

## Statement of Considerations

REQUEST BY THE DOW CHEMICAL COMPANY FOR AN ADVANCE  
WAIVER OF DOMESTIC AND FOREIGN RIGHTS IN SUBJECT  
INVENTIONS MADE IN THE COURSE OF OR UNDER MARTIN  
MARIETTA ENERGY SYSTEMS SUBCONTRACT RFP NO. SK761-86;  
DOE WAIVER DOCKET W(A)-93-036 [ORO-563]

The Dow Chemical Company (Dow) has made a timely request for an advance waiver to worldwide rights in Subject Inventions made in the course of or under a Martin Marietta Energy Systems Subcontract RFP No. SK761-86. The scope of the work calls for the development of a scaled process to synthesize a high-quality, low-cost silicon nitride powder with suitable properties for forming heat engine parts. The work is sponsored by the Office of Transportation Technologies.

The dollar amount of the subcontract is \$2,281,959 with Dow cost sharing at least 25% of the subcontract.

Dow has a history of research and development leading to commercialization of chemical products. Dow began its research and development program in 1983 and has been developing processes to synthesize advanced ceramic powders, such as aluminum nitride and silicon carbide, for many years. Also incorporated into the program is investigation of ceramic parts fabrication, including greenware formation and sintering development. Powder characterization and mechanical parts testing experience are major elements of Dow's R&D efforts. Dow is committing resources previously used in these activities, such as personnel, equipment, and expertise, to develop the silicon nitride powder under this subcontract. This includes a ceramics organization totaling about 200 staff members, two R&D facilities, and ten million dollar a year investment.

Four U.S. patents have been issued on Dow processes to produce non-oxide ceramic powders. Dow ranks in the top 20 of Fortune 500 companies and is a world leader in process development and production of chemical products. It has a world-scale manufacturing facility, promotional and pricing strategy, parts strategy and customer partnerships. Considering its market position and experience, it has the capability to commercialize the scaled process developed under the subcontract.

The subcontract has been executed and is proceeding with the standard DOE long form patent clause. If the requested waiver is approved, a patent rights clause embodying the standard DOE waiver terms and conditions, approved by Dow, including march-in rights, retention by the government of a license, preference for U.S. industry, and U.S. Competitiveness clauses will be added by a no-cost modification to the subcontract. The advance patent waiver will also contain a paragraph that limits Dow's ability to alienate waived rights. Specifically, Dow shall not assign any invention without prior approval of DOE. Also, should there be a change in ownership of Dow, rights in inventions will be suspended until approval by DOE of the entity obtaining controlling interest having the waiver.

Dow agrees that any products embodying any waived invention or produced through the use of any waived invention during the term of a United States patent covering the waived invention will be manufactured substantially in the United States unless Dow can show to the satisfaction of the contracting officer that it is not commercially feasible to do so.

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, therefore there should not be undue market influence resulting from the grant of the waiver.

Grant of the requested waiver should serve as encouragement to other DOE subcontractors that significant cost sharing will be recognized as an acceptable consideration for granting greater rights in subject inventions.

In view of the acceptable level of cost sharing by Dow and the objectives and considerations set forth in 41 CFR 9-9.109, all of which have been considered, it is recommended that the requested waiver for worldwide rights be granted.

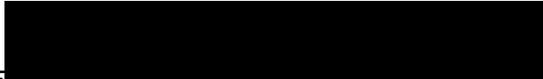
  
Katherine Lovingood  
Senior Patent Attorney

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. This waiver shall not apply to a modification or extension of the cost-shared subcontract where, through such a modification or extension, the purpose, scope or cost of the subcontract has been substantially altered.

CONCURRENCE:

APPROVAL:

  
Thomas J. Gross  
Acting Deputy Assistant Secretary  
for Transportation Technologies

  
Richard E. Constant  
Assistant General Counsel  
for Technology Transfer

Date: May 4, 1994

Date: 5/6/94