

IMPLEMENTING ARRANGEMENT #2
between
THE UNITED STATES DEPARTMENT OF ENERGY
and
THE FRENCH COMMISSARIAT A L'ENERGIE ATOMIQUE
on
COOPERATION IN
MEGAJOULE-CLASS SOLID STATE LASER TECHNOLOGY

WHEREAS the United States Department of Energy (DOE) and the Commissariat à l'Energie Atomique (CEA) of France (hereinafter referred to as "Parties") have agreed to cooperate under the Agreement between the Department of Energy of the United States of America and the Commissariat à l'Energie Atomique of France for Cooperation in Research, Development and Applications of High Energy Lasers and High Energy Laser-Matter Interaction Physics of August 9, 1994, included for reference as Appendix I of this Implementing Arrangement and hereinafter referred to as the "Umbrella Agreement" ;

WHEREAS Article 3.6 of the Umbrella Agreement provides that cooperation in research and development in the areas outlined in Article 2 of the Umbrella Agreement be in accordance with terms and conditions set forth in appropriate Implementing Arrangements ;

WHEREAS the government of the United States and the government of France have under consideration the potential construction of megajoule-class solid state laser facilities in their respective countries ;

WHEREAS DOE and CEA believe that cooperation in the areas specified in Article 2.2 (High-power, high-energy solid-state lasers) and Article 2.3 (Target experimental chambers and support systems) of the Umbrella Agreement would be of significant benefit to both Parties in enhancing their ability to achieve their respective goals of megajoule-class solid state laser facilities ;

WHEREAS DOE and CEA recognize the importance of each Party having the complete and absolute independence in controlling its own internal research and development ;

WHEREAS DOE and CEA recognize the benefits of having maximum flexibility in determining the nature and extent of cooperation between the two Parties ;

WHEREAS DOE and CEA wish to establish an Implementing Arrangement subordinate to the Umbrella Agreement for the purpose of implementing cooperative activities in research and development in megajoule-class solid state laser technology ;

NOW THEREFORE, DOE and CEA agree as follows :

ARTICLE 1 - OBJECTIVES

- 1.1 An objective of cooperation under this Implementing Arrangement is to cooperate in the research and development of (1) high-power, high-energy solid-state lasers by developing the science and technology, including theoretical and computational modeling capabilities, for more cost-effective megajoule-class solid state laser systems capable of achieving ICF ignition and (2) target experimental chambers and support systems, with emphasis on the development of systems meeting the requirements for containing and shielding significant inertial confinement fusion (ICF) target experimental yields. Cooperation in other areas of megajoule-class solid state laser technology may be undertaken in accordance with Articles 2 and 3 of the Umbrella Agreement as agreed upon in writing by the Parties.
- 1.2 Another objective of cooperation under this Implementing Arrangement is to develop advanced techniques and equipment for low-cost manufacturing of materials and components for megajoule-class solid state lasers. A goal of the Parties is to develop within, or transfer to, one or more manufacturers in the U.S. and in France or elsewhere the advanced manufacturing capabilities for each material or process for the purpose of supplying components for the construction of megajoule-class solid state laser facilities. In cases where both Parties use the same manufacturer for any system, component, material or material fabrication process, the Parties plan to generate a strategy for developing adequate infrastructure to support construction of future megajoule-class solid state laser facilities consistent with their schedules.
- 1.3 This cooperation may take one or more of the following forms : (1) one Party reviewing, analyzing and providing feedback on the research and development activities and results of the other Party ; (2) the Parties exchanging information in the areas of cooperation ; (3) the Parties exchanging technology where appropriate and feasible ; (4) the Parties conducting joint research and development activities ; and (5) the Parties jointly sharing in the cost of research and development of technology. Other forms of cooperation may be undertaken as agreed upon in writing by the Parties.

ARTICLE 2 - PROGRAM MANAGEMENT

- 2.1 The cooperation of the Parties under this Implementing Arrangement shall be in accordance with an annual Project Summary, consisting of written Project Task Statements (PTSs), describing each task to be performed. The PTSs will be jointly developed and agreed to in writing by the Parties, and shall be approved annually by the Coordinating Committee established under Article 4 of the Umbrella Agreement. Each PTSs shall specify, in detail, the work scope, schedule, estimated cost, the contribution, if any, of each Party, the responsibilities and rights of each Party, the information to be shared and the responsibilities and rights associated with the shared information, and the nature of the contribution of each Party (that

is, labor, materials, equipment, prior resources expended internal to its own organization, funds transferred to the other Party to be expended on the task or transferred to a third party for work on the task, etc.). Each PTSs shall be reviewed and approved by the Coordinating Committee.

- 2.2 A technical and financial review meeting between the Parties shall be held three times a year or as otherwise agreed and located alternately in the U.S. and France. At this meeting, both Parties, or their representatives, shall provide a detailed presentation of technical accomplishments and status of costs incurred under approved PTSs for the preceding time period. Any necessary revisions to the Project and PTSs may be agreed to in writing by both Parties at this meeting.
- 2.3 Each Party shall write and provide to the other Party prior to the technical and financial review meetings a progress report summarizing the work accomplished under approved PTSs during the preceding time period. This report shall identify any technical, schedule or cost variances between the work planned and work accomplished and describe how any such variances shall be corrected.
- 2.4 Each Party agrees to make available to the other Party all relevant information generated during the performance of each task specified in the PTSs, including information which is protected as intellectual property or is business confidential.
- 2.5 Each Party receiving the information specified in Article 2.4 shall have the right to freely use and have used such information for future megajoule-class solid state laser facilities in the U.S. and France. In the event commercial manufacturers of a Party are provided information under this Implementing Arrangement, they shall be required to execute non-disclosure agreements preventing further dissemination of such information.
- 2.6 Any use of information generated under this Implementing Arrangement other than the uses enumerated in the preceding Article 2.5 requires the prior written agreement of the Parties.
- 2.7 Each Party having the right to use third party business confidential information under this Implementing Arrangement shall use its best efforts to obtain from the third party the right for the other Party to use such business confidential information for the performance of activities under this Implementing Arrangement and for the manufacture of components for the future megajoule-class solid state laser facilities in the U.S. and France, as appropriate.
- 2.8 The confidentiality, use and non-disclosure rights and obligations of this Implementing Arrangement shall survive any termination of this Implementing Arrangement for a period of five years.

ARTICLE 3 - GENERAL PROVISIONS

Articles 6 and 10 and the Annex of the Umbrella Agreement are hereby incorporated by reference.

ARTICLE 4 - DURATION AND TERMINATION

- 4.1 This Implementing Arrangement shall continue in force as long as the Umbrella Agreement remains in force, unless terminated earlier in accordance with Article 4.2 below.
- 4.2 This Implementing Arrangement may be terminated at any time at the discretion of either Party upon six (6) months advanced notification in writing by the Party seeking to terminate this Implementing Arrangement. Such termination shall be without prejudice to the rights which may have accrued under this Implementing Arrangement to either Party up to the date of such termination.
- 4.3 Specific activities initiated hereunder but not completed at the termination of this Implementing Arrangement may be continued until their completion under the terms of this Implementing Arrangement upon agreement of the Parties.
- 4.4 This Implementing Arrangement may be amended through mutual written agreement of the Parties.

This Implementing Arrangement becomes effective upon the latter date of signature.

FOR THE UNITED STATES
DEPARTMENT OF ENERGY:

W. J. Smith
Nov. 19, 1994

FOR THE COMMISSARIAT
A L'ENERGIE ATOMIQUE
OF FRANCE:

Le 19.11.94
[Signature]