

as amended, which is classified generally to chapter 16 (§1861 et seq.) of Title 42, The Public Health and Welfare. For complete classification of this Act to the Code, see Short Title note set out under section 1861 of Title 42 and Tables.

#### PRIOR PROVISIONS

A prior section 9 of Pub. L. 96-480 was renumbered section 10 and is classified to section 3708 of this title.

#### AMENDMENTS

2000—Subsecs. (a), (b). Pub. L. 106-404 made technical amendments to references in original act which appear in text as references to section 3705 of this title.

1986—Subsec. (a). Pub. L. 99-502 substituted “Cooperative Research Centers” for “Centers for Industrial Technology” and struck out last sentence which read as follows: “The provisions of sections 3705(e) and 3705(f) of this title shall apply to Centers established under this section.”

### § 3708. Administrative arrangements

#### (a) Coordination

The Secretary and the National Science Foundation shall, on a continuing basis, obtain the advice and cooperation of departments and agencies whose missions contribute to or are affected by the programs established under this chapter, including the development of an agenda for research and policy experimentation. These departments and agencies shall include but not be limited to the Departments of Defense, Energy, Education, Health and Human Services, Housing and Urban Development, the Environmental Protection Agency, National Aeronautics and Space Administration, Small Business Administration, Council of Economic Advisers, Council on Environmental Quality, and Office of Science and Technology Policy.

#### (b) Cooperation

It is the sense of the Congress that departments and agencies, including the Federal laboratories, whose missions are affected by, or could contribute to, the programs established under this chapter, should, within the limits of budgetary authorizations and appropriations, support or participate in activities or projects authorized by this chapter.

#### (c) Administrative authorization

(1) Departments and agencies described in subsection (b) of this section are authorized to participate in, contribute to, and serve as resources for the Centers and for any other activities authorized under this chapter.

(2) The Secretary and the National Science Foundation are authorized to receive moneys and to receive other forms of assistance from other departments or agencies to support activities of the Centers and any other activities authorized under this chapter.

#### (d) Cooperative efforts

The Secretary and the National Science Foundation shall, on a continuing basis, provide each other the opportunity to comment on any proposed program of activity under section 3705, 3707, 3710, 3710d, 3711a, or 3712 of this title before funds are committed to such program in order to mount complementary efforts and avoid duplication.

(Pub. L. 96-480, §10, formerly §9, Oct. 21, 1980, 94 Stat. 2316; Pub. L. 99-502, §9(e)(2)(C), Oct. 20,

1986, 100 Stat. 1797; Pub. L. 100-107, §3(b), Aug. 20, 1987, 101 Stat. 727; renumbered §10 and amended Pub. L. 100-418, title V, §5122(a)(1), (c), Aug. 23, 1988, 102 Stat. 1438, 1439; Pub. L. 102-240, title VI, §6019, Dec. 18, 1991, 105 Stat. 2183.)

#### PRIOR PROVISIONS

A prior section 10 of Pub. L. 96-480 was renumbered section 11 and is classified to section 3710 of this title.

Another prior section 10 of Pub. L. 96-480 related to National Industrial Technology Board and was classified to section 3709 of this title, prior to repeal by section 9(a) of Pub. L. 99-502.

#### AMENDMENTS

1991—Subsec. (d). Pub. L. 102-240 made technical amendment to reference to section 3712 of this title to reflect renumbering of corresponding section of original act.

1988—Subsec. (d). Pub. L. 100-418, §5122(c), made technical amendment to references to sections 3705, 3707, 3710, 3710d, 3711a, and 3712 of this title to reflect renumbering of corresponding sections of original act.

1987—Subsec. (d). Pub. L. 100-107 inserted reference to section 3711a of this title.

1986—Subsec. (d). Pub. L. 99-502 inserted references to sections 3710 and 3710d of this title.

### § 3709. Repealed. Pub. L. 99-502, §9(a), Oct. 20, 1986, 100 Stat. 1795

Section, Pub. L. 96-480, §10, Oct. 21, 1980, 94 Stat. 2317, related to establishment, duties, membership, and terms of National Industrial Technology Board.

### § 3710. Utilization of Federal technology

#### (a) Policy

(1) It is the continuing responsibility of the Federal Government to ensure the full use of the results of the Nation's Federal investment in research and development. To this end the Federal Government shall strive where appropriate to transfer federally owned or originated technology to State and local governments and to the private sector.

(2) Technology transfer, consistent with mission responsibilities, is a responsibility of each laboratory science and engineering professional.

(3) Each laboratory director shall ensure that efforts to transfer technology are considered positively in laboratory job descriptions, employee promotion policies, and evaluation of the job performance of scientists and engineers in the laboratory.

#### (b) Establishment of Research and Technology Applications Offices

Each Federal laboratory shall establish an Office of Research and Technology Applications. Laboratories having existing organizational structures which perform the functions of this section may elect to combine the Office of Research and Technology Applications within the existing organization. The staffing and funding levels for these offices shall be determined between each Federal laboratory and the Federal agency operating or directing the laboratory, except that (1) each laboratory having 200 or more full-time equivalent scientific, engineering, and related technical positions shall provide one or more full-time equivalent positions as staff for its Office of Research and Technology Applications, and (2) each Federal agency which operates or directs one or more Federal labora-

tories shall make available sufficient funding, either as a separate line item or from the agency's research and development budget, to support the technology transfer function at the agency and at its laboratories, including support of the Offices of Research and Technology Applications. Furthermore, individuals filling positions in an Office of Research and Technology Applications shall be included in the overall laboratory/agency management development program so as to ensure that highly competent technical managers are full participants in the technology transfer process.

**(c) Functions of Research and Technology Applications Offices**

It shall be the function of each Office of Research and Technology Applications—

(1) to prepare application assessments for selected research and development projects in which that laboratory is engaged and which in the opinion of the laboratory may have potential commercial applications;

(2) to provide and disseminate information on federally owned or originated products, processes, and services having potential application to State and local governments and to private industry;

(3) to cooperate with and assist the National Technical Information Service, the Federal Laboratory Consortium for Technology Transfer, and other organizations which link the research and development resources of that laboratory and the Federal Government as a whole to potential users in State and local government and private industry;

(4) to provide technical assistance to State and local government officials; and

(5) to participate, where feasible, in regional, State, and local programs designed to facilitate or stimulate the transfer of technology for the benefit of the region, State, or local jurisdiction in which the Federal laboratory is located.

Agencies which have established organizational structures outside their Federal laboratories which have as their principal purpose the transfer of federally owned or originated technology to State and local government and to the private sector may elect to perform the functions of this subsection in such organizational structures. No Office of Research and Technology Applications or other organizational structures performing the functions of this subsection shall substantially compete with similar services available in the private sector.

**(d) Dissemination of technical information**

The National Technical Information Service shall—

(1) serve as a central clearinghouse for the collection, dissemination and transfer of information on federally owned or originated technologies having potential application to State and local governments and to private industry;

(2) utilize the expertise and services of the National Science Foundation and the Federal Laboratory Consortium for Technology Transfer; particularly in dealing with State and local governments;

(3) receive requests for technical assistance from State and local governments, respond to such requests with published information available to the Service, and refer such requests to the Federal Laboratory Consortium for Technology Transfer to the extent that such requests require a response involving more than the published information available to the Service;

(4) provide funding, at the discretion of the Secretary, for Federal laboratories to provide the assistance specified in subsection (c)(3) of this section;

(5) use appropriate technology transfer mechanisms such as personnel exchanges and computer-based systems; and

(6) maintain a permanent archival repository and clearinghouse for the collection and dissemination of nonclassified scientific, technical, and engineering information.

**(e) Establishment of Federal Laboratory Consortium for Technology Transfer**

(1) There is hereby established the Federal Laboratory Consortium for Technology Transfer (hereinafter referred to as the "Consortium") which, in cooperation with Federal laboratories and the private sector, shall—

(A) develop and (with the consent of the Federal laboratory concerned) administer techniques, training courses, and materials concerning technology transfer to increase the awareness of Federal laboratory employees regarding the commercial potential of laboratory technology and innovations;

(B) furnish advice and assistance requested by Federal agencies and laboratories for use in their technology transfer programs (including the planning of seminars for small business and other industry);

(C) provide a clearinghouse for requests, received at the laboratory level, for technical assistance from States and units of local governments, businesses, industrial development organizations, not-for-profit organizations including universities, Federal agencies and laboratories, and other persons, and—

(i) to the extent that such requests can be responded to with published information available to the National Technical Information Service, refer such requests to that Service, and

(ii) otherwise refer these requests to the appropriate Federal laboratories and agencies;

(D) facilitate communication and coordination between Offices of Research and Technology Applications of Federal laboratories;

(E) utilize (with the consent of the agency involved) the expertise and services of the National Science Foundation, the Department of Commerce, the National Aeronautics and Space Administration, and other Federal agencies, as necessary;

(F) with the consent of any Federal laboratory, facilitate the use by such laboratory of appropriate technology transfer mechanisms such as personnel exchanges and computer-based systems;

(G) with the consent of any Federal laboratory, assist such laboratory to establish pro-

grams using technical volunteers to provide technical assistance to communities related to such laboratory;

(H) facilitate communication and cooperation between Offices of Research and Technology Applications of Federal laboratories and regional, State, and local technology transfer organizations;

(I) when requested, assist colleges or universities, businesses, nonprofit organizations, State or local governments, or regional organizations to establish programs to stimulate research and to encourage technology transfer in such areas as technology program development, curriculum design, long-term research planning, personnel needs projections, and productivity assessments;

(J) seek advice in each Federal laboratory consortium region from representatives of State and local governments, large and small business, universities, and other appropriate persons on the effectiveness of the program (and any such advice shall be provided at no expense to the Government); and

(K) work with the Director of the National Institute on Disability and Rehabilitation Research to compile a compendium of current and projected Federal Laboratory technologies and projects that have or will have an intended or recognized impact on the available range of assistive technology for individuals with disabilities (as defined in section 3002 of title 29), including technologies and projects that incorporate the principles of universal design (as defined in section 3002 of title 29), as appropriate.

(2) The membership of the Consortium shall consist of the Federal laboratories described in clause (1) of subsection (b) of this section and such other laboratories as may choose to join the Consortium. The representatives to the Consortium shall include a senior staff member of each Federal laboratory which is a member of the Consortium and a senior representative appointed from each Federal agency with one or more member laboratories.

(3) The representatives to the Consortium shall elect a Chairman of the Consortium.

(4) The Director of the National Institute of Standards and Technology shall provide the Consortium, on a reimbursable basis, with administrative services, such as office space, personnel, and support services of the Institute, as requested by the Consortium and approved by such Director.

(5) Each Federal laboratory or agency shall transfer technology directly to users or representatives of users, and shall not transfer technology directly to the Consortium. Each Federal laboratory shall conduct and transfer technology only in accordance with the practices and policies of the Federal agency which owns, leases, or otherwise uses such Federal laboratory.

(6) Not later than one year after October 20, 1986, and every year thereafter, the Chairman of the Consortium shall submit a report to the President, to the appropriate authorization and appropriation committees of both Houses of the Congress, and to each agency with respect to which a transfer of funding is made (for the fis-

cal year or years involved) under paragraph (7), concerning the activities of the Consortium and the expenditures made by it under this subsection during the year for which the report is made. Such report shall include an annual independent audit of the financial statements of the Consortium, conducted in accordance with generally accepted accounting principles.

(7)(A) Subject to subparagraph (B), an amount equal to 0.008 percent of the budget of each Federal agency from any Federal source, including related overhead, that is to be utilized by or on behalf of the laboratories of such agency for a fiscal year referred to in subparagraph (B)(ii) shall be transferred by such agency to the National Institute of Standards and Technology at the beginning of the fiscal year involved. Amounts so transferred shall be provided by the Institute to the Consortium for the purpose of carrying out activities of the Consortium under this subsection.

(B) A transfer shall be made by any Federal agency under subparagraph (A), for any fiscal year, only if the amount so transferred by that agency (as determined under such subparagraph) would exceed \$10,000.

(C) The heads of Federal agencies and their designees, and the directors of Federal laboratories, may provide such additional support for operations of the Consortium as they deem appropriate.

#### **(f) Agency reports on utilization**

##### **(1) In general**

Each Federal agency which operates or directs one or more Federal laboratories or which conducts activities under sections 207 and 209 of title 35 shall report annually to the Office of Management and Budget, as part of the agency's annual budget submission, on the activities performed by that agency and its Federal laboratories under the provisions of this section and of sections 207 and 209 of title 35.

##### **(2) Contents**

The report shall include—

(A) an explanation of the agency's technology transfer program for the preceding fiscal year and the agency's plans for conducting its technology transfer function, including its plans for securing intellectual property rights in laboratory innovations with commercial promise and plans for managing its intellectual property so as to advance the agency's mission and benefit the competitiveness of United States industry; and

(B) information on technology transfer activities for the preceding fiscal year, including—

(i) the number of patent applications filed;

(ii) the number of patents received;

(iii) the number of fully-executed licenses which received royalty income in the preceding fiscal year, categorized by whether they are exclusive, partially-exclusive, or non-exclusive, and the time elapsed from the date on which the license was requested by the licensee in writing to the date the license was executed;

(iv) the total earned royalty income including such statistical information as the total earned royalty income, of the top 1 percent, 5 percent, and 20 percent of the licenses, the range of royalty income, and the median, except where disclosure of such information would reveal the amount of royalty income associated with an individual license or licensee;

(v) what disposition was made of the income described in clause (iv);

(vi) the number of licenses terminated for cause; and

(vii) any other parameters or discussion that the agency deems relevant or unique to its practice of technology transfer.

**(3) Copy to Secretary; Attorney General; Congress**

The agency shall transmit a copy of the report to the Secretary of Commerce and the Attorney General for inclusion in the annual report to Congress and the President required by subsection (g)(2) of this section.

**(4) Public availability**

Each Federal agency reporting under this subsection is also strongly encouraged to make the information contained in such report available to the public through Internet sites or other electronic means.

**(g) Functions of Secretary**

(1) The Secretary, in consultation with other Federal agencies, may—

(A) make available to interested agencies the expertise of the Department of Commerce regarding the commercial potential of inventions and methods and options for commercialization which are available to the Federal laboratories, including research and development limited partnerships;

(B) develop and disseminate to appropriate agency and laboratory personnel model provisions for use on a voluntary basis in cooperative research and development arrangements; and

(C) furnish advice and assistance, upon request, to Federal agencies concerning their cooperative research and development programs and projects.

**(2) REPORTS.—**

(A) **ANNUAL REPORT REQUIRED.**—The Secretary, in consultation with the Attorney General and the Commissioner of Patents and Trademarks, shall submit each fiscal year, beginning 1 year after November 1, 2000, a summary report to the President, the United States Trade Representative, and the Congress on the use by Federal agencies and the Secretary of the technology transfer authorities specified in this chapter and in sections 207 and 209 of title 35.

(B) **CONTENT.**—The report shall—

(i) draw upon the reports prepared by the agencies under subsection (f) of this section;

(ii) discuss technology transfer best practices and effective approaches in the licensing and transfer of technology in the context of the agencies' missions; and

(iii) discuss the progress made toward development of additional useful measures of

the outcomes of technology transfer programs of Federal agencies.

(C) **PUBLIC AVAILABILITY.**—The Secretary shall make the report available to the public through Internet sites or other electronic means.

(3) Not later than one year after October 20, 1986, the Secretary shall submit to the President and the Congress a report regarding—

(A) any copyright provisions or other types of barriers which tend to restrict or limit the transfer of federally funded computer software to the private sector and to State and local governments, and agencies of such State and local governments; and

(B) the feasibility and cost of compiling and maintaining a current and comprehensive inventory of all federally funded training software.

**(h) Duplication of reporting**

The reporting obligations imposed by this section—

(1) are not intended to impose requirements that duplicate requirements imposed by the Government Performance and Results Act of 1993 (31 U.S.C. 1101 note);

(2) are to be implemented in coordination with the implementation of that Act; and

(3) are satisfied if an agency provided the information concerning technology transfer activities described in this section in its annual submission under the Government Performance and Results Act of 1993 (31 U.S.C. 1101 note).

**(i) Research equipment**

The Director of a laboratory, or the head of any Federal agency or department, may loan, lease, or give research equipment that is excess to the needs of the laboratory, agency, or department to an educational institution or nonprofit organization for the conduct of technical and scientific education and research activities. Title of ownership shall transfer with a gift under this section.

(Pub. L. 96-480, § 11, Oct. 21, 1980, 94 Stat. 2318; renumbered § 10 and amended Pub. L. 99-502, §§ 3-5, 9(e)(1), Oct. 20, 1986, 100 Stat. 1787, 1789, 1791, 1797; renumbered § 11 and amended Pub. L. 100-418, title V, §§ 5115(b)(2), 5122(a)(1), 5162(b), 5163(c)(1), (3), Aug. 23, 1988, 102 Stat. 1433, 1438, 1450, 1451; Pub. L. 100-519, title II, §§ 201(d)(3), 212(a)(4), Oct. 24, 1988, 102 Stat. 2594, 2595; Pub. L. 101-189, div. C, title XXXI, § 3133(e), Nov. 29, 1989, 103 Stat. 1679; Pub. L. 102-245, title III, §§ 301, 303, Feb. 14, 1992, 106 Stat. 19, 20; Pub. L. 104-66, title III, § 3001(f), Dec. 21, 1995, 109 Stat. 734; Pub. L. 104-113, §§ 3, 9, Mar. 7, 1996, 110 Stat. 775, 779; Pub. L. 105-394, title II, § 212(d), Nov. 13, 1998, 112 Stat. 3655; Pub. L. 106-404, §§ 7(5), (6), 10(a), Nov. 1, 2000, 114 Stat. 1745-1747; Pub. L. 110-69, title III, § 3002(c)(4), Aug. 9, 2007, 121 Stat. 586.)

**REFERENCES IN TEXT**

The Government Performance and Results Act of 1993, referred to in subsec. (h), is Pub. L. 103-62, Aug. 3, 1993, 107 Stat. 285, which enacted section 306 of Title 5, Government Organization and Employees, sections 1115 to 1119, 9703, and 9704 of Title 31, Money and Finance, and sections 2801 to 2805 of Title 39, Postal Service,

amended section 1105 of Title 31, and enacted provisions set out as notes under sections 1101 and 1115 of Title 31. For complete classification of this Act to the Code, see Short Title of 1993 Amendment note set out under section 1101 of Title 31 and Tables.

## AMENDMENTS

2007—Subsec. (g)(1). Pub. L. 110-69 struck out “through the Under Secretary, and” after “The Secretary,” in introductory provisions.

2000—Subsec. (b). Pub. L. 106-404, §10(a)(1), struck out at end “The agency head shall submit to Congress at the time the President submits the budget to Congress an explanation of the agency’s technology transfer program for the preceding year and the agency’s plans for conducting its technology transfer function for the upcoming year, including plans for securing intellectual property rights in laboratory innovations with commercial promise and plans for managing such innovations so as to benefit the competitiveness of United States industry.”

Subsec. (e)(1). Pub. L. 106-404, §7(5), substituted “in cooperation with Federal laboratories” for “in cooperation with Federal Laboratories” in introductory provisions.

Subsec. (f). Pub. L. 106-404, §10(a)(2), added subsec. (f).

Subsec. (g)(2). Pub. L. 106-404, §10(a)(3), added par. (2) and struck out former par. (2) which read as follows: “Two years after October 20, 1986, and every two years thereafter, the Secretary shall submit a summary report to the President and the Congress on the use by the agencies and the Secretary of the authorities specified in this chapter. Other Federal agencies shall cooperate in the report’s preparation.”

Subsec. (h). Pub. L. 106-404, §10(a)(4), added subsec. (h).

Subsec. (i). Pub. L. 106-404, §7(6), substituted “a gift under this section” for “a gift under the section”.

1998—Subsec. (e)(1)(K). Pub. L. 105-394 added subpar. (K).

1996—Subsec. (e)(7)(B). Pub. L. 104-113, §3, amended subpar. (B) generally. Prior to amendment, subpar. (B) read as follows: “A transfer shall be made by any Federal agency under subparagraph (A), for any fiscal year, only if—

“(i) the amount so transferred by that agency (as determined under such subparagraph) would exceed \$10,000; and

“(ii) such transfer is made with respect to the fiscal year 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, or 1996.”

Subsec. (i). Pub. L. 104-113, §9, inserted “loan, lease, or” before “give”.

1995—Subsec. (f). Pub. L. 104-66 struck out heading and text of subsec. (f). Text read as follows: “Each Federal agency which operates or directs one or more Federal laboratories shall report annually to the Congress, as part of the agency’s annual budget submission, on the activities performed by that agency and its Federal laboratories pursuant to the provisions of this section.”

1992—Subsec. (e)(2). Pub. L. 102-245, §301(a), inserted “senior” before “representative”.

Subsec. (e)(6). Pub. L. 102-245, §301(b), inserted at end “Such report shall include an annual independent audit of the financial statements of the Consortium, conducted in accordance with generally accepted accounting principles.”

Subsec. (e)(7)(B)(ii). Pub. L. 102-245, §301(c), substituted “1991, 1992, 1993, 1994, 1995, or 1996” for “or 1991”.

Subsec. (e)(8). Pub. L. 102-245, §301(d), struck out former par. (8) which read as follows:

“(A) The Consortium shall use 5 percent of the funds provided in paragraph (7)(A) to establish demonstration projects in technology transfer. To carry out such projects, the Consortium may arrange for grants or awards to, or enter into agreements with, nonprofit State, local, or private organizations or entities whose primary purposes are to facilitate cooperative research

between the Federal laboratories and organizations not associated with the Federal laboratories, to transfer technology from the Federal laboratories, and to advance State and local economic activity.

“(B) The demonstration projects established under subparagraph (A) shall serve as model programs. Such projects shall be designed to develop programs and mechanisms for technology transfer from the Federal laboratories which may be utilized by the States and which will enhance Federal, State, and local programs for the transfer of technology.

“(C) Application for such grants, awards, or agreements shall be in such form and contain such information as the Consortium or its designee shall specify.

“(D) Any person who receives or utilizes any proceeds of a grant or award made, or agreement entered into, under this paragraph shall keep such records as the Consortium or its designee shall determine are necessary and appropriate to facilitate effective audit and evaluation, including records which fully disclose the amount and disposition of such proceeds and the total cost of the project in connection with which such proceeds were used.”

Subsec. (i). Pub. L. 102-245, §303, added subsec. (i).

1989—Subsec. (b). Pub. L. 101-189 struck out “after September 30, 1981,” after “(2)”, substituted “sufficient funding, either as a separate line item or from the agency’s research and development budget,” for “not less than 0.5 percent of the agency’s research and development budget”, struck out “agency head may waive the requirement set forth in clause (2) of the preceding sentence. If the agency head waives such requirement, the” after “transfer process. The”, and substituted “agency’s technology transfer program for the preceding year and the agency’s plans for conducting its technology transfer function for the upcoming year, including plans for securing intellectual property rights in laboratory innovations with commercial promise and plans for managing such innovations so as to benefit the competitiveness of United States industry” for “reasons for the waiver and alternate plans for conducting the technology transfer function at the agency”.

1988—Subsec. (d)(6). Pub. L. 100-418, §5163(c)(3), added par. (6).

Subsec. (e)(4). Pub. L. 100-418, §5115(b)(2), substituted “National Institute of Standards and Technology” for “National Bureau of Standards” and “Institute” for “Bureau”.

Subsec. (e)(7)(A). Pub. L. 100-418, §5162(b), substituted “0.008 percent of the budget of each Federal agency from any Federal source, including related overhead, that is to be utilized by or on behalf of” for “0.005 percent of that portion of the research and development budget of each Federal agency that is to be utilized by”.

Pub. L. 100-418, §5115(b)(2), substituted “National Institute of Standards and Technology” for “National Bureau of Standards” and “Institute” for “Bureau”.

Subsec. (g)(1). Pub. L. 100-519, §201(d)(3), inserted reference to the Under Secretary.

Subsec. (h). Pub. L. 100-519, §212(a)(4), struck out subsec. (h) which read as follows: “None of the activities or functions of the National Technical Information Service which are not performed by contractors as of September 30, 1987, shall be contracted out or otherwise transferred from the Federal Government unless such transfer is expressly authorized by statute, or unless the value of all work performed under the contract and related contracts in each fiscal year does not exceed \$250,000.”

Pub. L. 100-418, §5163(c)(1), added subsec. (h).

1986—Subsec. (a). Pub. L. 99-502, §4(a), designated existing provisions as par. (1) and added pars. (2) and (3).

Subsec. (b). Pub. L. 99-502, §4(b)(1), substituted “200 or more full-time equivalent scientific, engineering, and related technical positions shall provide one or more full-time equivalent positions” for “a total annual budget exceeding \$20,000,000 shall provide at least one professional individual full-time”, inserted “Fur-

thermore, individuals filling positions in an Office of Research and Technology Applications shall be included in the overall laboratory/agency management development program so as to ensure that highly competent technical managers are full participants in the technology transfer process.”, substituted “requirement set forth in clause (2) of the preceding sentence” for “requirements set forth in (1) and/or (2) of this subsection”, and substituted “such requirement” for “either requirement (1) or (2)”.

Subsec. (c)(1). Pub. L. 99-502, § 4(b)(2)(A), added par. (1) and struck out former par. (1) which read as follows: “to prepare an application assessment of each research and development project in which that laboratory is engaged which has potential for successful application in State or local government or in private industry;”.

Subsec. (c)(3). Pub. L. 99-502, § 4(b)(2)(B), substituted “the National Technical Information Service, the Federal Laboratory Consortium for Technology Transfer,” for “the Center for the Utilization of Federal Technology” and struck out “and” after the semicolon.

Subsec. (c)(4). Pub. L. 99-502, § 4(b)(2)(C), substituted “to State and local government officials; and” for “in response to requests from State and local government officials.”.

Subsec. (c)(5). Pub. L. 99-502, § 4(b)(2)(D), added par. (5).

Subsec. (d). Pub. L. 99-502, § 4(c)(1), substituted “The National Technical Information Service shall” for “There is hereby established in the Department of Commerce a Center for the Utilization of Federal Technology. The Center for the Utilization of Federal Technology shall” in introductory par.

Subsec. (d)(2). Pub. L. 99-502, § 4(c)(2), (3), redesignated par. (3) as (2) and struck out “existing” before “Federal Laboratory”. Former par. (2), which required the Center for the Utilization of Federal Technology to coordinate the activities of the Offices of Research and Technology Applications of the Federal Laboratories, was struck out.

Subsec. (d)(3). Pub. L. 99-502, § 4(c)(4), added par. (3). Former par. (3) redesignated (2).

Subsec. (d)(4). Pub. L. 99-502, § 4(c)(4)–(6), redesignated par. (5) as (4) and substituted “subsection (c)(3)” for “subsection (c)(4)”. Former par. (4), which required the Center for the Utilization of Federal Technology to receive requests for technical assistance from State and local governments and refer those requests to the appropriate Federal laboratories, was struck out.

Subsec. (d)(5), (6). Pub. L. 99-502, § 4(c)(5), redesignated pars. (5) and (6) as (4) and (5), respectively.

Subsecs. (e), (f). Pub. L. 99-502, §§ 3, 4(d), added subsec. (e), redesignated former subsec. (e) as (f), substituted “report annually to the Congress, as part of the agency’s annual budget submission, on the activities” for “prepare biennially a report summarizing the activities”, and struck out “The report shall be transmitted to the Center for the Utilization of Federal Technology by November 1 of each year in which it is due.”.

Subsec. (g). Pub. L. 99-502, § 5, added subsec. (g).

EX. ORD. NO. 12591. FACILITATING ACCESS TO SCIENCE AND TECHNOLOGY

Ex. Ord. No. 12591, Apr. 10, 1987, 52 F.R. 13414, as amended by Ex. Ord. No. 12618, Dec. 22, 1987, 52 F.R. 48661, provided:

By the authority vested in me as President by the Constitution and laws of the United States of America, including the Federal Technology Transfer Act of 1986 (Public Law 99-502) [see Short Title of 1986 Amendments note set out under section 3701 of this title], the Trademark Clarification Act of 1984 (Public Law 98-620) [see Short Title of 1984 Amendment note set out under section 1051 of this title], and the University and Small Business Patent Procedure Act of 1980 (Public Law 96-517) [see Tables for classification], and in order to ensure that Federal agencies and laboratories assist universities and the private sector in broadening our technology base by moving new knowledge from the research laboratory into the development of new products and processes, it is hereby ordered as follows:

SECTION 1. *Transfer of Federally Funded Technology.*

(a) The head of each Executive department and agency, to the extent permitted by law, shall encourage and facilitate collaboration among Federal laboratories, State and local governments, universities, and the private sector, particularly small business, in order to assist in the transfer of technology to the marketplace.

(b) The head of each Executive department and agency shall, within overall funding allocations and to the extent permitted by law:

(1) delegate authority to its government-owned, government-operated Federal laboratories:

(A) to enter into cooperative research and development agreements with other Federal laboratories, State and local governments, universities, and the private sector; and

(B) to license, assign, or waive rights to intellectual property developed by the laboratory either under such cooperative research or development agreements and from within individual laboratories.

(2) identify and encourage persons to act as conduits between and among Federal laboratories, universities, and the private sector for the transfer of technology developed from federally funded research and development efforts;

(3) ensure that State and local governments, universities, and the private sector are provided with information on the technology, expertise, and facilities available in Federal laboratories;

(4) promote the commercialization, in accord with my Memorandum to the Heads of Executive Departments and Agencies of February 18, 1983, of patentable results of federally funded research by granting to all contractors, regardless of size, the title to patents made in whole or in part with Federal funds, in exchange for royalty-free use by or on behalf of the government;

(5) administer all patents and licenses to inventions made with federal assistance, which are owned by the non-profit contractor or grantee, in accordance with Section 202(c)(7) of Title 35 of the United States Code as amended by Public Law 98-620, without regard to limitations on licensing found in that section prior to amendment or in Institutional Patent Agreements now in effect that were entered into before that law was enacted on November 8, 1984, unless, in the case of an invention that has not been marketed, the funding agency determines, based on information in its files, that the contractor or grantee has not taken adequate steps to market the inventions, in accordance with applicable law or an Institutional Patent Agreement;

(6) implement, as expeditiously as practicable, royalty-sharing programs with inventors who were employees of the agency at the time their inventions were made, and cash award programs; and

(7) cooperate, under policy guidance provided by the Office of Federal Procurement Policy, with the heads of other affected departments and agencies in the development of a uniform policy permitting Federal contractors to retain rights to software, engineering drawings, and other technical data generated by Federal grants and contracts, in exchange for royalty-free use by or on behalf of the government.

SEC. 2. *Establishment of the Technology Share Program.* The Secretaries of Agriculture, Commerce, Energy, and Health and Human Services and the Administrator of the National Aeronautics and Space Administration shall select one or more of their Federal laboratories to participate in the Technology Share Program. Consistent with its mission and policies and within its overall funding allocation in any year, each Federal laboratory so selected shall:

(a) Identify areas of research and technology of potential importance to long-term national economic competitiveness and in which the laboratory possesses special competence and/or unique facilities;

(b) Establish a mechanism through which the laboratory performs research in areas identified in Section 2(a) as a participant of a consortium composed of United States industries and universities. All consortia

so established shall have, at a minimum, three individual companies that conduct the majority of their business in the United States; and

(c) Limit its participation in any consortium so established to the use of laboratory personnel and facilities. However, each laboratory may also provide financial support generally not to exceed 25 percent of the total budget for the activities of the consortium. Such financial support by any laboratory in all such consortia shall be limited to a maximum of \$5 million per annum.

SEC. 3. *Technology Exchange—Scientists and Engineers.* The Executive Director of the President's Commission on Executive Exchange shall assist Federal agencies, where appropriate, by developing and implementing an exchange program whereby scientists and engineers in the private sector may take temporary assignments in Federal laboratories, and scientists and engineers in Federal laboratories may take temporary assignments in the private sector.

SEC. 4. *International Science and Technology.* In order to ensure that the United States benefits from and fully exploits scientific research and technology developed abroad,

(a) The head of each Executive department and agency, when negotiating or entering into cooperative research and development agreements and licensing arrangements with foreign persons or industrial organizations (where these entities are directly or indirectly controlled by a foreign company or government), shall, in consultation with the United States Trade Representative, give appropriate consideration:

(1) to whether such foreign companies or governments permit and encourage United States agencies, organizations, or persons to enter into cooperative research and development agreements and licensing arrangements on a comparable basis;

(2) to whether those foreign governments have policies to protect the United States intellectual property rights; and

(3) where cooperative research will involve data, technologies, or products subject to national security export controls under the laws of the United States, to whether those foreign governments have adopted adequate measures to prevent the transfer of strategic technology to destinations prohibited under such national security export controls, either through participation in the Coordinating Committee for Multilateral Export Controls (COCOM) or through other international agreements to which the United States and such foreign governments are signatories.

(b) The Secretary of State shall develop a recruitment policy that encourages scientists and engineers from other Federal agencies, academic institutions, and industry to apply for assignments in embassies of the United States; and

(c) The Secretaries of State and Commerce and the Director of the National Science Foundation shall develop a central mechanism for the prompt and efficient dissemination of science and technology information developed abroad to users in Federal laboratories, academic institutions, and the private sector on a fee-for-service basis.

SEC. 5. *Technology Transfer from the Department of Defense.* Within 6 months of the date of this Order [Apr. 10, 1987], the Secretary of Defense shall identify a list of funded technologies that would be potentially useful to United States industries and universities. The Secretary shall then accelerate efforts to make these technologies more readily available to United States industries and universities.

SEC. 6. *Basic Science and Technology Centers.* The head of each Executive department and agency shall examine the potential for including the establishment of university research centers in engineering, science, or technology in the strategy and planning for any future research and development programs. Such university centers shall be jointly funded by the Federal Government, the private sector, and, where appropriate, the States and shall focus on areas of fundamental research

and technology that are both scientifically promising and have the potential to contribute to the Nation's long-term economic competitiveness.

SEC. 7. *Reporting Requirements.* (a) Within 1 year from the date of this Order [Apr. 10, 1987], the Director of the Office of Science and Technology Policy shall convene an interagency task force comprised of the heads of representative agencies and the directors of representative Federal laboratories, or their designees, in order to identify and disseminate creative approaches to technology transfer from Federal laboratories. The task force will report to the President on the progress of and problems with technology transfer from Federal laboratories.

(b) Specifically, the report shall include:

(1) a listing of current technology transfer programs and an assessment of the effectiveness of these programs;

(2) identification of new or creative approaches to technology transfer that might serve as model programs for Federal laboratories;

(3) criteria to assess the effectiveness and impact on the Nation's economy of planned or future technology transfer efforts; and

(4) a compilation and assessment of the Technology Share Program established in Section 2 and, where appropriate, related cooperative research and development venture programs.

SEC. 8. *Relation to Existing Law.* Nothing in this Order shall affect the continued applicability of any existing laws or regulations relating to the transfer of United States technology to other nations. The head of any Executive department or agency may exclude from consideration, under this Order, any technology that would be, if transferred, detrimental to the interests of national security.

RONALD REAGAN.

## § 3710a. Cooperative research and development agreements

### (a) General authority

Each Federal agency may permit the director of any of its Government-operated Federal laboratories, and, to the extent provided in an agency-approved joint work statement or, if permitted by the agency, in an agency-approved annual strategic plan, the director of any of its Government-owned, contractor-operated laboratories—

(1) to enter into cooperative research and development agreements on behalf of such agency (subject to subsection (c) of this section) with other Federal agencies; units of State or local government; industrial organizations (including corporations, partnerships, and limited partnerships, and industrial development organizations); public and private foundations; nonprofit organizations (including universities); or other persons (including licensees of inventions owned by the Federal agency); and

(2) to negotiate licensing agreements under section 207 of title 35, or under other authorities (in the case of a Government-owned, contractor-operated laboratory, subject to subsection (c) of this section) for inventions made or other intellectual property developed at the laboratory and other inventions or other intellectual property that may be voluntarily assigned to the Government.

### (b) Enumerated authority

(1) Under an agreement entered into pursuant to subsection (a)(1) of this section, the laboratory may grant, or agree to grant in advance, to a collaborating party patent licenses or assign-