STATEMENT OF CONSIDERATIONS

IDENTIFIED WAIVER OF DOMESTIC AND FOREIGN PATENT RIGHTS IN THE IDENTIFIED INVENTIONS, DOE DOCKET NOS. S-141,634; S-141,635; AND S-141,636, MADE DURING PERFORMANCE OF AWARD DE-FG02-99ER14986.

W(I)-2015-025; CH-1746; S-141,634; U.S. PATENT 7,982,069 W(I)-2015-026; CH-1747; S-141,635; U.S. PATENT 8,513,464 W(I)-2015-027; CH-1748; S-141,636; U.S. PATENT 8,710,265

This waiver request is for domestic and foreign rights in the above identified inventions made by an employee of Petitioner, Queen's University at Kingston (Queens). The University of California, Davis was the original recipient of award DE-FG02-99ER14986. In 2003, during the period of award, inventor Phillip Jessop changed employment from the University of California, Davis to Queens. In 2006, Jessop attempted to assign any rights in the invention to Queens, and Queens subsequently filed the original patent application. That same year, Queens acted through its technology transfer office PARTEQ to enter into an inter-institutional agreement with Georgia Institute of Technology, the institution of co-inventors Charles Eckert and Charles Liotta. Under the agreement, PARTEQ was the party responsible for commercialization of the jointly owned inventions and it has subsequently licensed the technology to multiple parties. Queens has requested the instant patent waiver to obtain clear title to a divided interest in the above identified invention.

The objective of the award was to develop new or more efficient methods for the conversion of C02 into useful organic products, via the design or discovery of new catalysts, ligands, solvents, and methods. In addition, the project aimed to develop screening techniques for the synthesis of areas or carboxylic acids, study the synthetic mechanisms of those areas or carboxylic acids, and develop bifunctional ligands capable of secondary interactions with C02. The immediate subject inventions relate to a solvent that reversibly converts from a non-ionic liquid mixture to an ionic liquid upon contact with a selected trigger such as C02. Removal of the trigger readily converts the solvent back to the non-ionic liquid.

The award funding allotted totaled \$250,000. The period of performance for the award was November 1,2002 to October 31, 2004, with a no-cost extension to October 31, 2005. There is no record of Petitioner receiving funds under this award.

Referring to items 5-9 of the waiver petition, Petitioner has employees with extensive experience and considered leaders in the field. Petitioner, through its technology transfer office, has spun off greater than thirty companies based on technology developed through the university. In support of commercialization of the subject invention, Petitioner hosts a Canadian National Centre of Excellence focused on the commercialization of green chemistry made at academic institutions. Additionally, Petitioner has invested an additional \$57,000 CDN (\$46,400 USD) into development of the instant invention. Licenses for use of the invention have been executed and will continue.

Petitioner has agreed that this waiver will be subject to the march-in and preference for U.S. industry provisions, as well as the U.S. Government license, set out in 35 U.S.C. 202-204. Further, Petitioner has agreed to the attached U.S. Competitiveness provision paragraph (t). In brief, Petitioner has agreed that products embodying a waived invention or produced through the use of a waived invention will be manufactured substantially in the United States unless Petitioner can show to the satisfaction of the DOE that it is not commercially feasible to do so. Petitioner has further agreed to make

the above conditions binding on any assignee or licensee or any entity otherwise acquiring rights in the waived inventions, including subsequent assignees and licensees. Should the Petitioner or other such entity receiving rights in a 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 inventions is suspended until approved in writing by DOE.

Referring to item 10 of the waiver petition, granting this waiver will have little if any adverse impact on competition in this technology. The three patents relevant to the petition have already been licensed to multiple parties using nonexclusive terms. Additionally, numerous companies are investing in efforts to develop, patent and commercialize competing technologies. Therefore, as this technology is available through multiple companies, and is only one of many efforts to develop a breakthrough technology, the grant of this waiver will only help encourage competition in the market.

Considering the foregoing, it is believed that grant this waiver will provide the 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 784, all of which have been considered, it is recommended that the requested waiver be granted.

Jacob A. Heafner
Patent Attorney
Intellectual Property Law Division

01/26/17

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Michael J. Dobbs Assistant Chief Counsel Intellectual Property Law Division

Date

Based upon the foregoing Statement of Considerations and representations in the attached waiver petition, it is determined that the interests of the U.S. and the general public will best be served by a waiver of patent rights of the scope described above, and therefore the waiver is granted.

CONCURRENCE:

Huijou Harriet Kung
Associate Director
Office of Basic Energy Sciences, SC-22

Date: 6/16/2017

APPROVAL:

Brian J./Lally
Assistant General Counsel for Technology Transfer
and Intellectual Property, GC-62

Date: 6/27/17