Statement of Considerations

REQUEST BY MOSSEY CREEK ENERGY FOR DOMESTIC AND FOREIGN RIGHTS IN SUBJECT INVENTIONS S-124,118 AND S-124,156 MADE IN THE COURSE OF OR UNDER UT-BATTELLE PRIME CONTRACT NO. DE-AC05-00OR22725; DOE WAIVER DOCKETS: W(I) 2011-009 AND W(I) 2011-010 (COMBINED)

Mossey Creek Energy (Petitioner) has made a timely request for a waiver to worldwide *undivided* rights in *two* subject inventions (the subject inventions) made in the course of or under UT-Battelle, Prime Contract No. DE-AC05-00OR22725. The first invention(S-124,118) is entitled, "Thermally Conductive Electrically Insulating Silicon Containing Epoxy Molding Compound." The second invention (S-124,156) is "Sintered Polycrystalline Silicon Based Thermoelectrics." The subject inventions are both based on technology previously developed and patented by Petitioner related to a method of economically and safely milling silicon.

The subject inventions arose from collaboration between Petitioner's employee and a UT-Battelle employee working at the High Temperature Materials Laboratory (HTML) at the Oak Ridge National Laboratory (ORNL). The HTML is a DOE User Facility funded by EERE. Petitioner supplied samples of silicon powder to ORNL to convert into pellets which were then measured and characterized. No formal agreement was in place for the collaboration, but it is DOE's view that Section 9 of the Federal Nonnuclear Energy Research and Development Act of 1974, as amended (42 U.S.C. 5908), is applicable here. Section 9 vests title in DOE to "any invention...made or conceived in the course of or under any contract of the Administration." "Contract" is defined in Section 9 as including "any contract, grant, agreement, understanding or other arrangement, which includes research, development, or demonstration work . . . or subcontract." Thus, even though there was no formal agreement or exchange of funds, the collaboration is potentially an "arrangement" thereby requiring a waiver of rights under Section 9 in order for Petitioner to obtain title to these inventions. The invention was jointly made by the employees as a result of the interaction, thus UT-Battelle and Petitioner will each have undivided rights once the waiver is granted to Petitioner.

With respect to UT-Battelle's undivided rights in these inventions, UT-Battelle intends to execute an inter-institutional agreement which would designate the Petitioner as the lead in prosecuting, maintaining, and licensing the jointly-owned patents in exchange for a royalty share. It is noted that future collaborations with ORNL will be under a Cooperative Research and Development Agreement (CRADA), thus precluding the need for any additional waiver of rights.

Petitioner's experience and expertise will contribute substantially to the development of the inventions made under this arrangement. Petitioner has been developing this technology for over ten years and has invested in excess of $2M in time, patent expenses, and R&D. In addition, as mentioned above, Petitioner states that the technology is based upon patented technology developed and owned by Petitioner. Petitioner's employee co-inventor of these subject inventions, as well as of the aforementioned patent, is a recognized technical leader,

author, and entrepreneur in the field of applying physics through high temperature materials. He has extensive experience in the processing of silicon for a wide variety of ceramic, solar, chemical, electronic, and semiconductor applications.

Furthermore, Petitioner has close business relationships with leading silicon producers and epoxy molding compound industrial companies who will provide resources and manufacturing capabilities to help in expediting commercialization of the technology. Use of the technology disclosed in the subject inventions is expected to provide performance improvement in a number of devices such as hybrid car technology and semiconductors. Petitioner is currently soliciting capital to fund a beta operation for this technology and solar net shape silicon wafer technology and expects to raise around $12M in the near term.

Petitioner has agreed to accept the attached DOE waiver terms and conditions if the requested waiver is granted. Specifically, Petitioner agrees to abide by the conditions set forth at 35 U.S.C. §202-204 relating to the Government license, march-in rights, preference for U.S. industry, as well as U.S. Competitiveness.

Petitioner 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 Petitioner 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. Petitioner further agrees to make the above condition binding on any assignee or licensee or any entity otherwise acquiring rights to any waived invention, including subsequent assignees or licensees. Should Petitioner 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.

Granting of the waiver should have little effect on competition since there are several technology options, this being one of many previously or yet-to-be developed in the marketplace. Thus, there should not be undue market concentration of Petitioner products.

In view of the objectives and considerations set forth in 10 CFR 784.4, all of which have been considered, it is recommended that the requested waiver for worldwide patent rights in the subject inventions be granted.

[redacted]

Emily G. Schneider
Assistant Chief Counsel for
Intellectual Property

Date 1/30/2012

Based on the foregoing Statement of Considerations and the representations in the attached Waiver Petition, it is determined that the interest of the United States and the general public will best be served by a waiver of U.S. and foreign patent rights, and therefore, the waiver is granted.

CONCURRENCE:

[redacted]

Jerry L. Gibbs
Propulsion Materials
Vehicles Technology Program
Office of Energy Efficiency &
Renewable Energy

6/7/2012
Date

APPROVAL:

John T. Lucas
Assistant General Counsel for Technology
Transfer and Intellectual Property

6/13/2012
Date