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March 26, 2009

Office of Assistant General Counsel for Technology
Transfer and Intellectual Property
U.S. Department of Energy
1000 Independence Avenue, S.W.
Washington, DC 20585

ATTN: TECHNOLOGY TRANSFER QUESTIONS

Re: Notice of Inquiry; Technology transfer practices at the Department of
Energy (DOE) laboratories (73 Fed. Reg. 72,036)

Ladies and Gentlemen:

The Semiconductor Research Corporation ("SRC") is a non-profit consortium of firms in the semiconductor industry (www.src.org). It has been a leading technology research consortium for over twenty five years. It sponsors university research and manages related joint ventures that operate as independent consortia, including the Focus Center Research Program and the Nanotechnology Research Initiative. With member companies and university research programs spanning the globe, SRC makes a critical contribution to the research and development ("R&D") activities of the semiconductor industry.

Since its inception, SRC has invested over \$1.3 billion in cutting-edge, pre-competitive university research, supporting over 7,400 students and over 1,700 faculty members at over 240 universities worldwide. Because its industry members are actively engaged in oversight of and extracting value from SRC-funded research, SRC represents a particularly effective vehicle for technology transfer and commercialization.

SRC sees great benefits in increasing collaboration with DOE and DOE laboratories. SRC is pleased to submit comments from the perspective of a consortium.

Principal Avenues of Collaboration Between Consortia and DOE Laboratories

Cooperation in research activities is inherently different from the procurement of research services or the mere financial support of research as through the award of a grant. Cooperation in research implies common goals, a sharing of risks and benefits and a willingness to act in a joint cause. The Cooperative Research and Development Agreement ("CRADA"), as set forth in the DOE model CRADA, is specifically intended

to enable the DOE laboratories to engage in collaborative activity. It does so by creating a bilateral relationship between itself and the entity or entities with which it is to cooperate. Indeed, this is the principal avenue by which DOE laboratories cooperate in R&D activities.

Another avenue by which DOE laboratories could cooperate in R&D activities is by becoming a participant in an R&D consortium. In this way, the DOE laboratory would be on a similar footing as the other participants in the consortium. This kind of cooperation would likely require a special contracting device, a type that is available through use of the so-called "other transactions authority" ("OTA")¹. This is a contracting device that is particularly well suited for DOE laboratories to collaborate with consortia.

Challenges Presented by a CRADA

DOE laboratories frequently turn to CRADAs in order to carry out technology collaboration and transfer. SRC and other research consortia in the semiconductor industry have entered into a number of CRADAs with DOE laboratories in the past. Although CRADAs offer certain advantages for technology collaboration and transfer, they also pose the following complications for industry, especially with respect to cooperation with a consortium.

1. The U.S. competitiveness clause in the model CRADA presents a major impediment to industry collaboration with DOE laboratories.
2. CRADA provisions should be construed to facilitate partnership rather than to impose a contractor-subcontractor relationship between industry and DOE laboratories.
3. The government's acquisition of unlimited rights in generated information is needlessly broad and can create competitive problems for consortium participants.
4. The model CRADA does not make clear that cooperating entities are eligible to receive non-exclusive, royalty-free access to all intellectual property that arises under the CRADA; this is a significant omission that undermines the interest of industry consortia to collaborate with DOE laboratories.

1. U.S. competitiveness clause is a major impediment to industry collaboration with DOE laboratories

The U.S. competitiveness clause of the model CRADA requires that CRADA participants agree that: (1) products embodying intellectual property developed under the CRADA be substantially manufactured in the United States and, (2) processes covered by intellectual property developed under the CRADA be incorporated in manufacturing facilities in the United States before incorporation in facilities overseas.

¹ 10 U.S.C. 2371.

As noted in the DOE Notice of Inquiry, the requirement to manufacture substantially in the United States imposes a stricter limitation than is required by the enabling statute for a CRADA. It also exceeds the statutory purpose of the competitiveness clause. The relevant statute, the Stevenson-Wydler Technology Innovation Act of 1980², states with respect to U.S. manufacturing only that the government should "give preference" to entities that agree to manufacture in the United States products embodying intellectual property developed under a CRADA. There is nothing in the statute that requires substantial manufacturing in the United States. Nor is such a requirement found elsewhere in federal contract law. A preference implies only that all things being equal, a condition that rarely arises, especially in connection with cooperative arrangements in contrast to competitive procurement, an advantage should go to the party willing to guarantee domestic manufacturing.

As a practical matter, a U.S. manufacturing requirement creates a high level of uncertainty for companies considering participation in a CRADA. Increasingly, manufacturing is tied to global networks, and most companies are engaged in international production when it makes business sense to do so. For example, the location of product manufacture can depend on where the largest market for the product is—if the market is outside of the United States, it can be hard to justify substantial manufacturing in the United States. Similarly, the loading and capacity of global manufacturing networks can dictate the economic feasibility of where a product should be produced. It is a major obstacle, therefore, to require companies to commit, at the outset of undertaking research – particularly the early stage, pre-competitive research performed in consortia efforts – to domestic manufacturing before they know there will be a viable product, let alone the circumstances surrounding it. Providing a mere preference to an entity that will guarantee domestic manufacturing of any product embodying generated intellectual property is far preferable for a consortia member than a domestic manufacturing requirement.

If the purpose of the domestic manufacturing preference is to assure some domestic benefit to provide a return on the taxpayer's investment in the DOE laboratories, SRC believes that there are generally benefits inherent in consortia that can justify the participation of DOE laboratories. Similar to individual companies, a DOE laboratory can benefit from research cooperation with a consortium through the following ways: (i) enrich its technical capability through the give-and-take with outside experts; (ii) make productive use of its facilities while leveraging its R&D funding; and (iii) contribute to the enhancement of the technical prowess of the nation's workforce. Equally important, DOE laboratory collaboration is likely to lead to the development of technology and technology infrastructure that is grounded in the region surrounding the DOE laboratory. This creates a magnet for economic development of the most productive type, which

² Codified at 15 U.S.C. 3701.

benefits the region and the nation. Indeed, this could result in manufacturing as well. And all the while the DOE laboratory can be furthering its own mission.

Given the inherent benefits to the nation by a DOE laboratory's participation in a consortium, application of a net benefits test in lieu of a domestic manufacturing requirement would be much less objectionable. DOE has developed just such a net benefits test.³

The DOE net benefits test represents a sound and flexible approach to addressing a preference for domestic manufacturing. What has made it of minimal value to entities cooperating with DOE laboratories is that it is not applied at the time of entering the CRADA, but only at the time a product emerging from the CRADA is ready for manufacture. This means that a party cooperating with a DOE laboratory must endure all of the uncertainties and potential burdens of a domestic manufacturing requirement when entering into a CRADA, for duration of CRADA research, and potentially for the many years until a manufactured product may emerge. Applying the net benefits test in this way is simply too little too late. The better approach would be to replace the mandatory domestic manufacturing requirement in the model CRADA with a net benefits test. Applying the net benefits test at the outset of a CRADA eliminates uncertainty and highlights the overall advantages of engaging in cooperative research to the benefit to the U.S. economy.

In short, through timely application of the existing net benefits test, DOE has the means to remove a critical obstacle for cooperative research while remaining true to the statutory purpose of ensuring a national benefit for the use of DOE laboratories.

2. CRADA provisions should be construed to facilitate partnership

CRADA provisions should be construed in a way that facilitates partnership rather than in a way that imposes a contractor-subcontractor relationship upon collaboration with DOE laboratories. For example, the Statement of Work clause in the model CRADA requires each Project Task Statement to be approved by DOE. In addition, DOE laboratories have interpreted the Statement of Work clause to require that any work pursuant to a CRADA, undertaken by a party other than the participant, e.g., universities or individual consortium members, would be treated as a subcontract and subject to a flow-down of all the terms and conditions of the CRADA. Treating the Statement of Work clause in a way that converts any subsequent work by the third party into a CRADA subcontract imposes too much rigidity in the type and level of collaboration with a consortium.

In the consortium context, the research and related work is often undertaken by the members of the consortium or others sponsored by the consortium. As such, the

³ DOE Cooperative Research and Development Agreements Manual, Appendix B, at 65. See also Article XXII of Model CRADA.

members and affiliates of a consortium function in a collaborative manner with respect to each other, and undertake research in a way that is different in nature from a contractor-subcontractor relationship.

3. Government's unlimited rights to generated information are overbroad

The model CRADA provides the government with "unlimited rights" to generated information. SRC believes that this right is too broad and may be to the detriment of a cooperating entity, including a consortium and its participating entities. For example, government should not be allowed to sell the generated information to a third party (a party who may be a competitor to a company that funded the research) for the third party's own commercial use.

The DOE laboratories should not be in the business of commercializing technology beyond the government's needs unless it is pursuant to its march-in rights, that is, only in circumstances in which no commercialization whatsoever has occurred. DOE laboratories should not be able to assist the commercial activities of companies that did not contribute to or cooperate through the CRADA with the development of technology. Instead, it is reasonable and should be sufficient for the government to be entitled only to "government-use" rights.

4. Non-exclusive, royalty-free rights are not, but should be, available explicitly to CRADA participants

The model CRADA in Article XV provides that the Government retains a nonexclusive, paid-up (royalty free) license to practice inventions arising under the CRADA. The same Article acknowledges that the participant "has the option to obtain, up to and including, an exclusive license" to inventions of a DOE laboratory arising out of CRADA research. In the spirit of its cooperative intent, each party should receive equal rights. Therefore, it should be made clear in the CRADA that the participant also obtains a nonexclusive, royalty free license to inventions arising out of the CRADA. In order to encourage, rather than discourage, a consortium to participate in the CRADA, the consortium members' rights in subject inventions should be equal to the DOE laboratory. Consortium members do not want to pay twice for the research results: once when they sponsor the research and once when they seek to use the results.

Advantages of Other Transactions Authority

With the problems inherent in the model CRADA, especially when collaborating with consortia, SRC believes DOE should explore ways to utilize OTA in the context of its technology transfer practices. For example, DOE might utilize its OTA to effectively become a participant in an existing consortium. Such a model would offer many advantages for technology transfer between DOE and industry. A few of the benefits include:


- Participants in existing consortia define, shape and evaluate research on a continuing basis, and this provides the benefit of having access to pooled resources and talents from various interested and committed parties.
- Industry participants in existing consortia are all in the business of commercialization, therefore joining such a consortium greatly increases the potential for commercialization.
- Research results and intellectual property are made available to the consortium members quickly, and can be utilized by members for commercialization.
- Consortium model represents the middle ground between publicly available and exclusively licensed technology that provides a distinct and attractive model for commercialization.

At the same time, it is important that DOE not inhibit the flexibility that comes with OTA by imposing gratuitous requirements on it, such as a domestic manufacturing requirement. Given the advantages of OTA, SRC urges DOE to consider using OTA to join as a participant in existing consortia to maximize the benefits of technology development and transfer.

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SRC appreciates the opportunity to comment. In addition, SRC would be pleased to meet with DOE officials to further explore the issues raised above. Please feel free to contact the undersigned if you have questions regarding these comments.

Sincerely,



Celia I. Merzbacher, Ph.D.
Semiconductor Research Corporation
Vice President, Innovative Partnerships