

STATEMENT OF CONSIDERATIONS

REQUEST BY BECTHEL HYDROCARBON TECHNOLOGY SOLUTIONS FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN INVENTION RIGHTS UNDER DOE COOPERATIVE AGREEMENT NO. DE-FE0000896, W(A)-2012-030; CH-1667

The Petitioner, Bechtel Hydrocarbon Technology Solutions (Bechtel) was awarded a subcontract under the subject cooperative agreement between the Department of Energy and SRI International (SRI) for the performance of work entitled, "CO₂ Capture from IGCC (Integrated Gasification Combined Cycle) Gas Streams Using the AC-ABC (ammonium carbonate-ammonium bicarbonate) Process". The objective of the subcontract is to show the effectiveness of two technologies - one from SRI and one from Bechtel. This will include four to six weeks of testing at the National Carbon Capture Center in Wilsonville, Alabama. SRI's technology removes H₂S and CO₂ from a vapor stream and Bechtel's technology (referred to as the Bechtel Pressure Swing Clause Sulfur Recovery Unit (BPSC)) converts the toxic H₂S into elemental sulfur. BPSC is necessary to achieve low levels of sulfur in the resulting CO₂ stream. The combined technologies replace current methods (AGR- SRU- TGTU-Acid Gas Removal-Sulfur Recovery Unit-Tail Gas Treating Unit) and allow lower cost of compression and lower first year cost of electricity. SRI has the right to elect title to its inventions pursuant to the "Patent Rights-Small Business Firms and Nonprofit Organizations" clause of its contract. This waiver is for inventions of Bechtel only.

The total cost of the project is anticipated to be \$4,326,038 with SRI providing approximately 21% cost-share or \$897,660. DOE is providing the remaining 79% or \$3,428,378. SRI's cost share is to be attributed to Bechtel. The period of performance is anticipated to be from October 1, 2009 through December 31, 2013.

In its response to questions 5 and 6 of the attached waiver petition, Bechtel has described its technical competence in the field of sulfur processing. It has over eleven years of experience in sulfur processing for the hydrocarbon industry. It has installed equipment in over 50 plants in the United States and across the world. Bechtel states it is a co-inventor of the underlying BPSC technology, U.S. Patent No. 7,374,742, "Direct Sulfur Recovery System", a method for removing sulfur species from a gas stream at high pressure, without the use of a sulfur species removal process, such as an amine scrub. Bechtel cites two other U.S. patents relevant to this project, along with several publications that it has authored, all listed in response to question 5 of the petition. Bechtel has also licensed over ten different processes, which are described in response to question 5. In response to question 6, Bechtel has attached representative brochures related to sulfur work: Bechtel's Sulfur Recovery Center, and its Sulfur Technology Center Processes and Services. Bechtel's response demonstrates its technical competency in the field of sulfur processing.

In its response to question 10 of the attached waiver petition, Bechtel states that multiple competitive technologies exist that achieve the same energy reduction objectives as Bechtel's under this project. These objectives are well known in the industry. There is no evidence that grant of the waiver will have an adverse 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 Bechtel 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 Bechtel agrees to substantial U. S. manufacture of subject inventions (attached hereto). Bechtel agrees to submit annual reports on the utilization of a subject invention

or on efforts at obtaining such utilization that are being made by Bechtel and any of its licensee or assignees (see attached paragraph h). Bechtel also agrees to submit copies of any issued patents based on subject inventions. Additionally, Bechtel 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 cooperative agreement in a fashion which will make the cooperative 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.

[Redacted Signature]

Mark P. Dvorscak
Deputy Chief Counsel
Intellectual Property Law Division, CH

Date: September 11, 2012

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 subcontract, where through such modification or extension, the purpose, scope, or cost of the subcontract is substantially altered.

CONCURRENCE:

[Redacted Signature]

Carole A. Shomo
Acting Deputy Assistant Secretary
For Clean Coal, FE-20

Date: 1/29/13

APPROVAL:

[Redacted Signature]

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

Date: 1/29/2013

(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.

(h) Reporting on utilization of subject inventions.

The Contractor agrees to submit annual reports on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the Contractor and any of its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the Contractor, and such other data and information as DOE may reasonably specify. The Contractor also agrees to provide additional reports as may be requested by DOE in connection with any march in proceedings undertaken by DOE in accordance with paragraph (j) of this clause. To the extent data or information supplied under this paragraph is considered by the Contractor, its licensee or assignee to be privileged and confidential and is so marked, DOE agrees that, to the extent permitted by law, it shall not disclose such information to persons outside the Government.