STATEMENT OF CONSIDERATIONS

Advance Class Waiver of Patent Rights for Technology Developed Under DOE Funding Agreements Relating to DOE's Natural Gas Hydrate Product Line; Strategic Center for Natural Gas (SCNG); DOE Solicitation No. DE-PS26-01NT40869; W(C)-02-002; CH1117

The Department of Energy anticipates providing federal assistance for research and development to develop and support the Natural Gas Hydrate product line which is part of the Strategic Center for Natural Gas (SCNG). It is anticipated that 5-15 prime contracts will be awarded under this program. As set out in the following, this advance class waiver is intended to apply to inventions of all current and future contractors and subcontractors participating in this program who agree to the terms of the waiver, regardless of tier, except participants obtaining title pursuant to P.L. 96-517, as amended, and National Laboratories.

Methane hydrates represent a potentially enormous natural gas resource. Current resource estimates for methane in hydrates in the United States are between 100,000 and 300,000 trillion cubic feet. The DOE, the National Energy Technology Laboratory (NETL), and the SCNG are committed to developing a program to obtain the information necessary to bring methane hydrates into the natural gas resource base, to ensure safe drilling operations in and around natural hydrate accumulations, to better understand the effects of hydrate dissociation on seafloor stability, and to evaluate the utility of gas hydrates for transporting strended gas to market. This solicitation will focus on gas hydrates in the Gulf of Mexico and the North Slope of Alaska.

Under the Natural Gas Hydrate Product line, DOE is selecting a number of participants to perform research and development projects that will result in information and technology that promotes: 1) safe drilling through hydrates, 2) better understanding of seafloor stability problems related to gas hydrates, 3) improved methodologies for resource characterization, and 4) production. R&D proposals for work in Alaska will focus on 1) improved resource characterization of hydrates in the Alaskan permafrost, 2) planning and executing production test wells, and 3) obtaining reservoir information from wells of opportunity.

Multidisciplinary teaming arrangements among participants are required. Applicants must consist of at least two independent team members. DOE anticipates that technologies or methodologies which are successfully developed under this solicitation will be commercialized for use by, or incorporated into, the natural gas transmission and distribution infrastructure. To increase the probability of success, each team will, at a minimum, consist of a technology developer and a manufacturer or implementor of the technology or methodology.

Considering the above, it is the purpose of this class waiver to vest title to the parties' inventions made under this program with the awardees in a fashion enabling them to expediently commercialize the various technologies. Accordingly, DOE will waive the Government's title to subject inventions, other than inventions made by Bayh-Dole participants pursuant to P.L. 96-517, as amended, or National Laboratories, to the respective prime contractor and other entities as may be designated by the parties agreeing to the terms of this waiver. Since the Natural Gas Hydrate project obligates 20-

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50 per cent cost sharing, it is expected that patent rights will be allocated among the participants on the basis of cost.

This advance class waiver of the Government's rights in inventions is subject to the usual advance patent waiver and background data licensing provisions. The terms of the advance patent waiver include the usual Government license, march-in rights, and preference for U.S. industry provisions comparable to those set out in 35 U.S.C. §§ 202-204. The advance patent waiver also includes the attached U.S. Competitiveness clause which requires that 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. In the event 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 will further agree to make this 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 the waived invention is suspended until approved in writing by DOE.

The grant of this class waiver is not expected to result in adverse effects on competition or market concentration. Rather the waiver should enhance competition and growth of the natural gas infrastructure of the United States, and in particular, broaden the base of U.S. developers and manufactures as contemplated by the Natural Gas Hydrate Product Line. DOE has the right to require reports of the utilization or the efforts at utilization that are being made for the waived inventions.

This advance class waiver shall apply to each of the respective tearning arrangements, upon the Contracting Officer's written notice to Field Patent Counsel that the prime contractor is obligated to provide at least 20% cost sharing, and will remain in effect as long as such cost sharing is maintained, in aggregate, over the term of the agreement. No separate waiver petition is required to be submitted.

In addition to the above, all participants in the Natural Gas Hydrate project, other than participants that are domestic small businesses or non-profit organizations under P.L. 96-517, as amended, or National Laboratories, shall give DOE written notice of their acceptance of the terms and conditions of this class wavier prior to entering into any agreement incorporating the terms of this waiver. Except as otherwise specifically approved by Field Patent Counsel, a participant's acceptance of an agreement under the Natural Gas Hydrate project, at any tier, shall constitute such participant's notice to DOE that it is aware of its right to seek a waiver independently of patent rights but elects to accept the terms and conditions of this class waiver. A participant may seek its own individual waiver if it does not agree to the terms and conditions of this class waiver.

In the event a participant does not participate in subsequent phases of a Natural Gas Hydrate project, the prime contractor or other entity, as the remaining participants in such project may determine, shall retain as a minimum a royalty-free, nonexclusive license throughout the world, with the right to grant sublicenses in each subject invention

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held by such participant pursuant to this class waiver, except as otherwise approved by Field Patent Counsel.

Considering the foregoing, and in view of the statutory objectives to be obtained and the factors to be considered under DOE's waiver regulation, 10 C.F.R. 784, all of which have been considered, it has been determined that this class waiver as set forth above will best serve the interest of the United States and the general public. It is recommend that the waiver be granted.

> Mark P. Dvorscak Assistant Chief Counsel Intellectual Property Law Division

Date: September 17, 2002

Based on the foregoing Statement of Considerations, it is determined that the United States and the general public will best be served by a waiver of rights of the scope described above, 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:

Physical Scientist Office of Natural Gas and Petroleum Technology Office of Fossil Energy

Date 10/09/02

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Assistant General Counsel for Technology Transfer and Intellectual Property

Date 10-15-02-

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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.

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