

STATEMENT OF CONSIDERATIONS

REQUEST BY BP AMERICA, INC., FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN INVENTION RIGHTS UNDER DOE COOPERATIVE AGREEMENT NO. DE-FC26-01NT41145 W(A)-01-023, CH-1070

The Petitioner, BP America (BP), was awarded this cooperative agreement for the performance of work entitled, "CO2 Capture Project: An Integrated, Collaborative Technology Development Project for Next Generation CO2 Separation, Capture, and Geologic Sequestration". The purpose of the cooperative agreement is to develop new, breakthrough technologies to reduce the cost of CO2 separation, capture, transportation and sequestration by one-half over today's best available technology for existing facilities, and by three-quarters for new facilities, by the end of 2003. According to BP's response to question 2 of the attached waiver petition, if current costs are \$40-60/ton of CO2 avoided, or %150-220/ton of carbon, as studies suggest, then a very significant and important goal first step towards DOE's long-term goal of reducing total costs to \$10/ton of carbon avoided will be achieved by this project, in three years. The scope of the contract will consider a variety of fuel types, combustion sources and geologic sequestration targets that have the potential to materially reduce U.S. GHG emissions.

To accomplish the above stated goals of this project, a team of nine major international energy companies including Chevron, Norsk Hydro, Royal Dutch/Shell, Statoil, Suncor Energy, Pan Canadian Resources, ENI S.p.A., Texaco, and BP, has formed the CO2 Capture Project (CCP-a joint industry project). This team represents a significant market for the technologies to be developed, having combined emissions of roughly 193 million tons of CO2 annually. Additionally, the team is in the unique position of also operating and utilizing many of the geologic sinks needed to sequester the CO2. The CCP team will work with BP under subcontracts to BP's prime cooperative agreement. This waiver request is for inventions of BP and its lower tier subcontractors.

As set out above, BP has also requested a waiver of patent rights in the subject inventions of its lower tier subcontractors. This waiver contemplates that the parties may allocate title or other rights to inventions among themselves as they deem appropriate. For subcontractors who provide cost sharing at twenty percent (20%), DOE expects title to any such subcontractor inventions to vest in the subcontractor. Any allocation of title will be subject to the terms and conditions of this waiver, including the U.S. Competitiveness clause. It is believed that this approach will facilitate timely commercialization of the technology by furthering the establishment of business and technical relationships between the parties and providing a mechanism for obtaining meaningful cost sharing between the parties. Accordingly, title will be waived directly to a subcontractor upon mutual agreement of the Petitioner and the subcontractor. However, this waiver will only apply to such subcontractor(s) who provide a letter to DOE acknowledging their right to ask for a waiver and agreeing to the terms of this waiver. This waiver shall not impact the rights of those parties subject to Public Law 96-517, as amended, nor shall it grant any rights in inventions made by employees of the National Laboratories.

The total estimated cost of the cooperative agreement is \$9,994,1655 with BP cost sharing just over 50%, or \$4,999,165. DOE's share is \$4,995,000. The planned performance period is July 11, 2001 through November 11, 2004.

In its response to questions 5 and 6 of the attached waiver petition, BP has detailed its technical competence in the field of CO2 sequestration. BP is an integrated oil company having numerous facilities throughout the world that use gas turbines, furnaces or power generation equipment. This equipment emits CO2 to the atmosphere. BP is also one of the largest producers of natural gas and has expertise in numerous gas processing processes including removal of sulfur, CO2, ammonia, water and other components from natural gas or refinery gas streams. Petitioner also has expertise in injecting CO2 into geologic reservoirs. The technology field covered by the work under the cooperative agreement includes developing better and less expensive processes to both capture and sequester CO2. BP's response fully demonstrates its technical competence in the field of CO2 sequestration.

In its response to questions 9 and 10 of the attached waiver petition, BP states that grant of the waiver will assist in commercialization of the CO2 sequestration technology because BP is a likely source to sponsor further development of the technology, and that commercialization will most likely come through further development contracts with engineering contractors or technology developers. Grant of the waiver will thus have a positive effect on competition and promote widespread application and commercialization of technology developed under the agreement.

The subject cooperative agreement will be modified to add the Patent Rights--Waiver clause in conformance with 10 CFR 784.12. This waiver clause will also include a paragraph entitled U.S. Competitiveness, in which BP agrees to substantial U. S. manufacture of subject inventions. (attached hereto). This U.S. Competitiveness paragraph has been modified, through negotiations with BP and DOE programmatic officials and patent counsel, to reflect the unique circumstances of this agreement, namely, the site specific nature of the work, performed on a global scale. Attachment "E", referred to in BP's request for deviation from the standard U.S. Competitiveness language, is attached.

Additionally, BP agrees not to transfer subject inventions to any other entity unless that other entity agrees to these same requirements. The petitioner has further agreed to modification of the data clause of the subject cooperative agreement (48 C.F.R. 952.227-14) by adding paragraph (k), Alternative VI, concerning contractor licensing of data.

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: Dec 20 2001

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 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:



George Rudins
Deputy Assistant Secretary for Coal
And Power Systems
Office of Fossil Energy

Date: 12/20/01

APPROVAL:



Paul A. Gottlieb
Assistant General Counsel
for Technology Transfer and
Intellectual Property

Date: 12-21-01

(t) U. S. COMPETITIVENESS (DE-FC26-01NT41145 modification)

The Contractor agrees that any products or processes embodying any waived invention, or practiced through the use of any waived invention will be manufactured or practiced substantially in the United States unless the Contractor can show to the satisfaction of the DOE that it is not commercially practicable to do so. It is recognized, in part based on Attachment E to this contract, that it may not be commercially practicable to direct manufacture of any such product or practice of any such process in the United States in the area of CO₂ separation, capture and sequestration where other governments are also encouraging similar developments and many potential developer or users of this technology are located outside the United States. In the event that 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. DOE written approval, which shall not be unreasonably withheld, is required to maintain the waiver, assignment, license or other transfer of rights, should the Contractor undergo a change in ownership amounting to a controlling interest.

4.27 ATTACHMENT E – U.S. COMPETIVENESS

The technology field covered by the work under this contract includes developing better and less expensive processes to separate, capture and sequester CO₂ that otherwise would be emitted to the atmosphere from industrial sources such as gas turbines, furnaces or power generation facilities and pre-combustion processes to enhance the separation, capture and sequestration of CO₂. Emissions of CO₂ from similar sources occur worldwide.

Commercialization of processes and equipment to separate, capture and sequester CO₂ and processes involving pre-combustion is expected to occur at chemical plants, refineries or gas and oil production facilities. This could occur in the United States or elsewhere. There are no current requirements in the United States to install processes or equipment to capture and sequester CO₂ from gas turbines, furnaces or power generation facilities or to install pre-combustion processes. In some other countries, tax policies or other incentives are in play and may result in commercial implementation of this technology sooner than in the United States.

Based on the above, it is expected that initial commercialization efforts may more likely take place outside of the United States. It is also expected that any such commercialization would be applicable to chemical plants, refineries and power generation facilities in the United States.

Application of any CO₂ capture and sequestration, and pre-combustion technology in the United States, whether done voluntarily or through legal requirement could occur at Contractor's largest facilities in the United States including its Prudhoe Bay natural gas reinjection operations in Alaska or its large refineries in Texas and Indiana. In such cases, a substantial benefit will be provided to the United States economy. Also to the extent that any commercialization outside the United States is the result of commercial trials requiring additional development, there is efficiency gained by those located in the United States later installing commercially proven equipment or processes.