STATEMENT OF CONSIDERATIONS

CLASS WAIVER OF U.S. AND FOREIGN PATENT RIGHTS IN INVENTIONS MADE BY SUBCONTRACTORS AND USERS DURING THE PERFORMANCE OF WORK UNDER THE MANUFACTURING DEMONSTRATION FACILITY PROGRAM (MDF) AT OAK RIDGE NATIONAL LABORATORY UNDER DOE CONTRACT NO. DE-AC05-00OR22725; W(C) 2012-002 [ORO-805]

Background

In December 2011, UT-Battelle, LLC (UT-Battelle), the Management & Operating Contractor for the Oak Ridge National Laboratory (ORNL), was granted funding of an estimated $10M per year for three years by U.S. Department of Energy (DOE) Energy Efficiency and Renewable Energy (EERE) Advanced Manufacturing Office (AMO) for the "Manufacturing Demonstration Facility (MDF)," under the FY12 Annual Operating Plan (AOP). The ORNL MDF was initiated under the Defense Advanced Research Projects Agency (DARPA) Open Manufacturing Program by a Federal Work for Others project in FY 2011. DOE and DARPA are participating in the Advanced Manufacturing Partnership (AMP), a national initiative announced in June 2011 by President Obama that enlists the cooperation of industry, academia and the federal government. The AMP's charter is to drive innovative technologies that will revitalize U.S. manufacturing, creating new, quality jobs and helping restore this country's leadership in the global manufacturing marketplace. The ORNL MDF supports the objectives of the AMP.

The ORNL MDF program will give interested partners immediate access to unique research capabilities and facilities in order to reduce the risk of inappropriate capital investment, obviate lead times for capital equipment purchase and delivery, and accelerate manufacturing trials. By providing such access, the MDF is expected to facilitate development, integration, evaluation and utilization of efficient/rapid/flexible manufacturing technologies and to promote broad and rapid dissemination of developed technologies. The MDF is organized around six core technology thrust areas which provide distinctive resources and equipment that leverage previous and on-going government and industrial investments:

- **Additive Manufacturing**: state-of-the-art equipment and close collaborative relationships with equipment vendors to improve and apply a broad range of state-of-the-art direct manufacturing technologies for metal and polymer material systems, including electron beam melting, ultrasonic, extrusion, and laser deposition
- **Carbon Fiber and Composites**: comprehensive capabilities for carbon fiber synthesis, characterization, and compositing technologies including low-cost precursor development and 25 ton-per-year carbon fiber pilot scale production
- **Lightweight Metals Processing**: facilities and extensive experience with advanced synthesis and processing technologies for low-cost titanium alloys, magnesium alloys and metal matrix composite products
- **Roll-to-Roll Processing**: pulse thermal processing (PTP) and other advanced processing technologies to develop low cost manufacturing of flexible electronics, photovoltaics, and energy storage systems
- **Low-Temperature Material Synthesis**: unique synthesis technologies for the production of novel materials at or near room temperature, enabling high performance low-cost products
- **Transient Field Processing**: advanced processing technologies utilizing radiant, magnetic, ultrasonic, electron beam, etc. to create unique properties in materials

The objectives and tasks associated with each of these technology thrust areas are designed to advance the technology, making the technology and these advancements available to a wide user base and range of applications. These technologies can reduce energy intensity, lower carbon emissions, create lower cost production pathways, and enhance the competitiveness of U.S. advanced manufacturing industries.

The MDF will be made available to industrial users, manufacturing equipment suppliers, material suppliers and other users, with guidance provided by the DOE AMO Program Manager. Although primarily aimed towards industrial partners, other MDF collaborators may also include universities, DOE national laboratories, non-profit institutions, other government organizations, and industry. ORNL may award subcontracts to certain partners, as well as enter into other technology transfer agreements, e.g., CRADAs, WFOs and User Agreements, with the various industry participants for the MDF work.

It is anticipated that the intellectual property resulting from the MDF work will be protected and allocated between ORNL and the MDF participants and commercialized. In this regard, for subject inventions not covered by another class waiver or statutory authority, it is requested that DOE grant a Class Patent Waiver for subject inventions made by (1) MDF subcontractors that cost share at least 20% of the subcontract work and agree to substantially manufacture new technology resulting from the MDF work in the U.S. or provide other acceptable economic benefits to the U.S; and (2) MDF users who are provided access to MDF equipment to perform research and/or work collaboratively with ORNL for short term nonproprietary projects and who also agree to substantially manufacture new technology resulting from the MDF work in the U.S. or provide other acceptable economic benefits to the U.S.

Subcontractor Rights to Inventions

This Class Waiver waives title to inventions to those MDF subcontractors to UT-Battelle (other than small businesses and non-profit organizations) who cost-share at least 20% of the cost of the work to be performed under the MDF subcontract and also agree to substantial U.S. manufacture of resulting technology or provide other acceptable economic benefit to the U.S. This Class Waiver will put these subcontractors in the same position as small business and non-profit MDF partners with respect to ownership of inventions so that each partner will be able to commercialize the inventions in a way to achieve the goals of the AMP. This waiver is subject to the government license, march-in rights, and other restrictions and obligations set forth in Sections 202-204 of P.L. 96-517 as implemented by applicable regulations.

Users Rights to Inventions

In addition to subcontracts and other technology transfer agreements such as WFO and CRADAs, it is expected that some participants will come to ORNL to gain access to unique equipment and expertise on a short term basis and use the MDF as a user facility for nonproprietary research[1].

For this work, an agreement similar to that used for DOE Designated Non-Proprietary User Facilities will be used. DOE will pay for the full cost of operating the equipment and for ORNL staff time, but will not pay funds directly to MDF users, who will be covering their own costs. Although there is no DOE cost share as in subcontracts, the justification for the disposition of rights for MDF users is consistent with the reasons set forth in the Class Waiver for Designated Non-Proprietary User Facilities (W(C) 2008-003). Like W(C) 2008-003, this waiver will apply in those situations where the MDF users access the MDF

[1] UT-Battelle does not intend to request official designation for this facility as a User Facility, thus inventions made by users at the MDF are not covered by W(C) 2008-003.

equipment and facilities with or without some degree of collaboration with ORNL personnel and further, where MDF users:

(1) will have a general scope of work in which ORNL's and the User's tasks will be directed toward nonproprietary research that advances the state of the art in the User's area of interest rather than toward producing a specific commercial result (e.g., a marketable product).
(2) intend to publish their research in the open scientific literature; and
(3) do not require the data protection available in a CRADA, WFO or Proprietary User Agreement.

Because the MDF is not a DOE Designated Nonproprietary User Facility, this Class Waiver is not automatic, but will be granted upon certification of patent counsel that the above criteria are met and that users are selected based on the following merit review process.

Prospective users will be required to submit a proposal for review and will consult with the appropriate MDF staff concerning specific plans and time schedules to accomplish project objectives. Proposals will be reviewed by a Review Committee consisting of one or more knowledgeable peers, internally and/or externally. Selection of proposals will be based on the compatibility of the proposed research with the missions of both the ORNL MDF and DOE. The Facility Director or his/her designee will allocate facility time to approved proposals considering the prioritization established by the Review Committee and the availability of resources. The DOE Program Manager will be aware of this process and of projects selected for work within the MDF.

The MDF staff will be available to assist companies for up to 12 months with problems or opportunities such as evaluating the appropriate rapid manufacturing process to meet a specific market opportunity, or testing and comparing several different candidate materials to determine the best fit for a new product.

U.S. Competitiveness

As stated above, the MDF is directly in support of President Obama's AMP Initiative which aims to identify opportunities for investments in R&D, pre-competitive collaboration, and shared facilities and infrastructure that have the potential to transform advanced manufacturing in the United States. AMP is in direct response to the President's Council of Advisors on Science and Technology (PCAST), the Office of Science and Technology Policy and the National Economic Council who believe that a coherent innovation policy that supports advanced manufacturing will provide the basis for high-quality jobs for Americans and sustain U.S. competitiveness in the 21st century. In view of the above goals, this Class Waiver requires subcontractors and users to agree to U.S. manufacture requirements. MDF subcontractors and users subject to this waiver agree 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 subcontractors and users 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 goals of the MDF include developing innovative manufacturing processes and materials technologies to advance clean energy economy by increasing industrial and manufacturing energy efficiency, delivering the breakthroughs that the Nation needs to significantly reduce energy and carbon intensity throughout the economy throughout the coming decades, and revitalizing existing manufacturing industries and supporting the development of new products in emerging industries.

Having MDF subcontractors and users own the rights to intellectual property they create and make in performing the work directed at solving their specific problems will allow those parties to most effectively incorporate the newly developed solutions into their own manufacturing processes and facilities.

Granting of this waiver should have little effect on competition and market concentration due to the fact that the MDF is going to be made available to many industrial entities, and therefore, all will be able to improve their manufacturing processes and have the opportunity to keep up with the improvements of the other MDF participants. In addition, the MDF work subject to this waiver is to be non-proprietary so the results and how they are obtained will be made available to other industrial companies that will be able to advance the state of manufacturing across industries.

Accordingly, in view of the Congressional and statutory objectives to be obtained and the factors to be considered under DOE's Statutory Patent Waiver Policy, all of which have been considered, it is determined that this Class Waiver will best serve the interests of the United States and the general public. It is therefore recommended that the waiver be granted.

[redacted]

Emily G. Schneider
Assistant Chief Counsel for Intellectual Property
Oak Ridge Office

3/9/2012
Date

Pursuant to the authority provided in Section 152 of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2182), Section 9 of the Federal Nonnuclear Energy Research and Development Act of 1974, as amended (42 U.S.C. 5908), and the implementing regulations promulgated there under for waivers of patent rights, it is concluded that it is in the best interests of the United States and the general public to grant a waiver of patent rights to the MDF subcontractors other than small businesses and non-profit organizations who cost-share at least 20% of the subcontract cost and also provide either substantial U.S. manufacture or other acceptable economic benefit to the U.S. It is also concluded that it is in the best interests of the United States and the general public to approve grant of this waiver to MDF users. Therefore, it is ordered that the waiver of U.S. and foreign patent rights to the class of subcontractors and users as described in the foregoing Statement of Considerations is hereby granted. The waiver is subject to all the limitations, terms and conditions set forth in the foregoing Statement of Considerations. The Assistant General Counsel for Technology Transfer and Intellectual Property shall be responsible for issuing instructions for implementation of this waiver in accordance with DOE regulations for waiver of patent rights.

CONCURRENCE:

[redacted]

Leo Christodoulou, Ph.D.
Program Manager
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June 7 2012

Date

APPROVAL:

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

6/7/2012

Date