

## STATEMENT OF CONSIDERATIONS

### REQUEST BY RED SHIELD ACQUISITION, LLC FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN PATENT RIGHTS UNDER DOE AWARD NO. DE-EE0003364 W(A) 2010-030

The Petitioner, Red Shield Acquisition, LLC. (Red Shield), has requested a waiver of domestic and foreign patent rights for all subject inventions arising from its participation under the above-referenced award entitled "Demonstration of an Integrated Biorefinery at Old Town, Maine." The University of Maine is a subawardee, and is not subject to this waiver request.

The objective of this award is to develop a prototype demonstration cellulosic biorefinery that will establish and validate, on a pre-commercial scale, the extraction of hemicelluloses from wood chips and the process to convert the resultant lignocellulosic extract to biofuels and other chemicals that can provide fungible replacements for currently used transportation fuels.

This project will provide technical, business, and operational data that are crucial to commercializing and deploying the technology to existing pulp operations across the United States. Wood is a sustainable, high impact feedstock that can significantly contribute to the goal of reducing dependency on foreign oil and petrochemicals. Red Shield's technology has the potential to spur the creation of a highly viable and sustainable domestic bioindustry and transform the forest products industry from one that is in rapid decline to state-of-the-art.

This demonstration project provides a significant technical advantage over other competing technologies in that it can be integrated into an existing pulp facility infrastructure and minimizes the need for expensive capital outlay required to build a new, purpose-built refinery. The technology and process is synergistic with pulp facility processing and provides significant opportunities for aging or struggling operations.

The total anticipated cost of the agreement is \$5,725,234, with Petitioner cost sharing \$2,862,617, or 50%<sup>1</sup>. This waiver is contingent upon Petitioner maintaining the above cost share percentage.

As indicated in more detail in its petition, Red Shield operates a wood pulp mill in Old Town, Maine, and has partnered with the University of Maine to research, develop, demonstrate, and commercialize a technique to extract the hemicellulose from wood chips during pulp production, and a process to make biofuel and other specialty chemicals that are used by transportation and other industries. Red Shield has invested over \$2 million in preliminary design, engineering, cost estimation, and commercialization planning for this demonstration project. Red Shield has put together a highly qualified team of researchers, scientists, design, specification, environmental, construction, and project management engineers, and internal resources to support this project.

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<sup>1</sup> These figures are for Budget Period 1. The amounts for Budget Period 2 have not yet been determined, because any award for Budget Period 2 is contingent on Red Shield meeting certain performance milestones by the end of Budget Period 1. Cost share for Red Shield for Budget Period 1 and all successive budget periods will be a minimum of 50%.

Petitioner has agreed that this waiver shall be subject to the march-in and preference for U.S. industry provisions, as well as the U.S. Government license, comparable to those set out in 35 U.S.C. 202-204. Further, Petitioner has agreed to the U.S. competitiveness provisions as attached to this Statement. In brief, Petitioner has agreed that products embodying intellectual property developed under this agreement shall be substantially manufactured in the United States, and that Petitioner will not license, assign, or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements.

Referring to item 10 of the waiver petition, granting this waiver is not anticipated to have any adverse impact on competition. According to the petition, the project involves demonstrating a process that has not been accomplished before on either a technical or commercial level. Therefore, there is no established commercial position in the field at this time. It is anticipated that research performed under this award will allow Petitioner to match or slightly better the technology of other players, but it does not anticipate gaining a dominant position as a result of this award. The granting of this waiver should not impact the other competitors' ability to continue their efforts.

Considering the foregoing, it is believed that granting this waiver will provide Petitioner with the necessary incentive to invest its resources in commercializing the results of the agreement in a manner that will make the above technology available to the public in the shortest 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.

  
/ Julia Cook Moody  
Patent Counsel  
Golden Field Office

Date: 21 June 2010

## **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 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 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 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 any waived invention is suspended until approved in writing by DOE.

Based upon the foregoing Statement of Considerations, it is determined that the interests of the United States and the general public will best be served by a waiver of the United States and foreign patent rights as set forth herein, and, therefore the waiver is granted. This waiver shall not affect any waiver previously granted.

CONCURRENCE:



Paul Bryan  
Program Manager  
Office of the Biomass Program

Date: 5/27/2011

APPROVAL:



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

Date: 5/31/2011