attached U.S. Competitiveness clause (paragraph t) which requires products embodying any waived invention or produced through the use of any waived

invention be manufactured substantially in the United States unless the participant can show to the satisfaction of DOE that it is not commercially feasible to do so. The contractor further agrees to make the above condition binding on any assignee, licensee or other entity 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 the waived invention is suspended until approved in writing by DOE.

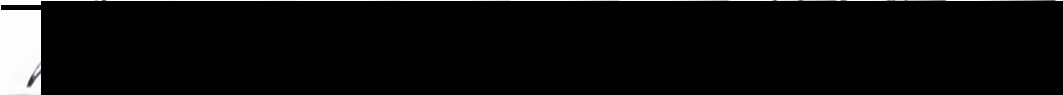
Considering the foregoing, it is believed that granting this waiver will provide Petitioner with the necessary incentive to invest its resources in the commercialization of the results of the agreement in a fashion which will make the technology available to the public in the shortest practicable time. 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.

Mark P. Dvorscak
Deputy Chief Counsel
Intellectual Property Law Division

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 be served by a waiver of patent rights of the scope described above, and therefore the waiver is granted. This waiver will not apply to any modification or extension of the cooperative agreement, where through such modification or extension, the purpose, scope or cost of the cooperative agreement has been substantially altered.

CONCURRENCE:

APPROVAL:


Patrick Davis
Office of the FreedomCAR and Vehicle
Technologies Program, Office of Energy
Efficiency and Renewable Energy, EE-2G

Date 1/6/12


John T. Lucas
Assistant General Counsel for Technology
Transfer and Intellectual Property, GC-62

Date 1/9/12

(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.