

STATEMENT OF CONSIDERATIONS

CLASS WAIVER OF THE GOVERNMENT'S U.S. AND FOREIGN PATENT RIGHTS IN INVENTIONS MADE IN THE PERFORMANCE OF COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS (CRADAS) RELATING TO INORGANIC MEMBRANE TECHNOLOGY ENTERED INTO BY LOCKHEED MARTIN ENERGY SYSTEMS, INC. UNDER ITS MANAGEMENT AND OPERATING CONTRACT DE-AC05-84OR21400 AND BY LOCKHEED MARTIN ENERGY RESEARCH CORP. UNDER ITS MANAGEMENT AND OPERATING CONTRACT DE-AC05-96OR22464; WAIVER ORO-632, W(C)-96-006

The Department of Energy (DOE) previously approved a class waiver [W(C)-90-001] of domestic and foreign patent rights to Martin Marietta Energy Systems, Inc. (Energy Systems) in inventions made by Energy System's employees in the performance of work under a CRADA and to participants in inventions made by their employees under the class of CRADAs entered into by participants with Energy Systems under its management and operating contract. Martin Marietta Energy Systems, Inc. is now, by change of name, Lockheed Martin Energy Systems, Inc. (Energy Systems). Also, work under the DE-AC05-84OR21400 contract has been divided with management and operation of the Oak Ridge National Laboratory (ORNL) now being performed by another Lockheed Martin Corporation subsidiary, Lockheed Martin Energy Research Corporation (Energy Research) under contract DE-AC05-96OR22464. The earlier waiver has been determined by DOE to also apply to CRADAs under the Energy Research contract in view of its applicability to ORNL prior to the separate contract being awarded, the selection of another Lockheed Martin Corporation affiliated subsidiary to operate ORNL and the carry over of substantially identical patent provisions in the Energy Systems contract.

Early in fiscal year 1995, the DOE, through its Office of Nuclear Energy, Science and Technology, began working toward the establishment of CRADAs with several companies interested in applying the Department's classified gaseous diffusion membrane technology to commercial applications other than uranium enrichment. These CRADAs can be carried out on a classified basis, committing the participants to work to rigorous standards of security. Proposed commercial membrane products would be evaluated and certified by DOE prior to deployment or commercialization to ensure that applicable nonproliferation standards are met and that arms control risks are acceptable. The operable gaseous diffusion barrier or membrane used for uranium enrichment would not be transferred to private industry under the proposed CRADAs. Recently, the Department has given approval, subject to several restrictions designed to ensure that safeguard and security standards are met, for the proposed CRADAs to proceed to the point where proof-of-principle is reached for commercial application of the membrane technology in fields of use other than uranium enrichment.

The proposed membrane technology CRADAs would not be subject to the earlier CRADA class waiver discussed above because that class waiver did not include subject matter which falls within DOE's uranium enrichment program or subject matter which is classified or sensitive. The purpose of this class waiver is to extend the benefits of the earlier waiver to the limited additional subject matter of inorganic membrane technology for other than uranium enrichment which was previously excluded. Such extension is both necessary and desirable in order for the Department to proceed with the proposed CRADAs and similar future inorganic membrane CRADAs for reasons set forth below.

The National Technology Transfer and Advancement Act of 1995 (hereafter the "Act") provides that the Federal laboratories (contractor) must ensure through the CRADA that the collaborating party (participant) has the option to choose an exclusive license for a pre-negotiated field of use to laboratory Subject Inventions. In addition, the Act provides that the collaborating party may retain title to any invention made solely by its own employee in exchange for normally granting the Government a license to practice the invention. Such provisions can best be implemented in inorganic membrane CRADAs by this class waiver of the Governments rights which would permit the contractor to elect and offer an exclusive field-of-use license in its employees' inventions to the CRADA participant and election by the participant of inventions made by its employees.

Compliance with the provisions of the Act is being effected in the proposed CRADAs by language which permits the participant to retain title to sole inventions of its employees and joint ownership of jointly made inventions. In addition, the participant is given the right to choose, for reasonable compensation, an exclusive field-of-use license in contractor employee inventions. Any such license is subject to all applicable DOE classification and security restrictions as well as nonproliferation safeguards including the requirement that DOE certification and approval be given prior to field testing or deployment of gaseous diffusion membrane technology or distribution of materials or information resulting from the CRADA outside of DOE safeguarded facilities.

Any invention disclosures will be subject to classification review to determine whether they contain Classified Information or Unclassified Controlled Nuclear Information in accordance with DOE standards and procedures and will be subject to all applicable classification and security restrictions including Secrecy orders, where applicable. Also, participants have been put on notice that future commercialization efforts involving gaseous diffusion membrane technology may be severely curtailed as a result of DOE classification, safeguards and nonproliferation considerations and agree that they will not assert a claim for pecuniary award or compensation based on DOE or contractor actions arising out of such considerations.

This waiver of the Government's rights in inventions is subject to the Government's retention of : (1) a non-exclusive, non-transferable, irrevocable, paid-up license to practice or to have practiced for or on behalf of the United States the waived inventions, (2) an irrevocable, paid-up, exclusive license in the field-of-use of uranium enrichment with the sole right to grant sublicenses in the field-of-use and (3) March-in-Rights. In addition, both the Energy Systems and the Energy Research contracts contain restrictions on the disposition of royalty income resulting from authorized technology transfer activities. All such income is to be used by the Contractors for scientific research, development, technology transfer and education at their respective Laboratories consistent with the research and development mission and objectives of the Laboratories. If the amounts of such royalties and income exceed 5 percent of the Laboratory's budget for a fiscal year, 75 percent of such excess amounts must be paid to the treasury of the United States and the remaining amount of such excess used for the purposes described above. Also, each Contractor has established Contracting Officer approved policies for making awards and sharing royalties with Contractor employee-inventors. Although the 5 percent threshold has not been reached to date, the potential commercial market for inorganic membrane technology could ultimately result in total royalty income which would trigger application of this contract provision.

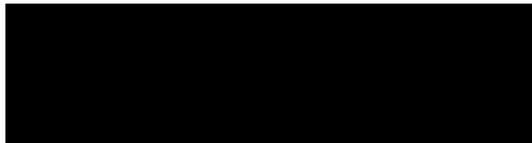
The grant of this Class Waiver should not result in adverse effects on competition or market concentration. The ultimate commercial development of inventions made using membrane technology is speculative at best since the technology is untested in applications other than uranium enrichment and nonproliferation concerns could severely restrict future commercialization even if proof-of-principle testing is favorable. Thus, there is a level of uncertainty about commercialization of the technology which makes it difficult to predict future effects of the Class Waiver on competition. One factor which would limit any adverse effects on competition where commercialization occurs is the likelihood that any inventions made under the CRADAs would be limited to relatively small improvements in the technology previously developed by the Government during the course of over fifty years of development. Accordingly, it is unlikely that any broad or dominant patents will result from the CRADAs which could form the basis for any broad market concentration. At best, such patents could form a basis for a strong market position in a narrow field-of-use where alternative technologies are not available.

There are no known Government regulations which require or might require use of the technology which is the subject of the contract and this waiver. The technology does not directly concern the public health, safety or welfare although some future applications of the technology such as water purification or waste cleanup could have an impact on public health.

Conclusions/Recommendation

It is believed that granting this class waiver will facilitate the commercialization of membrane technology to the extent that such commercialization is consistent with DOE classification and security restrictions as well as nonproliferation safeguards. It is also believed that such commercialization will inure to the benefit of the United States and the general public, and that no adverse effects on competition or market concentration are likely to result. If participants do not make reasonable efforts to utilize a waived invention, DOE can exercise its March-in-Rights to require licensing of the invention to a responsible party or parties.

Accordingly, in view of the legislative requirement that CRADA participants be offered an exclusive field-of-use license, the protective restrictions, including a certification requirement, that will ensure compliance with DOE classification and security standards and nonproliferation safeguards, the statutory objectives to be obtained and the factors to be considered under DOE's statutory waiver policy, the objectives of Public Law 101-189, and Executive Order 12591, all of which have been considered, it is believed that the grant of this Class Waiver, as set forth above, will best serve the interest of the United States and the general public. It is therefore recommended that the waiver be granted.



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

CONCURRENCE:

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Office of Nuclear Energy Science and Technology

Date: August 23, 1996

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