

STATEMENT OF CONSIDERATIONS

REQUEST BY SOLARCHEM ENTERPRISES, INC. (SOLARCHEM) FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN PATENT RIGHTS UNDER ITS SUBCONTRACT WITH MIDWEST RESEARCH INSTITUTE (MRI/NREL) UNDER SUBCONTRACT NO. NREL-ZAT-4-13498-01 UNDER PRIME CONTRACT NO. DE-AC02-83CH10093; W(A)-94-002; CH-0824

Solarchem Enterprises, Inc. (Solarchem) has requested a waiver of domestic and foreign patent rights for all subject inventions under a subcontract it expects to enter with the Midwest Research Institute (MRI/NREL) for the development of a commercialized solar detoxification system.

The objective of the work to be performed under the subcontract is to further develop, optimize, and test Solarchem's proprietary homogeneous aqueous phase photocatalyst for solar detoxification of contaminated water. Additionally, under the subcontract, NREL will obtain the information necessary to conduct an accurate systems analysis to assess the potential of the catalyst for use in commercial solar detoxification systems. To facilitate commercialization of a cost-competitive solar detoxification system, the work will focus on reducing cost and other performance barriers.

The total estimated cost for performance of the definitized subcontract is expected to be \$153,330 over the course of the subcontract. Solarchem has agreed to cost share twenty percent (20%) of the total subcontract cost.

Referring to its waiver petition, Solarchem believes that it is an acknowledged leader in the technical field of photo-chemical detoxification, and, in particular, UV-oxidation technology. In its petition, Solarchem states that it has a highly trained and experienced scientific and engineering staff, a well equipped test laboratory for developing photo-chemical treatment processes, and an analytical laboratory for working with environmental samples. Further, Solarchem states that it has extensive experience in supplying and carrying out field demonstrations of photo-chemical detoxification, having participated in 40 such demonstrations throughout North America. Accordingly, Solarchem believes that its technical expertise in the field of photo-chemical detoxification will benefit the work to be done under the subcontract.

In terms of an established commercial position, Solarchem states in its petition that since the first commercial installation of its Rayox system (an advanced UV-oxidation process which Solarchem markets under the trademark "Rayox") in 1989, it has delivered, primarily in North America, over 45 such

Rayox systems. Customers of Solarchem include a large number of well recognized multinational companies, as well as many U.S. government agencies. Moreover, in addition to its main facilities in Canada, Solarchem has a second manufacturing facility in Buffalo, New York, also authorized to deliver Rayox systems.

Again referring to its waiver petition, Solarchem states that, since 1987, it has invested approximately 25% of its gross sales into research and development of UV-oxidation related technology. As a result of such extensive research and development, Solarchem has been able develop and patent "Solaqua," a solar detoxification system using a homogeneous aqueous phase photocatalyst, which is the subject of this subcontract. Solarchem states that thus far it has developed Solaqua on its own and intends to commercialize the Solaqua technology at its earliest opportunity. The grant of the waiver, upon which the subcontract is based, would optimize the described solar detoxification method and greatly speed the commercialization of this technology.

While grant of the waiver will place Solarchem in a favorable position within the water detoxification technology, it is not expected to have any adverse effects on competition. The environmental remediation market for treating contaminated water is rather large, and even within the more narrow technology UV-oxidation, there are, currently, several competing companies which market alternate systems. Solar UV-oxidation technology, as developed by Solarchem, will likely augment and not replace the rather diverse market for UV-oxidation and other methods of water detoxification. In addition, entry of the Solaqua process using solar UV light will likely encourage other companies to develop other means of using solar energy to achieve UV-oxidation.

Solarchem has agreed that the waiver of the Government's rights in the identified invention will be subject to the usual march-in rights, U.S. manufacturing preference and U.S. Government license comparable to those set out in 35 U.S.C. 202-204. Additionally, products, processes or services used or sold by Solarchem or its affiliates which embody the invention under this waiver must be manufactured, practiced or provided substantially in the United States, and further, any license or other transfer of rights in the subject invention to third parties must be approved by DOE prior to any such transfer. Still further, to insure commercialization of this technology, Solarchem has agreed to license third parties under its background data and background patents on reasonable terms and conditions if it fails to make reasonable efforts to commercialize the technology.

Upon evaluation of the waiver petition and in view of the objectives and considerations set forth in 41 CFR 9-9.109-6, all of which have been considered, it is recommended that the requested waiver be granted.


Thomas G. Anderson
Assistant Chief Counsel
Intellectual Property Law
Division

Date: 2/18/94


Daniel D. Park
Patent Attorney
Intellectual Property Law
Division

Date: 2/18/94

Based upon the foregoing Statement of Considerations and representations in the attached waiver petition, it is determined that the interests of the United States 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. This waiver shall not apply to any modification or extension of the subcontract, where through such modification or extension, the purpose, scope or cost of the subcontract has been substantially altered, or in the event that Solarchem's obligation for cost sharing is less than twenty percent (20%) of the total cost of the subcontract.

CONCURRENCE:


Kurt D. Sisson, EE-222
Office of Waste Reduction
Technologies

Date: 3/21/94

APPROVAL:


Richard E. Constant
Assistant General Counsel
for Technology Transfer
and Intellectual Property

Date: 3/25/94

WAIVER ACTION - ABSTRACT
W(A)-94-002

<u>REQUESTOR</u>	<u>CONTRACT SCOPE OF WORK</u>	<u>RATIONALE FOR DECISION</u>	<u>DISPOSITION</u>
Solarchem Enterprises, Inc.	Development of a Homogeneous Aqueous Phase Photocatalyst for Solar Detoxification	20% cost sharing	