AMENDMENT NO. 1627 Calendar No. ____

Purpose: To better integrate university and private industry into the National Laboratory system of the Department of Energy so as to speed the development of technology in areas of significant economic potential.

IN THE SENATE OF THE UNITED STATES—100th Cong., 2d Sess.

S. 1480

The Department of Energy National Laboratory Cooperative Research Initiatives Act

Referred to the Committee on Energy and Natural Resources and ordered to be printed

Ordered to lie on the table and to be printed

March 4, 1988

AMENDMENT proposed by Mr. DOMENICI (for himself, Mr. McClure, and Mr. Bingaman)

Viz:

Strike out all after the enacting clause and insert in lieu thereof the following:

SECTION 1. SHORT TITLE.

This Act may be cited as the "Department of Energy National Laboratory Cooperative Research Initiatives Act".

SEC. 2. DEFINITIONS.

For Purposes of this Act--

(1) The term "National Laboratory" means--

(A) Lawrence-Livermore National Laboratory;

(B) Lawrence-Berkeley National Laboratory;

(C) Los Alomos National Laboratory;

(D) Sandia National Laboratory;

(E) Fermi National Accelorator;

(F) Princeton Plasma Physics Laboratory;

(G) Idaho National Engineering Laboratory;

(H) Argonne National Laboratory;

(I) Brookhaven National Laboratory;

(J) Oak Ridge National Laboratory;

(K) Pacific Northwest Laboratory;

(L) Ames Laboratory;

(M) Stanford Linear Accelerator Center;

(N) Bates Linear Accelerator Facility;

(O) Center for Energy and Environment Research;

(P) Coal Fired Flow Facility;

(Q) Energy Technology Engineering Center;

(R) Hanford Engineering Development Laboratory;

(S) Inhalation Toxicology Research Institute;

(T) Laboratory for Energy-Related Health Research;

(U) Laboratory of Biomedical and Environmental Sciences;

(V) Laboratory of Radiobiology and Environmental Health;

(W) Michigan State University - DOE Plant Research Laboratory;

(X) Notre Dame Radiation Laboratory;

(Y) Oak Ridge Associated Universities;

(Z) Radiobiology Laboratory;

(AA) Savannah River Ecology Laboratory;

(BB) Savannah River Laboratory;

(CC) Solar Energy Research Institute;

(DD) Stanford Synchrotron Radiation Laboratory.

Such term also includes any future government-owned, contractor-operated laboratory facilities established as Department of Energy Multiprogram Laboratories or Program-Dedicated Facilities.

Such term does not include Naval Nuclear Propulsion Reactor Laboratories, their contractors or subcontractors performing work covered under Executive Order 12344, as codified in section 7158 of title 4, United States Code.

(2) The term "Federal Agency" means any executive agency as defined in section 105 of title 5, United States Code, and the military departments defined by section 102 of title 5, United States Code.

(3) The term "contract" means any contract, grant, or cooperative agreement as those terms are used in sections 6303, 6304, and 6305 of title 31, United States Code, entered into between any Federal agency and any contractor for the performance of experimental, developmental, or research work funded in whole or in part by the Federal Goverment. Such term includes any assignment, substitution of parties, or subcontract of any type entered into for the performance of experimental, developmental, or research work under a contract.

(4) The term "cooperative research and development agreement" means any agreement ~~[as defined in section 11 of the Stevenson Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710a(d)(1))]~~ between one or more National Laboratories and one or more non-Federal parties under which the Government, through its National Laboratories, provides personnel, services, facilities, equipment, or other resources with or

without reimbursement (but not funds to non-Federal parties) and the non-Federal parties provide funds, personnel, services, facilities, and equipment, or other resources toward the conduct of specified research or development efforts which are consistent with the missions of the National Laboratory; except that such term does not include a procurement contract or cooperative agreement as those terms are used in sections 6303, 6304, and 6305 of title 31, United States Code.

(5) The term "funding agreement" means any contract, grant, or cooperative agreement entered into between the Secretary of Energy and a contractor operating a National Laboratory of the Department of Energy that provides for such contractor to perform research and development at such National Laboratory.

TITLE I --THE DEPARTMENT OF ENERGY NATIONAL LABORATORIES

CENTERS FOR RESEARCH ON ENABLING TECHNOLOGIES

FOR HIGH TEMPERATURE SUPERCONDUCTING APPLICATIONS.

SEC. 101. FINDINGS.

Congress makes the following findings:

(1) the Department of Energy has conducted extensive research in superconducting materials to support its programatic activities in High Energy Physics, Magnetic Fusion Energy, Energy Storage Systems, Electric Energy Systems, and Energy Conservation pursuant to the Federal Nonnuclear Energy Research and Development Act of 1974 (P.L.93-577), the Energy Reorganization Act of 1974 (P.L. 93-483), and the Department of Energy Organization Act (Public Law 95-91);

(2) recent developments in high-temperature superconducting materials hold great promise for highly efficient energy storage and transmission, medical diagnostics, magnets for physics research and fusion reactors, and smaller supercomputers;

(3) the United States is a world leader in basic research on high-temperature superconducting materials, and programs supporting this research at the **Department of Defense, the** National Science Foundation and the Department of Energy should be maintained and strengthened;

(4) international interest in the commercialization of high-temperature superconducting materials is high and the key to success lies in the rapid development of these materials and the identification of applications; and

(5) the National Laboratories of the Department of Energy have demonstrated expertise in superconductivity research and a proven record in research in enabling technologies which can benefit industrial efforts in product development.

SEC. 102. PURPOSE .--The purposes of this title are--

(1) to research critical enabling technologies to assist United States industry in the commercialization of high-temperature superconductors;

(2) to provide national organization and coordination in the research, development and commercialization of high-temperature superconductors; and

(3) to encourage private industry, university, and Department of Energy National Laboratory interaction through Centers for Research on Enabling Technologies at the National Laboratories.

SEC. 103. ESTABLISHMENT OF THE SUPERCONDUCTOR RESEARCH INITIATIVE.--

The Secretary of Energy shall initiate and carry out a cooperative program of research on enabling superconductor technology and on the practical applications of superconductor technology (hereafter in this title referred to as the "Superconductor Research Initiative").

SEC. 104. PARTICIPATION OF NATIONAL LABORATORIES OF THE DEPARTMENT OF ENERGY.

(a) Mission of National Laboratories.--The Secretary of Energy shall ensure that the National Laboratories of the Department of Energy participate in the Initiative, to the extent that such participation does not detract from the primary mission of the National Laboratory.

(b) Agreements.--The Secretary of Energy shall enter into such agreements with other Federal agencies, with U.S. private industrial or research organizations, consortias, or with any college or university as may be necessary to provide for the active participation of the National Laboratories of the Department of Energy in the Superconductor Research Initiative.

(c) Required Provisions.--The Superconductor Research Initiative shall include provisions for one or more national laboratories of the Department of Energy to conduct research and development activities relating to research on high-temperature superconductivity. Such activities may include research and development in associated technologies including thin film and bulk ceramic synthesis and processing and the characterization of physical, chemical, and structural properties in materials.

SEC. 105. FORMATION OF COUNCIL AND CENTERS FOR RESEARCH ON ENABLING TECHNOLOGIES.

(a) Council.--The Secretary of Energy shall form a council to be known as the "Council for Research on Enabling Technologies" (hereafter in this title referred to as the "Council") which shall be composed of representatives of appropriate government agencies, universities, and industry to provide guidance in setting goals and strategies for the timely research on critical enabling technologies in high-temperature superconductors. The Council shall set guidelines for the release of the technical findings and developments made by the cooperative research centers established pursuant to subsection (b). Guidelines for releasing technical findings set forth by the Council shall be consistent with guidelines set forth by the relevent agencies.

(b) Cooperative Research Centers.-- (1) The Secretary of Energy shall establish cooperative research centers in enabling technology for superconducting materials and applications (hereafter in this title referred to as "centers") at National Laboratories with appropriate university and private industry participants.

(2) The centers shall be located at National Laboratories which demonstrate expertise in--

(A) superconductivity research; and

(B) research in associated technologies including--

(i) thin film and bulk ceramic synthesis and processing; and

(ii) characterization of physical, chemical, and structural properties in materials.

(c) Avoidance of Duplication.-- The Council shall keep appraised of activities taking place at the existing Research Centers on Superconductivity and Superconductivity Pilot Centers. In carrying out the responsibilities of subsection (a) the Council shall ensure that unnecessarily duplicative research or activities are not being carried out at these Centers.

SEC. 106. PERSONNEL EXCHANGES.--The Superconductor Research Initiative ~~[shall]~~ may include provisions for temporary exchanges of personnel between any domestic firm or university referred to in this title and the National Laboratories of the Department of Energy that are participating in the Superconductor Research Initiative. The exchange of personnel ~~[shall]~~ may be subject to such restrictions, limitations, terms and conditions as the Secretary of Energy considers necessary in the interest of national security.

SEC. 107. OTHER DEPARTMENT OF ENERGY RESOURCES.

(a) Availability of Resources.--The Secretary of Energy shall make available to other departments or agencies of the Federal Government, and to any participant in research and development projects under the Superconductor Research Initiative, any facilities, personnel, equipment, services, and other resources of the Department of Energy for the purpose of conducting research and development projects under the Superconductor Research Initiative consistent with section 104.

(b) Reimbursement.--The Secretary may make facilities available under this section only to the extent that the cost of the use of such facilities is reimbursed by the user.

SEC. 108. BUDGETING FOR SUPERCONDUCTIVITY RESEARCH.

To the extent the Secretary considers appropriate and necessary, the ~~[The]~~ Secretary of Energy, in preparing the research and development budget of the Department of Energy to be included in the annual budget submitted to the Congress by the President **for fiscal years 1990, 1991, 1992, 1993, 1994, and 1995** under section 1105(a) of title 31, United States Code, shall provide for programs, projects, and activities that encourage the development of new technology in the field of superconductivity.

SEC. 109. COST-SHARING AGREEMENTS.

(a) Permitted Provisions.-- **The Secretary of Energy shall ensure that contracts for the operation of Department of Energy National Laboratories provide the** ~~[The]~~ director of each National Laboratory of the Department of Energy that is participating in the Superconductivity Research Initiative or the contractor operating any such National Laboratory **the authority to** ~~[may]~~ include in any cooperative research and development agreement entered into with a domestic firm, or university in conjunction with the Superconductor Research Initiative, a cooperative provision for the domestic firm or university to pay a portion of the cost of the research and development activities.

(b) Considerations.-- The Director of each National Laboratory of the Department of Energy that is participating in the Superconductivity Research Initiative, in determining the type and extent of its laboratory participation in carrying out work for others, shall undertake such work only when facilities are available and when it would not interfere with Department of Energy programs, and shall be conducted in such a way as to not create a future detrimental burden on the National Laboratory.

(c) ~~[(b)]~~ Limitations.-- (1) An amount equal to not more than 10 percent of any National Laboratory's annual budget shall be received from non-appropriated funds derived from work for

others contracts entered into under the Superconductor Research Initiative in any fiscal year except to the extent approved in advance by the Secretary of Energy.

(2) **Pursuant to the authority delegated by the Secretary of Energy to the National Laboratory Directors, no** ~~[No]~~ Department of Energy National Laboratory may receive more than $10,000,000 of non-appropriated funds under any cooperative research and development agreement entered into under this subsection in connection with the Superconductor Research Initiative except to the extent approved in advance by the Secretary of Energy.

SEC. 110. DEPARTMENT OF ENERGY OVERSIGHT OF COOPERATIVE AGREEMENTS RELATING TO THE SUPERCONDUCTOR RESEARCH INITIATIVE.

(a) Provisions Relating to Disapproval and Modification of Agreements.-- (1) The Secretary of Energy or his designee may review a cooperative research and development agreement for the purpose of disapproving or requiring the modification of the cooperative research and development agreement [~~if the agreement exceeds $1,000,000~~]. If the Secretary notifies the parties to the agreement of his intent to review the agreement, the agreement shall provide a 30-day period within which the agreement may be disapproved or modified beginning on the date the agreement is submitted to the Secretary.

(2) In any case in which the Secretary of Energy or his designee disapproves or requires the modification of any agreement presented under this section, the Secretary of Energy or such designee shall transmit a written explanation of such disapproval or modification to the head of the laboratory concerned.

(b) Record of Agreements.-- Each national laboratory shall maintain a record of all agreements entered into under this section[~~.~~] , and submit such record to the Secretary of Energy on an annual basis.

SEC. 111. AVOIDANCE OF DUPLICATION.

In carrying out the Superconductivity Research Initiative, the Secretary of Energy shall ensure that unnecessarily duplicative research is not performed at the research facilities (including the National Laboratories of the Department of Energy) that are participating in the Superconductivity Research Initiative.

SEC. 112. INTERNAL REVENUE CODE TREATMENT.

(a) Tax Exemptions.--Any cooperative agreement, assocaition, or consortium established by the Department of Energy or the National Laboratories of the Department of Energy, and which is consistent with the purposes of this Title, shall be treated as an organization described in section 501(c)(3) of the Internal Revenue Code of 1986 and exempt from tax under section 501 (a) of such Code with respect to activities authorized by this Title.

(b) Basic Research Payments.-- Any amounts transferred to an organization described in paragraph (a) by a participating member of such an organization shall be taken into account as basic research paymnets for purposes of section 41(a)(2) of such Code.

(c) Capital Gains Treatment.--

(1) No gain or loss shall be recognized in connection with the transfer pursuant to this title of any patent, copyright, trademark, trade secret, mask work, or other intellectual property by or between an organization described in subsection (a) and any participating member of such an organization.

(2) If property is received in a transfer described in paragraph (1), the basis of the property in the hands of the transferee shall be the same as it would be in the hands of the transferor.

SEC. 113. ANTITRUST TREATMENT.

Any cooperative agreement, association, or consortia created by the Department of Energy or the National Laboratories of the Department of Energy pursuant to the provisions of this Title, shall be considered a joint research and development venture within the meaning of section 2(a)(6) of the National Cooperative Research Act of 1984 (15 U.S.C. 4301 et seq.), for purposes of such Act.

TITLE II --TECHNOLOGY MANAGEMENT AT THE DEPARTMENT OF ENERGY

NATIONAL LABORATORIES

Sec. 200. Findings.

The Congress finds that--

(1) private industry has great interest in scientific collaboration with the Department of Energy National Laboratories but only if the present Department of Energy laboratory contracting process can be streamlined and intellectual property associated with joint ventures, adequately protected;

(2) contracts for the operation of the Department of Energy National Laboratories must provide the Directors of such Laboratories with sufficient management authority for intellectual property ~~[must be granted to the Director of the Department of Energy National Laboratories]~~ to ensure that they can negotiate with industry to set up cooperative research and development agreements; This authority shall be subject to periodic audit and oversight by the Secretary of Energy, the

Inspector General and the Comptroller General as well as Congress.

(3) the present Department of Energy policy of disseminating computer software publically, via the National Energy Software Center, despite its commercialization potential, has at times, benefited foreign companies and there should be timely, consistent review procedure to ensure that commercialization potential is considered when software is developed under a Department of Energy contract or may have involved some Department of Energy funding;

(4) the Department of Energy National Laboratories must be perceived as "user-friendly" in order for industry to seriously consider the laboratories partners for collaborative research and development ventures;

(5) the National Laboratories must aggressively seek contact with private industries to ensure that they recognize the technical and scientific expertise resident in these laboratories, in addition to publicizing the availability of user facilities and technological projects in ~~[process]~~ progress, and

(6) the National Laboratories have demonstrateed successes in technology transfer into the private sector but the effort can be significantly enhanced if--

(A) industry becomes more aware of the laboratories research and development projects and capabilities;

(B) technology transfer is considered a significant part of the laboratory's mission;

(C) the laboratories become better educated in industry market requirements; and

(D) industry gets involved with the laboratories early enough in the research and development process to direct development of commercially viable products.

Sec. 201. Duties and authorities of the Secretary of Energy.

The Secretary of Energy shall:

(1) review all existing regulations, policies procedures, and administrative processes associated with the Department of Energy's National Laboratories Directors' ability to:

(A) form cooperative relationships and enter into cooperative research and development agreements with private industry or universities;

(B) undertake "work-for others"; and

(C) operate user facilities.

(D) review standards of conduct for resolving potential conflicts of interest to make sure they adequately establish guidelines for situations likely to arise through the use of the authorities granted in this Act, included, but not limited to cases where present or former National Laboratory employees or their partners negotiate licenses or assignments of

titles to inventions or negotiate cooperative research and development agreements with Federal agencies including the Department of Energy or the contractor-operator with which the employee involved is or was formerly employed.

(2)(A) review all public laws and related procedures requiring public disclosure of technical data to ensure that they are as consistent as legally possible with the purposes of the this Act.

(B) survey non-federal parties interested in entering into cooperative research and development agreements with the National Laboratories to determine if adequate safeguards exist for insuring the confidentiality and proprietary value of technical data.

(C) based on the results of the study develop policy recommendations that shall be submitted to the Congress.

(3) formulate and carry out a comprehensive set of policy guidelines to advance the goals of this act, based on the review required under paragraphs (1) and (2).

(4) report to Congress and the President within 90 days the status of this review and implement the policy guidelines within 180 days of enactment of this bill.

SEC. 202. PURPOSE.

The purpose of this title is to better meet the continuing responsibility of the Federal Government to ensure the full use of the results of the Nation's Federal investment in the National Laboratories' research and development in meeting international competition.

SEC. 203. POLICY.

It is the policy of Congress that

(1) intellectual property rights in technology ~~[or devices]~~ developed at the National Laboratories be ~~[controlled in a manner that promotes]~~ managed so as to promote ~~[the use of such technology and devices to improve]~~ the competitiveness ~~[advantage]~~ of ~~[the]~~ United States industries ~~[.]~~ ;

(2) the Secretary of Energy promulgate policy guidelines dealing with cooperative research and development agreements and intellectual property rights arising under such agreements; and

(3) the Laboratory Directors devise implementing procedures consistent with the policy guidelines set forth by the Secretary;

Sec. 204. DEFINITIONS.

For purposes of this title--

(1) The term "invention" means any invention which is or may be patentable or otherwise protected under Title 35, United States Code, or any novel variety of plant which is or may be protectable under the Plant Variety Protection Act (7 U.S.C. 2321 et seq.);

(2) The term "subject invention" means any invention of a National Laboratory first conceived or reduced to practice in the performance of work under a contract or funding agreement for the operation of a National Laboratory;

(3) The term "made" when used in conjunction with any invention means the conception or first actual reduction to practice of such invention;

(4) The term "technical data" means recorded information of a scientific or technical nature regardless of form or the media on which it may be recorded;

(5) The term "commercially valuable technical data" means applied technology which may have near term commercial value or which arose under a cooperative research and development agreement. The term does not apply to basic research;

~~[(5)]~~ (6) The term "computer software" means recorded information, regardless of form or the media on which it may be recorded, comprising computer programs or documentation thereof;

~~[(6)]~~ (7) The term "intellectual property" means patents, trademarks, copyrights, trade secrets, mask works, and other forms of comparable ~~[intellectual]~~ property rights ~~[enacted by Congress or the States]~~;

~~[(7)]~~ (8) The term "collaborative party" means a party to a cooperative research and development agreement as defined in paragraph (4);

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~~[(8)]~~ (9) The term "laboratory owned" means any rights in intellectual property conveyed under this title to a contractor operating a National Laboratory or any rights in intellectual property arising under the operating contract for a National Laboratory where rights are not expressly taken by the United States Government or by a subcontractor;

(10) The term "Director of a National Laboratory" means the Department of Energy contractor operator's employee, directing the management or operation of any National Laboratory;

(11) The term "laboratory manager or operator" means the contractor who has signed a management and operating contract with the Department of Energy (but only with respect to activities relating to such management or operation).

(12) The term "third parties" means domestic entities located in the United States who agree to manufacture and to conduct research, and development substantially in the United States including--

(A) Federal agencies other than the Department of Energy;

(B) units of State or local government;

(C) industrial organizations, such as corporations, partnerships, limited partnerships, consortia, or industrial development organizations;

(D) public and private foundations;

(E) nonprofit organizations such as universities; and

(F) licensees of inventions, technical data, or computer software owned by the laboratory manager or operator.

SEC. 205. COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS.

(a) General Authority.--The Secretary of Energy shall **develop policy guidelines under which he shall ensure that contracts for the operation of Department of Energy National Laboratories provide the Directors of such laboratories with the authority:** [permit the Director of any of its National Laboratories:]

(1) to enter into cooperative research and development agreements **and to negotiate the terms and conditions of such agreements** ~~[on behalf of the Department of Energy]~~ with--

(A) other federal agencies;

(B) units of state or local government;

(C) industrial organizations including corporations, partnerships, and limited partnerships, consortia, and industrial development organizations;

(D) public and private foundations;

(E) nonprofit organizations including universities; or

(F) other persons including licensees of inventions, technical data or computer software owned by the National Laboratory; and

(2) to negotiate intellectual property licensing agreements for National Laboratory owned inventions, technical data or computer software, assigned or licensed to the National Laboratory by third parties, including voluntary assignment by employees.

(b) Specific Authority.--~~[~~ ~~Under cooperative research and development agreements entered into pursuant to subsection (a)(1), the Director of a National Laboratory may]~~ Each Director of a National Laboratory may negotiate and include provisions in any cooperative research and development agreement entered into pursuant to this section permitting the laboratory manager or operator, on behalf of the United States to --

(1) accept, retain, and use funds, personnel, services, and property from collaborating parties and provide personnel, services, and property to collaborating parties;

(2) grant or agree to grant in advance to a collaborat ~~[ing]~~ ive party, intellectual property licenses or assignments, or options thereto, in any invention, technical data or computer software, made in whole or in part by ~~[a National Laboratory employee]~~

an employee of a laboratory manager or operator under the cooprative research and agreement; and

(3) to the extent consistent with Department of Energy ~~[requirements and standards of conduct,]~~ regulations, orders, and directives pertaining to conflict of interest, permit employees or former employees of ~~[the National Laboratory]~~ a laboratory manager or operator to participate in efforts to ~~[commercialize]~~ transfer to the private sector inventions, technical data or computer software, ~~[they]~~ such employees developed or made while in the service of ~~[the National Laboratory]~~ such laboratory manager or operator.

(c) In determining whether to enter into a cooperative research and development agreement the Laboratory Director shall determine that--

(1) facilities at the National Laboratory are available to do the work that is the subject of the cooperative research and development agreement;

(2) the work that is the subject of the cooperative research and development agreement would not interfere with Department of Energy programs;

(3) the work that is the subject of the cooperative research and development agreement would not create a future detrimental burden on the National Laboratory;

(4) the proposed cooperative research and development agreement is consistent with other guidelines that the Secretary of Energy may prescribe consistent with the policies set forth in this Act, provided that such guidelines are first published for public comment in the Federal Register.

~~[(e)]~~ (d) Approval of Agreement by Secretary.--~~[(1) If the value of an agreement entered into under this section does not exceed $1,000,000, the agreement shall not be subject to the approval of the Secretary of Energy.~~

~~(2) When the value of the agreement exceeds $1,000,000, but does not exceed $10,000,000 (the maximum amount for a cooperative research and development agreement), t~~] The Secretary of Energy or his designee may disapprove or require the modification of the agreement. The agreement shall provide a 30-day period beginning on the date the agreement is presented to the Secretary of Energy or his designee by the ~~[head]~~ Laboratory

Director of the National Laboratory concerned, within which such action shall be taken. In any case in which the Secretary of Energy or his designee disapproves or requires the modification of any cooperative agreement presented under this section, the Secretary or his designee shall transmit a written explanation of such disapproval or modification to the ~~[head]~~ Laboratory Director of the National Laboratory concerned. If such action is not taken within this thirty day period, the cooperative research and development agreement shall be deemed approved.

~~[(d)]~~ (e) Limit on Percentage Of the Total Work Cooperative Research and Development Agreements Can Comprise at the National Laboratories. The cumulative total of non-appropriated funds of all agreements entered into by each National Laboratory Director under this section shall not exceed an amount equal to 10 percent of that laboratory's annual budget.

~~[(e)]~~ Records of Agreements.--Each National Laboratory shall maintain a record of all agreements entered into under this section, and shall submit it to the Secretary of Energy on an annual basis.

SEC. 206. CONTRACT CONSIDERATIONS.--(a) Regulations and Procedures.--(1) ~~[The Office of Federal Procurement Policy may]~~ The Secretary of Energy shall issue within 180 days after enactment of this Act regulations or set forth suitable procedures for implementing the provisions of Section 205 ~~[(a)(1)]~~ after public comment. Implementation of Section 205 ~~[(a)(1)]~~ shall not be delayed until issuance of such regulations.

(2) Any regulations covering National Laboratory cooperative research and development agreements under Section 205 ~~[(a)(1)]~~ shall be guided by the purpose of this Act.

(3) The Office of Federal Procurement Policy shall review such regulations referred to in subparagraph (1) for consistency with this Act before issuance of such regulations.

(b) Agreement Considerations.--The Director of the National laboratory in deciding what cooperative research and development agreements to enter into shall:

(1) give special consideration to small business firms and consortia involving small business firms; and

(2) give preference to business units located in the United States, which agree that products embodying inventions, technical data or computer software, made under the cooperative research and development agreement or produced through the use of such inventions, technical data or computer software, will be developed and manufactured substantially in the United States.

(3) in the case of any industrial organizations or other person subject to the control of a foreign company or government, as appropriate, take into consideration whether or not such foreign government permits United States agencies, organizations, or other persons to enter into cooperative research and development agreements and licensing agreements; and

(4) provide universities the opportunity to participate in such cooperative agreements when such participation will contribute to the purpose of this legislation.

(c) Record of Agreements.--The ~~[Department of Energy]~~ Director of each National Laboratory shall maintain a record of all agreements entered into under this section and submit it to the Secretary of Energy on an annual basis.

SEC. 407. PATENT OWNERSHIP AND THE CONDITIONS OF OWNERSHIP.--

(a) Disposal of Title to Inventions.--Notwithstanding section 152 of the Atomic Energy Act of 1954 (42 U.S.C. 2182), section 9 of the Federal Nonnuclear Energy Research and Development Act of 1974 (42 U.S.C. 5908), or other provision of law, the Secretary of Energy shall dispose of the title to any subject invention made in the performance of a Department of Energy contract to operate any National Laboratory in the same manner as applied to small business and nonprofit organizations under Chapter 18 of title 35, United States Code.

Regulatory

(b) Retention of Title by United States.--(1) Whenever a National Laboratory manager or operator makes an invention to which the Department of Energy has determined (at the time of contracting for the management and operation of the National Laboratory) to retain title:

(A) for exceptional circumstances under section 202(a)(ii) of title 35, United States Code; or

(B) because the invention is made in the course of or under a funding agreement described in section 202(a)(iv) of title 35, United States Code, the title to such invention shall be retained by the Government unless the National Laboratory at which the invention is made requests title to

such invention and the Secretary of Energy does not notify the Director of the National Laboratory within 90 days after receipt of such request that the invention is covered by an exceptional circumstances determination or has been designated sensitive technical information as authorized by Federal statutes ~~[other than those involving export control].~~

(2) The Secretary may not use export control statutes or regulations as ~~[a]~~ the sole basis for refusing a request for title.

(3) The Secretary may not retain title to a subject invention under the exception set forth at Section 202(a)(iv) of title 35, United States Code, without first determining that the invention has been classified or has been designated sensitive technical information as authorized by applicable statutes ~~[other than those involving export control].~~ If the Secretary does not notify the requesting National Laboratory, the laboratory shall be deemed to have elected title to the invention under the Government-wide contractor patentable ownership provisions of chapter 18 of title 35, United States Code.

~~[SEC. 200. TECHNICAL DATA OR COMPUTER SOFTWARE AND THE CONDITIONS OF OWNERSHIP.--(a) Rights Retained by a National Laboratory.--Notwithstanding any other provision of law, the Secretary of Energy shall delegate the authority to permit a National Laboratory to elect ownership to any intellectual property rights that can be established to protect commercially valuable technical data or computer software obtained or generated under a Department contract for the operation of such National Laboratory subject to a royalty free license to use and reproduce such technical data or computer software for United States Governmental purposes.~~

~~(b) Protection of Technical Data and Computer Software.--(1) Technical data or computer software obtained or generated by a National Laboratory shall not be disclosed to the public if the Director of the National Laboratory or his designee determines that--~~

~~(A) the technical data or computer software is commercially valuable; [and] or~~

~~(B) the technical data has been generated as a result of or under a cooperative research and development agreement that provides for the total reimbursement by the non federal parties; and~~

~~[(B)]~~ (C) ~~there is a reasonable expectation that disclosure of the technical data or computer software could cause substantial harm to the commercial application of such information.~~

~~(2) A cooperative research and development agreement which provides that technical data or computer software which meets the conditions of paragraph (1) obtained or generated~~

~~(A) by the Department of Energy or the National Laboratory pursuant to a cooperative research and development agreement; or~~

~~(B) under a National Laboratory cooperative research and development,~~

~~shall not be disclosed to the public~~ for a period of 2 years.

~~(3) Documentation disclosing technical data or computer software subject to nondisclosure under paragraphs (1) and (2) shall not be considered as agency records under the Freedom of Information Act during the term of nondisclosure to the public.~~

~~(c) Regulations. [The Office of Federal Procurement Policy,] (1) The Department of Energy, in cooperation with other interested federal agencies, shall issue within 180 days after the date of enactment of this title including 30 days for public comment, regulations establishing a standard contract clause to implement [this] sections 407 and 408 in the Department of Energy contract for the operation of any National Laboratory.~~

~~(2) The Office of Federal Procurement Policy shall review such regulations for consistency with this Act prior to the issuance of such regulations under paragraph (1).~~

~~(2) In the event the Department of Energy regulations are not issued within the time prescribed the sole responsibility shall be transferred to the Office of Federal Procurement Policy.]~~

SEC. ~~[209.]~~ 208. SPECIAL RULE FOR WAIVER OF GOVERNMENT LICENSE RIGHTS.--

Any of the rights of the Government or obligations of a National Laboratory described in chapter 18 of title 35, United States Code, including the license reserved in section 202 (c) (4) of title 35, United States Code, may be waived or omitted if the Secretary of Energy determines that the interests of the United States and the general public will be better served or the objectives and policies of this title will be better promoted by such waiver or omission. A waiver or omission shall be considered--

(1) if it is necessary to obtain a uniquely or highly qualified contractor; or

(2) if invention involves cosponsored, cost sharing or joint venture research and development, and the contractor, cosponsor or joint venturer is making substantial contribution of funds, facilities or equipment to the work performed on the invention; or

(3) if the invention will require substantial additional investment in development before a product is

created and it is expected that the primary market for such product is the United States Government.

SEC. ~~[210]~~ 209. INTELLECTUAL PROPERTY CONTRACT PROVISIONS.

(a) Contract Provisions.--Any Department of Energy ~~[contract]~~ funding agreement to operate a National laboratory shall provide--

(1) that any royalties or income that is earned by the manager or operator of a ~~[the]~~ National Laboratory from the licensing of laboratory-owned intellectual property rights in any fiscal year shall be used as authorized under subsection 202(c)(7)(E) of title 35, United States Code and section 13(a)(1)(B)(i)-(iv) and section 13(a)(2)-(4) of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710c(a)(1)(B)(i)-(iv) and 3710c(a)(2)-(4);

(2) that the costs of obtaining and protecting intellectual property rights in any invention, technical data or computer software, owned by the National Laboratory shall be paid for by ~~[the Department of Energy to the extent not offset by royalty income earned from the licensing of National Laboratory owned intellectual property rights;]~~ the National Laboratories under standard operating funds or as a cost shared expense under a cooperative research and development agreement;

(3) that Department of Energy establish procedures to have the management of intellectual property rights, including procurement and retention of such rights as well as licensing of such rights, in connection with laboratory-owned inventions, commercially valuable technical data and computer software shall be the responsibility of the Director of the National Laboratory at which the invention, technical data, or computer software are made, developed or assigned.

(4) The Secretary of Energy shall promulgate appropriate regulations, orders, or directives precluding any laboratory manager or operator who has received title to intellectual property under this section from receiving money or other benefit from the use or licensing of such property for the benefit of the laboratory manager or operator, except for research and development associated with activities at the National Laboratory, to promote technology transfer as authorized by laws, or in special circumstances, as may be approved by the appropriate Department of Energy manager of the Operations Office.

(b) Compensation.--(1) Subject to paragraph (2), in return for retaining title to any intellectual property rights in any invention or discovery made in performance of a Department of Energy cooperative research agreement, the National Laboratory

contractor shall pay to the United States reasonable compensation based on the value of the technology transferred. The amount of the payment arising as a result of the transfer shall be set by an arbitration board consisting of one member selected by the contractor, one member selected by the Secretary of Energy, and one member jointly selected by the contractor and the Secretary. In determining the payment, the arbitration board shall set an amount that is proportionate with the research and development costs funded by the United States. The arbitration board shall have discretion to permit the payment to be made in installments according to the extent the contractor uses or employs the intellectual property.

(2) Provided that this subsection shall not apply if:

(A) the contractor is operating the National Laboratory for no profit or fee beyond expenses; and

(B) the contractor is offering the intellectual property for fair market value and any value or royalties the contractor derives from the intellectual property will be returned to the National Laboratory or the Federal Treasury in accordance with Section 202(c)(7)(E) of title 35, United States Code.

SEC. ~~[211]~~ 210. MARCH-IN RIGHTS.

(a) Rights.--The Secretary of Energy may require the licensing to third parties of all intellectual property owned by the laboratory manager or operator that is subject to the provisions of this Act in the same manner as provided under section 203 of title 35, United States Code.

~~[Each funding agreement for the operation of a National Laboratory shall contain a provision allowing the Department of Energy to require the licensing of the intellectual property rights to third parties of inventions, technical data, or software owned by the contractor that are subject to the provisions of this title for any of the reasons described in 35 U.S.C. 203(1)(a-d). Such provision will ensure that the technology is licensed and commercialized by affording similar Federal march in rights provided for inventions under section 203, title 35, United States Code, but will be applicable to all intellectual property for which title was acquired by the National Laboratory Directors under this title.]~~

~~[(c) Regulations. [The Office of Federal Procurement Policy,] (b) The Department of Energy, in cooperation with other interested federal agencies, shall issue within 180 days from enactment including thirty (30) for public comment, regulations to implement the march in rights under this section.~~

~~(c) In the event the Department of Energy does not issue the regulations referred to above in the prescribed time frame, the responsibility for issuing the regulations shall be transferred to the Office of Federal Procurement Policy.]~~

SEC. ~~[412.]~~ 411. EFFECTIVE DATE.--This title shall take effect on the date of enactment. The Secretary of Energy shall immediately enter into negotiations with the contractors of the National Laboratories to amend all existing contracts for the operation of the National Laboratories, to reflect this Title. Pending such amendment, the provisions of this title shall govern the disposition of all intellectual property rights covering laboratory-owned inventions, technical data, and computer software, generated in performance of Department of Energy contracts for the operation of the Department of Energy National Laboratories.

Tangible Research Property

This Guide Memo covers ownership and distribution of tangible property which results as a product or by-product of research activities.

The following policy and procedures are directed toward the administration and distribution of tangible research property (TRP) which is owned and/or controlled by Stanford. The policy and procedures are subject to Stanford's contractual obligations and are to be interpreted and applied consistent with and complementary to Stanford's other policies affecting the administration of tangible properties.

Section headings in this Guide Memo are:

1. DEFINITION OF TRP
2. OWNERSHIP OF TRP
3. CONTROL OF TRP
4. INCOME FROM TRP
5. PURPOSE OF TRP PROCEDURES
6. IDENTIFICATION OF TRP
7. DISTRIBUTION OF TRP FOR RESEARCH PURPOSES
8. DISTRIBUTION OF TRP FOR COMMERCIAL PURPOSES

1. DEFINITION OF TRP

Tangible research property (TRP) is defined for purposes of this Guide Memo as tangible (or corporeal) items produced in the course of research projects supported by Stanford or by external sponsors. TRP includes such items as:

- Biological materials
- Computer software
- Computer data bases
- Circuit diagrams
- Engineering drawings
- Integrated circuit chips
- Prototype devices
- Equipment

TRP is separate and distinct from intangible (or intellectual) property such as inventions, patents, copyright, trademarks, trade secrets, etc. which are subject to other policies and guidelines (see Guide Memos 75, Patents, and 76, Copyrightable Materials and Other Intellectual Property). Individual items of TRP may be associated with one or more intangible properties such as copyright or patents.

2. OWNERSHIP OF TRP

TRP normally is either owned by Stanford or is subject to the ownership and other provisions of contracts and grants. For example, items such as microorganisms produced under a government grant usually belongs to Stanford as expendable property, subject to the terms and conditions of the grant. Equipment which is fabricated at Stanford for subsequent off-campus use by a

research sponsor (e.g., an instrument for a space satellite fabricated at Stanford under contract with NASA) is usually owned exclusively by the sponsor.

3. CONTROL OF TRP

a. Freedom of Access — The University's Secrecy in Research Guidelines, adopted by the Senate in 1969, state:

"... that the principle of openness in research — the principle of freedom of access by all interested persons to the underlying data, to the processes, and to the final results of research — is one of overriding importance."

Consistent with these Guidelines, it is Stanford's policy to promote the prompt and open exchange of TRP and associated research data with scientific colleagues outside the investigator's immediate laboratory.

b. Control Responsibilities — It is the responsibility of the principal investigator (or laboratory director or department chairperson, if the TRP is not developed as part of a sponsored research project) to control the development, storage, use, and distribution of TRP made in the course of research activity, subject to provisions of applicable grants or contracts and University policy. Such control includes determining if and when distribution of the TRP is to be made beyond the laboratory for others' scientific use.

c. Commercial Considerations — Because TRP may have potential commercial value as well as scientific value, the investigator may wish to make TRP broadly available for others' scientific use by means which do not diminish its value or inhibit its commercial development or public use. Although valid non-commercial reasons may exist for the temporary delay of TRP distribution outside the laboratory for others' scientific use (e.g., safety factors or the need to more fully characterize the TRP prior to distribution, etc.) scientific exchanges should not be inhibited due to potential commercial considerations.

4. INCOME FROM TRP

a. Recoverable Costs — TRP may not be sold for profit, although licensing agreements which include provision for royalty income may be negotiated for commercial use of the intangible property rights associated with the TRP (see section 8.c below). When distributing TRP to research colleagues outside the laboratory, costs of the raw materials and handling may be recovered from the recipient, with the income returned to the account which funded those costs.

b. Contractual Obligations — If any of the initial costs were funded from sponsored agreements, the Sponsored Projects Office (SPO) should be asked to advise on the contractual obligations regarding distribution of the TRP and disposition of the recovered costs. If any costs are charged for TRP distribution, adequate documentation must be maintained for audit purposes.

5. PURPOSE OF TRP PROCEDURES

The following procedures for identification and distribution of TRP are designed to aid the traditional open distribution and exchange of TRP for research purposes, preserve the potential commercial value of TRP, assist the further development of TRP for public use, and protect the

University and its employees from liability claims arising from the use of Stanford TRP by others.

6. IDENTIFICATION OF TRP —

a. Identification System — Each item of TRP should have an unambiguous identification code and name sufficient to distinguish it from other similar items developed at Stanford or elsewhere.

The Office of Technology Licensing (OTL) should be consulted for assistance in developing appropriate identification systems and for information regarding use of existing University systems (e.g., Biological TRP Registry, Trademark Registry, etc.).

b. Ownership Marks — Where applicable (e.g., computer software), each item should also carry the name of the TRP owner and such other marks and legends as may be required to meet Stanford's contractual obligations and administrative needs, including notice of copyright, trademark, government rights, etc.

Information regarding identification, marks, and legends required under research contracts and grants can be obtained from the Patent and Copyright Affairs (PCA) group in the Sponsored Projects Office (SPO).

7. DISTRIBUTION OF TRP FOR RESEARCH PURPOSES

a. Biological TRP —

i. Transmittal Letter — Each distribution for non-commercial research purposes should be accompanied by a letter of transmittal which includes the following, des the following, or equivalent, wording:

"For Stanford's records, please indicate your agreement (1) to accept S— (insert Biological Registry No.) to be used only for non-clinical research by you in your research laboratory, and (2) to not distribute S— to any other individual or entity, by signing and returning a copy of this letter to me."

ii. Precautionary Language — If there is a possibility of biohazard or other risk associated with the transport, storage or use of a particular TRP, or if the recipient is likely to use the TRP for clinical research, the Office of the University Counsel should be consulted for advice regarding appropriate precautionary language in the TRP distribution agreement.

b. Software TRP — Distribution, for research purposes only, of computer software owned by Stanford (see Guide Memo 76) may be made without restrictions if control of subsequent use by the principal investigator is not desired. For example, a principal investigator may wish recipients to follow a specific research protocol. Any such distribution is subject to the applicable contract or grant provisions and an agreement by the recipient that commercial development of the software is not to be undertaken.

i. Distribution Agreement — If software owned by Stanford has commercial value or if it is considered desirable to control subsequent use, distribution for research purposes must be coordinated with OTL and must be accompanied by an appropriate agreement with the recipient. OTL will arrange for trademark and copyright registration as needed. OTL will also provide wording for the distribution agreement as necessary to preserve

commercial value and provide coordination with existing or prospective commercial licensing activities.

ii. **Distribution Services** — The Software Distribution Center (SDC), operated by OTL, provides a convenient service for distributing software for research use, charging recipients only the cost of distribution. In addition to attending to any legal and other details, including mailing, etc., SDC also makes arrangements for collecting departmental costs associated with providing software for non-commercial use and returning these to the department. Faculty and staff are encouraged to use this service for all software distribution activities.

iii. **Contractual Obligations** — When software results from sponsored research, the PCA group in SPO should be consulted regarding contractual obligations and regulations affecting ownership, disposition of various rights, and restrictions on the distribution and use of TRP and any associated income.

c. **Other Forms of TRP** — Distribution of TRP other than biological products should normally follow the procedures outlined above for the example of computer software.

8. DISTRIBUTION OF TRP FOR COMMERCIAL PURPOSES

a. **Distribution Agreement** — If TRP developed by Stanford as a result of research activities is to be distributed to outside users for commercial purposes, the distribution agreement must contain provisions negotiated by OTL covering the terms under which the property may be used, limits on the University's liability for the property or products derived therefrom, and disposition of any royalty income to Stanford from the licensing of intangible property rights associated with the use of the tangible property.

b. **Income Distribution** — Distribution of any TRP-related royalty income other than patent royalties will be similar to the patent royalty income distribution policy (see Guide Memo 75, Patents, except that the "inventor's share" will normally be distributed to a research account in the laboratory which produced the TRP (subject to any contractual obligations regarding distribution of income). Questions regarding distribution of any royalty income to individuals should be referred to OTL. Any distribution to individuals is subject to prior approval of the Vice Provost and Dean of Graduate Studies and Research.

c. **Contractual Obligations** — If the TRP results from sponsored research, the PCA group in SPO should be consulted regarding contractual obligations and regulations affecting ownership, notices, acknowledgements, disposition of various rights, and restrictions on the distribution and use of the TRP and any associated income.