

“(i) ADDITIONAL TERMS AND CONDITIONS.—The Secretary may require such additional terms and conditions in connection with a transfer under subsection (b) as the Secretary considers appropriate to protect the interests of the United States.

“(j) DEFINITIONS.—In this subsection:

“(1) The term ‘major system’ has the meaning provided in section 2302 of title 10, United States Code.

“(2) The term ‘contractual agreement’ includes contracts, grants, cooperative agreements, and other transactions.”

USE OF RESEARCH AND DEVELOPMENT FUNDS FOR TEST FACILITIES AND EQUIPMENT

Pub. L. 99-190, § 101(b) [title VIII, § 8015], Dec. 19, 1985, 99 Stat. 1185, 1205, which provided that appropriations available to the Department of Defense for research and development could be used for 10 U.S.C. 2353 and for purposes related to research and development for which expenditures are specifically authorized in other appropriations of the Service concerned, was repealed and restated in section 2351(b) of this title by Pub. L. 100-370, § 1(g)(1)(B), (2), July 19, 1988, 102 Stat. 846.

§ 2354. Contracts: indemnification provisions

(a) With the approval of the Secretary of the military department concerned, any contract of a military department for research or development, or both, may provide that the United States will indemnify the contractor against either or both of the following, but only to the extent that they arise out of the direct performance of the contract and to the extent not compensated by insurance or otherwise:

(1) Claims (including reasonable expenses of litigation or settlement) by third persons, including employees of the contractor, for death, bodily injury, or loss of or damage to property, from a risk that the contract defines as unusually hazardous.

(2) Loss of or damage to property of the contractor from a risk that the contract defines as unusually hazardous.

(b) A contract, made under subsection (a), that provides for indemnification must also provide for—

(1) notice to the United States of any claim or suit against the contractor for the death, bodily injury, or loss of or damage to property; and

(2) control of or assistance in the defense by the United States, at its election, of that suit or claim.

(c) No payment may be made under subsection (a) unless the Secretary of the department concerned, or an officer or official of his department designated by him, certifies that the amount is just and reasonable.

(d) Upon approval by the Secretary concerned, payments under subsection (a) may be made from—

(1) funds obligated for the performance of the contract concerned;

(2) funds available for research or development, or both, and not otherwise obligated; or

(3) funds appropriated for those payments.

(Aug. 10, 1956, ch. 1041, 70A Stat. 134.)

HISTORICAL AND REVISION NOTES

Revised section	Source (U.S. Code)	Source (Statutes at Large)
2354(a)	5:235f (1st sentence, less provisos). 5:475k (1st sentence, less provisos). 5:628f (1st sentence, less provisos).	July 16, 1952, ch. 882, § 5, 66 Stat. 726.
2354(b)	5:235f (1st proviso of 1st sentence). 5:475k (1st proviso of 1st sentence). 5:628f (1st proviso of 1st sentence).	
2354(c)	5:235f (last proviso of 1st sentence). 5:475k (last proviso of 1st sentence). 5:628f (last proviso of 1st sentence).	
2354(d)	5:235f (less 1st sentence). 5:475k (less 1st sentence). 5:628f (less 1st sentence).	

In subsection (a), the words “Liability on account of”, and “of such claims” are omitted as surplusage. In clauses (1) and (2), the word “from” is substituted for the words “arising as a result of”.

In subsections (a) and (b), the words “United States” are substituted for the word “Government”.

In subsection (b), the words “made under subsection (a), that provides for indemnification” are substituted for the words “so providing * * * with respect to any alleged liability for such death”. The words “appropriate” and “or actions filed * * * or made” are omitted as surplusage.

In subsection (c), the words “by the Government”, “authority of”, and “for such purpose” are omitted as surplusage.

In subsection (d), the words “by the Congress” and “the making of” are omitted as surplusage. The words “or both” are inserted to conform to subsection (a).

§ 2355. Repealed. Pub. L. 103-355, title II, § 2002(a), Oct. 13, 1994, 108 Stat. 3303

Section, act Aug. 10, 1956, ch. 1041, 70A Stat. 135, authorized Secretary of each military department to prescribe by regulation the extent of itemization, substantiation, or certification of vouchers for funds spent under research or development contracts prior to payment.

§ 2356. Repealed. Pub. L. 104-106, div. A, title VIII, § 802(a), Feb. 10, 1996, 110 Stat. 390

Section, acts Aug. 10, 1956, ch. 1041, 70A Stat. 135; Sept. 2, 1958, Pub. L. 85-861, § 1(43A), 72 Stat. 1457; July 18, 1984, Pub. L. 98-369, div. B, title VII, § 2727(d), 98 Stat. 1195; Dec. 4, 1987, Pub. L. 100-180, div. A, title XII, § 1231(18)(B), 101 Stat. 1161, related to delegations of authority under sections 1584, 2353, 2354, and 2355 of this title.

§ 2357. Repealed. Pub. L. 101-510, div. A, title XIII, § 1301(11), Nov. 5, 1990, 104 Stat. 1668

Section, act Aug. 10, 1956, ch. 1041, 70A Stat. 135, required Secretary of each military department to report to Congress on contracts for research and development.

§ 2358. Research and development projects

(a) AUTHORITY.—The Secretary of Defense or the Secretary of a military department may engage in basic research, applied research, advanced research, and development projects that—

(1) are necessary to the responsibilities of such Secretary’s department in the field of research and development; and

(2) either—

- (A) relate to weapon systems and other military needs; or
- (B) are of potential interest to the Department of Defense.

(b) AUTHORIZED MEANS.—The Secretary of Defense or the Secretary of a military department may perform research and development projects—

- (1) by contract, cooperative agreement, or grant, in accordance with chapter 63 of title 31;
- (2) through one or more military departments;
- (3) by using employees and consultants of the Department of Defense; or
- (4) by mutual agreement with the head of any other department or agency of the Federal Government.

(c) REQUIREMENT OF POTENTIAL DEPARTMENT OF DEFENSE INTEREST.—Funds appropriated to the Department of Defense or to a military department may not be used to finance any research project or study unless the project or study is, in the opinion of the Secretary of Defense or the Secretary of that military department, respectively, of potential interest to the Department of Defense or to such military department, respectively.

(d) ADDITIONAL PROVISIONS APPLICABLE TO COOPERATIVE AGREEMENTS.—Additional authorities, conditions, and requirements relating to certain cooperative agreements authorized by this section are provided in sections 2371 and 2371a of this title.

(Added Pub. L. 87-651, title II, §208(a), Sept. 7, 1962, 76 Stat. 523; amended Pub. L. 97-86, title IX, §910, Dec. 1, 1981, 95 Stat. 1120; Pub. L. 100-370, §1(g)(3), July 19, 1988, 102 Stat. 846; Pub. L. 103-160, div. A, title VIII, §827(a), Nov. 30, 1993, 107 Stat. 1712; Pub. L. 103-355, title I, §1301(a), Oct. 13, 1994, 108 Stat. 3284; Pub. L. 104-201, div. A, title II, §267(c)(2), Sept. 23, 1996, 110 Stat. 2468.)

HISTORICAL AND REVISION NOTES
1962 ACT

Revised section	Source (U.S. Code)	Source (Statutes at Large)
2358	5:171c(b)(2), (3).	July 26, 1947, ch. 343, §203(b)(2), (3); added Aug. 6, 1958, Pub. L. 85-599, §9(a) (3d and 4th pars.), 72 Stat. 520.

5 U.S.C. 171c(b)(3) is omitted as unnecessary since the authorization for appropriations is implied in 5 U.S.C. 171c(b)(2).

1988 ACT

In the existing text of 10 U.S.C. 2358, the bill would in two instances strike the phrase “or his designee” appearing after “Secretary of Defense” (section 1(g)(3)). The change is made for consistency in the Code, and no substantive change is intended. The committee notes that the Secretary of Defense has general authority to delegate functions under 10 U.S.C. 113(d).

Subsection (b) is based on Pub. L. 91-441, title II, §204, Oct. 7, 1970, 84 Stat. 908.

AMENDMENTS

1996—Subsec. (d). Pub. L. 104-201 substituted “sections 2371 and 2371a” for “section 2371”.

1994—Pub. L. 103-355 amended section generally, inserting reference to development projects in section

catchline, and in text specifying that relevant Secretary may perform research and development projects in accordance with chapter 63 of title 31, and adding subsec. (d) relating to additional provisions applicable to cooperative agreements.

1993—Pub. L. 103-160 amended section generally. Prior to amendment, section read as follows:

“(a) IN GENERAL.—Subject to approval by the President, the Secretary of Defense may engage in basic and applied research projects that are necessary to the responsibilities of the Department of Defense in the field of basic and applied research and development and that relate to weapons systems and other military needs. Subject to approval by the President, the Secretary may perform assigned research and development projects—

- “(1) by contract with, or by grant to, educational or research institutions, private businesses, or other agencies of the United States;
- “(2) through one or more of the military departments; or
- “(3) by using employees and consultants of the Department of Defense.

“(b) REQUIREMENT OF POTENTIAL MILITARY RELATIONSHIP.—Funds appropriated to the Department of Defense may not be used to finance any research project or study unless the project or study has, in the opinion of the Secretary of Defense, a potential relationship to a military function or operation.”

1988—Pub. L. 100-370 designated existing provisions as subsec. (a), inserted heading, struck out “or his designee” after “Secretary of Defense” and “President, the Secretary”, and added subsec. (b).

1981—Par. (1). Pub. L. 97-86 substituted “by contract with, or by grant to,” for “by contract with”.

EFFECTIVE DATE OF 1994 AMENDMENT

For effective date and applicability of amendment by Pub. L. 103-355, see section 10001 of Pub. L. 103-355, set out as a note under section 2302 of this title.

ADVANCED ROTORCRAFT FLIGHT RESEARCH AND DEVELOPMENT

Pub. L. 112-81, div. A, title II, §222, Dec. 31, 2011, 125 Stat. 1336, provided that:

“(a) PROGRAM AUTHORIZED.—The Secretary of the Army may conduct a program for flight research and demonstration of advanced rotorcraft technology.

“(b) GOALS AND OBJECTIVES.—The goals and objectives of the program authorized by subsection (a) are as follows:

- “(1) To flight demonstrate the ability of advanced rotorcraft technology to expand the flight envelope and improve the speed, range, payload, ceiling, survivability, reliability, and affordability of current and future rotorcraft of the Department of Defense.
- “(2) To mature advanced rotorcraft technology and obtain flight-test data to—

- “(A) support the assessment of such technology for future rotorcraft platform development programs of the Department; and
- “(B) have the ability to add such technology to the existing rotorcraft of the Department to extend the capability and life of such rotorcraft until next-generation platforms are fielded.

“(c) ELEMENTS OF PROGRAM.—The program authorized by subsection (a) may include—

- “(1) integration and demonstration of advanced rotorcraft technology to meet the goals and objectives described in subsection (b); and
- “(2) flight demonstration of the advanced rotorcraft technology test bed under the experimental airworthiness process of the Federal Aviation Administration or other appropriate airworthiness process approved by the Secretary of Defense.

“(d) COMPETITION.—In awarding a contract under this section, the Secretary shall use competitive procedures in accordance with the requirements of section 2304 of title 10, United States Code, and shall consider a timely

offer submitted by a small business concern (as defined in section 2225(f)(3) of such title) in accordance with the specifications and evaluation factors specified in the solicitation.”

PROGRAM FOR RESEARCH, DEVELOPMENT, AND DEPLOYMENT OF ADVANCED GROUND VEHICLES, GROUND VEHICLE SYSTEMS, AND COMPONENTS

Pub. L. 111-383, div. A, title II, §214, Jan. 7, 2011, 124 Stat. 4164, provided that:

“(a) PROGRAM AUTHORIZED.—The Secretary of Defense may carry out a program for research and development on, and deployment of, advanced technology ground vehicles, ground vehicle systems, and components within the Department of Defense.

“(b) GOALS AND OBJECTIVES.—The goals and objectives of the program authorized by subsection (a) are as follows:

“(1) To identify and support technological advances that are necessary for the development of advanced technologies for use in ground vehicles of types to be used by the Department of Defense.

“(2) To procure and deploy significant quantities of advanced technology ground vehicles for use by the Department.

“(3) To maximize the leverage of Federal and non-government funds used for the development and deployment of advanced technology ground vehicles, ground vehicle systems, and components.

“(c) ELEMENTS OF PROGRAM.—The program authorized by subsection (a) may include—

“(1) enhanced research and development activities for advanced technology ground vehicles, ground vehicle systems, and components, including—

“(A) increased investments in research and development of batteries, advanced materials, power electronics, fuel cells and fuel cell systems, hybrid systems, and advanced engines;

“(B) pilot projects for the demonstration of advanced technologies in ground vehicles for use by the Department of Defense; and

“(C) the establishment of public-private partnerships, including research centers, manufacturing and prototyping facilities, and test beds, to speed the development, deployment, and transition to use of advanced technology ground vehicles, ground vehicle systems, and components; and

“(2) enhanced activities to procure and deploy advanced technology ground vehicles in the Department, including—

“(A) preferences for the purchase of advanced technology ground vehicles;

“(B) the use of authorities available to the Secretary of Defense to stimulate the development and production of advanced technology systems and ground vehicles through purchases, loan guarantees, and other mechanisms;

“(C) pilot programs to demonstrate advanced technology ground vehicles and associated infrastructure at select defense installations;

“(D) metrics to evaluate environmental and other benefits, life cycle costs, and greenhouse gas emissions associated with the deployment of advanced technology ground vehicles; and

“(E) schedules and objectives for the conversion of the ground vehicle fleet of the Department to advanced technology ground vehicles.

“(d) COOPERATION WITH INDUSTRY AND ACADEMIA.—

“(1) IN GENERAL.—The Secretary may carry out the program authorized by subsection (a) through partnerships and other cooperative agreements with private sector entities, including—

“(A) universities and other academic institutions;

“(B) companies in the automobile and truck manufacturing industry;

“(C) companies that supply systems and components to the automobile and truck manufacturing industry; and

“(D) any other companies or private sector entities that the Secretary considers appropriate.

“(2) NATURE OF COOPERATION.—The Secretary shall ensure that any partnership or cooperative agreement under paragraph (1) provides for private sector participants to collectively contribute, in cash or in kind, not less than one-half of the total cost of the activities carried out under such partnership or cooperative agreement.

“(e) COORDINATION WITH OTHER FEDERAL AGENCIES.—The program authorized by subsection (a) shall be carried out, to the maximum extent practicable, in coordination with the Department of Energy and other appropriate departments and agencies of the Federal Government.”

PILOT PROGRAM TO INCLUDE TECHNOLOGY PROTECTION FEATURES DURING RESEARCH AND DEVELOPMENT OF DEFENSE SYSTEMS

Pub. L. 111-383, div. A, title II, §243, Jan. 7, 2011, 124 Stat. 4178, as amended by Pub. L. 112-81, div. A, title II, §252, Dec. 31, 2011, 125 Stat. 1347, provided that:

“(a) PILOT PROGRAM.—The Secretary of Defense shall carry out a pilot program to develop and incorporate technology protection features in a designated system during the research and development phase of such system.

“(b) COST-SHARING.—Any contract for the design or development of a system resulting from activities under subsection (a) for the purpose of enhancing or enabling the exportability of the system either—

“(1) for the development of program protection strategies for the system; or

“(2) for the design and incorporation of exportability features into the system,

shall include a cost-sharing provision that requires the contractor to bear at least one-half of the cost of such activities.

“(c) ANNUAL REPORTS.—Not later than December 31 of each year in which the Secretary carries out the pilot program established under this section, the Secretary shall submit to the congressional defense committees [Committees on Armed Services and Appropriations of the Senate and the House of Representatives] a report on the pilot program, including a list of each designated system included in the program.

“(d) TERMINATION.—The pilot program established under this section shall terminate on October 1, 2015.

“(e) DEFINITIONS.—In this section:

“(1) The term ‘designated system’ means any system (including a major system, as defined in section 2302(5) of title 10, United States Code) that the Under Secretary of Defense for Acquisition, Technology, and Logistics designates as being included in the pilot program established under this section.

“(2) The term ‘technology protection features’ means the technical modifications necessary to protect critical program information, including anti-tamper technologies and other systems engineering activities intended to prevent or delay exploitation of critical technologies in a designated system.”

PROGRAM TO ASSESS THE UTILITY OF NON-LETHAL WEAPONS

Pub. L. 111-383, div. A, title X, §1078, Jan. 7, 2011, 124 Stat. 4380, provided that:

“(a) SENSE OF CONGRESS.—It is the sense of Congress that the Secretary of Defense should support the research, development, test, and evaluation, procurement, and fielding of effective non-lethal weapons and technologies explicitly designed to, with respect to counterinsurgency operations, reduce military casualties and fatalities, improve military mission accomplishment and operational effectiveness, reduce civilian casualties and fatalities, and minimize undesired damage to property and the environment.

“(b) PROGRAM REQUIRED.—

“(1) DEMONSTRATION AND ASSESSMENT.—The Secretary of Defense, acting through the Executive Agent for Non-lethal Weapons and in coordination with the Secretaries of the military departments and

the combatant commanders, shall carry out a program to demonstrate and assess the utility and effectiveness of non-lethal weapons to provide escalation of force options in counter-insurgency operations.

“(2) NON-LETHAL WEAPONS EVALUATED.—In evaluating non-lethal weapons under the program under this subsection, the Secretary shall include non-lethal weapons designed for counter-personnel and counter-materiel missions.

“(c) REPORT.—

“(1) REPORT REQUIRED.—Not later than October 1, 2011, the Secretary of Defense shall submit to the congressional defense committees [Committees on Armed Services and Appropriations of the Senate and the House of Representatives] a report on the role and utility of non-lethal weapons and technologies in counterinsurgency operations.

“(2) ELEMENTS.—The report under paragraph (1) shall include the following:

“(A) A description of the results of any demonstrations and assessments of non-lethal weapons conducted during fiscal year 2011.

“(B) A description of the Secretary’s plans for any demonstrations and assessments of non-lethal weapons to be conducted during fiscal years 2012 and 2013.

“(C) A description of the extent to which non-lethal weapons doctrine, training, and employment include the use of strategic communications strategies to enable the effective employment of non-lethal weapons.

“(D) A description of the input of the military departments in developing concepts of operations and tactics, techniques, and procedures for incorporating non-lethal weapons into the current escalation of force procedures of each department.

“(E) A description of the extent to which non-lethal weapons and technologies are integrated into the standard equipment and training of military units.”

MECHANISMS TO PROVIDE FUNDS FOR DEFENSE LABORATORIES FOR RESEARCH AND DEVELOPMENT OF TECHNOLOGIES FOR MILITARY MISSIONS

Pub. L. 110-417, [div. A], title II, § 219, Oct. 14, 2008, 122 Stat. 4389, as amended by Pub. L. 111-84, div. B, title XXVIII, § 2801(c), Oct. 28, 2009, 123 Stat. 2660; Pub. L. 112-81, div. A, title II, § 253, Dec. 31, 2011, 125 Stat. 1347, provided that:

“(a) MECHANISMS TO PROVIDE FUNDS.—

“(1) IN GENERAL.—The Secretary of Defense, in consultation with the Secretaries of the military departments, shall establish mechanisms under which the director of a defense laboratory may use an amount of funds equal to not more than three percent of all funds available to the defense laboratory for the following purposes:

“(A) To fund innovative basic and applied research that is conducted at the defense laboratory and supports military missions.

“(B) To fund development programs that support the transition of technologies developed by the defense laboratory into operational use.

“(C) To fund workforce development activities that improve the capacity of the defense laboratory to recruit and retain personnel with needed scientific and engineering expertise.

“(D) To fund the revitalization and recapitalization of the laboratory pursuant to section 2805(d) of title 10, United States Code.

“(2) CONSULTATION REQUIRED.—The mechanisms established under paragraph (1) shall provide that funding shall be used under paragraph (1) at the discretion of the director of a defense laboratory in consultation with the science and technology executive of the military department concerned.

“(b) ANNUAL REPORT ON USE OF AUTHORITY.—Not later than March 1 of each year, the Secretary of Defense shall submit to the congressional defense committees [Committees on Armed Services and Appro-

priations of the Senate and the House of Representatives] a report on the use of the authority under subsection (a) during the preceding year.

“(c) SUNSET.—The authority under subsection (a) shall expire on September 30, 2016.”

SCIENCE AND TECHNOLOGY INVESTMENT STRATEGY TO DEFEAT OR COUNTER IMPROVISED EXPLOSIVE DEVICES

Pub. L. 110-417, [div. A], title XV, § 1504, Oct. 14, 2008, 122 Stat. 4650, as amended by Pub. L. 111-383, div. A, title IX, § 901(a)(2), Jan. 7, 2011, 124 Stat. 4317; Pub. L. 112-81, div. A, title X, § 1062(b), Dec. 31, 2011, 125 Stat. 1585, provided that:

“(a) STRATEGY REQUIRED.—The Director of the Joint Improvised Explosive Device Defeat Organization (JIEDDO), jointly with the Assistant Secretary of Defense for Research and Engineering, shall develop a comprehensive science and technology investment strategy for countering the threat of improvised explosive devices (IEDs).

“(b) ELEMENTS.—The strategy developed under subsection (a) shall include the following:

“(1) Identification of counter-IED capability gaps.

“(2) A taxonomy describing the major technical areas for the Department of Defense to address the counter-IED capability gaps and in which science and technology funding investments should be made.

“(3) Identification of funded programs to develop or mature technologies from or to the level of system or subsystem model or prototype demonstration in a relevant environment, and investment levels for those initiatives.

“(4) Identification of JIEDDO’s mechanisms for coordinating Department of Defense and Federal Government science and technology activities in areas covered by the strategy.

“(5) Identification of technology transition mechanisms developed or utilized to efficiently transition technologies to acquisition programs of the Department of Defense or into operational use, including a summary of counter-IED technologies transitioned from JIEDDO, the military departments, and other Defense Agencies to the acquisition programs or into operational use.

“(6) Identification of high priority basic research efforts that should be addressed through JIEDDO or other Department of Defense activities to support development of next generation IED defeat capabilities.

“(7) Identification of barriers or issues, such as industrial base, workforce, or statutory or regulatory barriers, that could hinder the efficient and effective development and operational use of advanced IED defeat capabilities, and discussion of activities undertaken to address them.

“(8) Identification of the measures of effectiveness for the overall Department of Defense science and technology counter-IED effort.

“(9) Such other matters as the Director of the JIEDDO and the Assistant Secretary of Defense for Research and Engineering consider appropriate.”

HYPERSONICS DEVELOPMENT

Pub. L. 109-364, div. A, title II, § 218, Oct. 17, 2006, 120 Stat. 2126, as amended by Pub. L. 112-81, div. A, title II, § 241, Dec. 31, 2011, 125 Stat. 1343, provided that:

“(a) ESTABLISHMENT OF JOINT TECHNOLOGY OFFICE ON HYPERSONICS.—The Secretary of Defense shall establish within the Office of the Secretary of Defense a joint technology office on hypersonics. The office shall carry out the program required under subsection (b), and shall have such other responsibilities relating to hypersonics as the Secretary shall specify.

“(b) PROGRAM ON HYPERSONICS.—The joint technology office established under subsection (a) shall carry out a program for the development of hypersonics for defense purposes.

“(c) RESPONSIBILITIES.—In carrying out the program required by subsection (b), the joint technology office established under subsection (a) shall do the following:

“(1) Coordinate and integrate current and future research, development, test, and evaluation programs and system demonstration programs of the Department of Defense on hypersonics.

“(2) Undertake appropriate actions to ensure—

“(A) close and continuous integration of the programs on hypersonics of the military departments with the programs on hypersonics of the Defense Agencies;

“(B) coordination of the programs referred to in subparagraph (A) with the programs on hypersonics of the National Aeronautics and Space Administration; and

“(C) that developmental testing resources are adequate and facilities are made available in a timely manner to support hypersonics research, demonstration programs, and system development.

“(3) Approve demonstration programs on hypersonic systems.

“(4) Ensure that any demonstration program on hypersonic systems that is carried out in any year after its approval under paragraph (3) is carried out only if certified under subsection (e) as being consistent with the roadmap under subsection (d).

“(d) ROADMAP.—

“(1) ROADMAP REQUIRED.—The joint technology office established under subsection (a) shall develop, and every two years revise, a roadmap for the hypersonics programs of the Department of Defense.

“(2) COORDINATION.—The roadmap shall be developed and revised under paragraph (1) in coordination with the Joint Staff and in consultation with the National Aeronautics and Space Administration.

“(3) ELEMENTS.—The roadmap shall include the following matters:

“(A) Anticipated or potential mission requirements for hypersonics.

“(B) Short-term, mid-term, and long-term goals for the Department of Defense on hypersonics, which shall be consistent with the missions and anticipated requirements of the Department over the applicable period.

“(C) A schedule for meeting such goals, including—

“(i) the activities and funding anticipated to be required for meeting such goals; and

“(ii) the activities of the National Aeronautics and Space Administration to be leveraged by the Department to meet such goals.

“(D) The test and evaluation facilities required to support the activities identified in subparagraph (C), along with the schedule and funding required to upgrade those facilities, as necessary.

“(E) Acquisition transition plans for hypersonics.

“(4) SUBMITTAL TO CONGRESS.—The Secretary shall submit to the congressional defense committees [Committees on Armed Services and Appropriations of the Senate and the House of Representatives]—

“(A) at the same time as the submittal to Congress of the budget for fiscal year 2008 (as submitted pursuant to section 1105 of title 31, United States Code), the roadmap developed under paragraph (1); and

“(B) at the same time as the submittal to Congress of the budget for each even-numbered fiscal year after 2008, the roadmap revised under paragraph (1).

“(e) ANNUAL REVIEW AND CERTIFICATION OF FUNDING.—

“(1) ANNUAL REVIEW.—The joint technology office established under subsection (a) shall conduct on an annual basis a review of—

“(A) the funding available for research, development, test, and evaluation and demonstration programs within the Department of Defense for hypersonics, in order to determine whether or not such funding is consistent with the roadmap developed under subsection (d); and

“(B) the hypersonics demonstration programs of the Department, in order to determine whether or

not such programs avoid duplication of effort and support the goals of the Department in a manner consistent with the roadmap developed under subsection (d).

“(2) CERTIFICATION.—The joint technology office shall, as a result of each review under paragraph (1), certify to the Secretary whether or not the funding and programs subject to such review are consistent with the roadmap developed under subsection (d).

“(3) TERMINATION.—The requirements of this subsection shall terminate after the submittal to Congress of the budget for fiscal year 2016 pursuant to section 1105 of title 31, United States Code.

“(f) REPORTS TO CONGRESS.—If, as a result of a review under subsection (e), funding or a program on hypersonics is certified under that subsection not to be consistent with the roadmap developed under subsection (d), the Secretary shall submit to the congressional defense committees [Committees on Armed Services and Appropriations of the Senate and the House of Representatives], at the same time as the submittal to Congress of the budget (as submitted pursuant to section 1105 of title 31, United States Code), a report on such funding or program, as the case may be, describing how such funding or program is not consistent with the roadmap, together with a statement of the actions to be taken by the Department.”

COLLABORATIVE PROGRAM FOR RESEARCH AND DEVELOPMENT OF VACUUM ELECTRONICS TECHNOLOGIES

Pub. L. 108-375, div. A, title II, §212, Oct. 28, 2004, 118 Stat. 1832, as amended by Pub. L. 111-383, div. A, title IX, §901(a)(2), Jan. 7, 2011, 124 Stat. 4317, provided that:

“(a) PROGRAM REQUIRED.—The Secretary of Defense shall establish a program for research and development in advanced vacuum electronics to meet the requirements of Department of Defense systems.

“(b) DESCRIPTION OF PROGRAM.—The program under subsection (a) shall be carried out collaboratively by the Assistant Secretary of Defense for Research and Engineering, the Secretary of the Navy, the Secretary of the Air Force, the Secretary of the Army, and other appropriate elements of the Department of Defense. The program shall include the following activities:

“(1) Activities needed for development and maturation of advanced vacuum electronics technologies needed to meet the requirements of the Department of Defense.

“(2) Identification of legacy and developmental Department of Defense systems which may make use of advanced vacuum electronics under the program.

“(c) REPORT.—Not later than January 31, 2005, the Assistant Secretary of Defense for Research and Engineering shall submit to the congressional defense committees [Committees on Armed Services and Appropriations of Senate and House of Representatives] a report on the implementation of the program under subsection (a). The report shall include the following:

“(1) Identification of the organization to have lead responsibility for carrying out the program.

“(2) Assessment of the role of investing in vacuum electronics technologies as part of the overall strategy of the Department of Defense for investing in electronics technologies to meet the requirements of the Department.

“(3) The management plan and schedule for the program and any agreements relating to that plan.

“(4) Identification of the funding required for fiscal year 2006 and for the future-years defense program to carry out the program.

“(5) A list of program capability goals and objectives.

“(6) An outline of the role of basic and applied research in support of the development and maturation of advanced vacuum electronics technologies needed to meet the requirements of the Department of Defense.

“(7) Assessment of global capabilities in vacuum electronics technologies and the effect of those capa-

bilities on the national security and economic competitiveness of the United States.”

DEPARTMENT OF DEFENSE PROGRAM TO EXPAND HIGH-SPEED, HIGH-BANDWIDTH CAPABILITIES FOR NETWORK-CENTRIC OPERATIONS

Pub. L. 108-136, div. A, title II, §234, Nov. 24, 2003, 117 Stat. 1423, provided that:

“(a) IN GENERAL.—The Secretary of Defense shall carry out a program of research and development to promote the development of high-speed, high-bandwidth communications capabilities for support of network-centric operations by the Armed Forces.

“(b) PURPOSES.—The purposes of the program required by subsection (a) are as follows:

“(1) To accelerate the development and fielding by the Armed Forces of network-centric operational capabilities (including expanded use of unmanned vehicles, satellite communications, and sensors) through the promotion of research and development, and the focused coordination of programs, to achieve high-speed, high-bandwidth connectivity to military assets.

“(2) To provide for the development of equipment and technologies for military high-speed, high-bandwidth communications capabilities for support of network-centric operations.

“(c) DESCRIPTION OF PROGRAM.—In carrying out the program of research and development required by subsection (a), the Secretary shall—

“(1) identify areas of advanced wireless communications in which research and development, or the use of emerging technologies, has significant potential to improve the performance, efficiency, cost, and flexibility of advanced communications systems for support of network-centric operations;

“(2) develop a coordinated plan for research and development on—

“(A) improved spectrum access through spectrum-efficient communications for support of network-centric operations;

“(B) high-speed, high-bandwidth communications;

“(C) networks, including complex ad hoc adaptive network structures;

“(D) communications devices, including efficient receivers and transmitters;

“(E) computer software and wireless communication applications, including robust security and encryption; and

“(F) any other matters that the Secretary considers appropriate for the purposes described in subsection (b);

“(3) ensure joint research and development, and promote joint systems acquisition and deployment, among the military departments and defense agencies, including the development of common cross-service technology requirements and doctrine, so as to enhance interoperability among the military services and defense agencies;

“(4) conduct joint experimentation among the Armed Forces, and coordinate with the Joint Forces Command, on experimentation to support the development of network-centric warfare capabilities from the operational to the small unit level in the Armed Forces;

“(5) consult with other Federal entities and with private industry to develop cooperative research and development efforts, to the extent that such efforts are practicable.

“(d) REPORT.—(1) The Secretary shall submit to the congressional defense committees [Committees on Armed Services and Appropriations of Senate and House of Representatives], together with the budget justification materials submitted to Congress in support of the Department of Defense budget for fiscal year 2006 (as submitted with the budget of the President under section 1105(a) of title 31, United States Code), a report on the activities carried out under this section through the date on which the report is submitted.

“(2) The report under paragraph (1) shall include the following:

“(A) A description of the research and development activities carried out under subsection (a), including the particular activities carried out under the plan required by subsection (c)(2).

“(B) Current and proposed funding for the particular activities carried out under that plan, as set forth in each of subparagraphs (A) through (F) of subsection (c)(2).

“(C) A description of the joint research and development activities required by subsection (c)(3).

“(D) A description of the joint experimentation activities required by subsection (c)(4).

“(E) An analysis of the effects on recent military operations of limitations on communications bandwidth and access to radio frequency spectrum.

“(F) An assessment of the effect of additional resources on the ability to achieve the purposes described in subsection (b).

“(G) Such recommendations for additional activities under this section as the Secretary considers appropriate to meet the purposes described in subsection (b).”

RESEARCH AND DEVELOPMENT OF DEFENSE BIOMEDICAL COUNTERMEASURES

Pub. L. 108-136, div. A, title XVI, §1601, Nov. 24, 2003, 117 Stat. 1680, as amended by Pub. L. 112-81, div. A, title X, §1062(g)(3), Dec. 31, 2011, 125 Stat. 1585, provided that:

“(a) IN GENERAL.—The Secretary of Defense (in this section referred to as the ‘Secretary’) shall carry out a program to accelerate the research, development and procurement of biomedical countermeasures, including but not limited to therapeutics and vaccines, for the protection of the Armed Forces from attack by one or more biological, chemical, radiological, or nuclear agents.

“(b) INTERAGENCY COOPERATION.—(1) In carrying out the program under subsection (a), the Secretary may enter into interagency agreements and other collaborative undertakings with other Federal agencies.

“(2) The Secretary, through regular, structured, and close consultation with the Secretary of Health and Human Services and the Secretary of Homeland Security, shall ensure that the activities of the Department of Defense in carrying out the program are coordinated with, complement, and do not unnecessarily duplicate activities of the Department of Health and Human Services or the Department of Homeland Security.

“(c) EXPEDITED PROCUREMENT AUTHORITY.—(1) For any procurement of property or services for use (as determined by the Secretary) in performing, administering, or supporting biomedical countermeasures research and development, the Secretary may, when appropriate, use streamlined acquisition procedures and other expedited procurement procedures authorized in—

“(A) section 32A of the Office of Federal Procurement Policy Act, as added by section 1443 of this Act [now 41 U.S.C. 1903]; and

“(B) section 2371 of title 10, United States Code, and section 845 of the National Defense Authorization Act for Fiscal Year 1994 (Public Law 103-160; 10 U.S.C. 2371 note).

“(2) Notwithstanding paragraph (1) and the provisions of law referred to in such paragraph, each of the following provisions shall apply to the procurements described in this subsection to the same extent that such provisions would apply to such procurements in the absence of paragraph (1):

“(A) Chapter 37 of title 40, United States Code (relating to contract work hours and safety standards).

“(B) Subsections (a) and (b) of section 7 of the Anti-Kickback Act of 1986 ([former] 41 U.S.C. 57(a) and (b)) [now 41 U.S.C. 8703(a)].

“(C) Section 2313 of title 10, United States Code (relating to the examination of contractor records).

“(3) The Secretary shall institute appropriate internal controls for use of the authority under paragraph

(1), including requirements for documenting the justification for each use of such authority.

“(d) DEPARTMENT OF DEFENSE FACILITIES AUTHORITY.—(1) If the Secretary determines that it is necessary to acquire, lease, construct, or improve laboratories, research facilities, and other real property of the Department of Defense in order to carry out the program under this section, the Secretary may do so using the procedures set forth in paragraphs (2), (3), (4), and (5).

“(2) The Secretary shall use existing construction authorities provided by subchapter I of chapter 169 of title 10, United States Code, to the maximum extent possible.

“(3)(A) If the Secretary determines that use of authorities in paragraph (2) would prevent the Department from meeting a specific facility requirement for the program, the Secretary shall submit to the congressional defense committees [Committees on Armed Services and Appropriations of Senate and House of Representatives] advance notification, which shall include the following:

“(i) Certification by the Secretary that use of existing construction authorities would prevent the Department from meeting the specific facility requirement.

“(ii) A detailed explanation of the reasons why existing authorities cannot be used.

“(iii) A justification of the facility requirement.

“(iv) Construction project data and estimated cost.

“(v) Identification of the source or sources of the funds proposed to be expended.

“(B) The facility project may be carried out only after the end of the 21-day period beginning on the date the notification is received by the congressional defense committees.

“(4) If the Secretary determines: (A) that the facility is vital to national security or to the protection of health, safety, or the quality of the environment; and (B) the requirement for the facility is so urgent that the advance notification in paragraph (3) and the subsequent 21-day deferral of the facility project would threaten the life, health, or safety of personnel, or would otherwise jeopardize national security, the Secretary may obligate funds for the facility and notify the congressional defense committees within seven days after the date on which appropriated funds are obligated with the information required in paragraph (3).

“(5) Nothing in this section shall be construed to authorize the Secretary to acquire, construct, lease, or improve a facility having general utility beyond the specific purposes of the program.

“(6) In this subsection, the term ‘facility’ has the meaning given the term in section 2801(c) of title 10, United States Code.

“(e) AUTHORITY FOR PERSONAL SERVICES CONTRACTS.—(1) Subject to paragraph (2), the authority provided by section 1091 of title 10, United States Code, for personal services contracts to carry out health care responsibilities in medical treatment facilities of the Department of Defense shall also be available, subject to the same terms and conditions, for personal services contracts to carry out research and development activities under this section. The number of individuals whose personal services are obtained under this subsection may not exceed 30 at any time.

“(2) The authority provided by such section 1091 may not be used for a personal services contract unless the contracting officer for the contract ensures that—

“(A) the services to be procured are urgent or unique; and

“(B) it would not be practicable for the Department of Defense to obtain such services by other measures.

“(f) STREAMLINED PERSONNEL AUTHORITY.—(1) The Secretary may appoint highly qualified experts, including scientific and technical personnel, to carry out research and development under this section in accordance with the authorities provided in section 342 of the National Defense Authorization Act for Fiscal Year 1995 (Public Law 103-337; 108 Stat. 2721), section 1101 of

the Strom Thurmond National Defense Authorization Act for Fiscal Year 1999 (Public Law 105-261 [5 U.S.C. 3104 note]), and section 1101 of this Act [enacting chapter 99 of Title 5, Government Organization and Employees, and provisions set out as a note under section 9901 of Title 5].

“(2) The Secretary may use the authority under paragraph (1) only upon a determination by the Secretary that use of such authority is necessary to accelerate the research and development under the program.

“(3) The Secretary shall institute appropriate internal controls for each use of the authority under paragraph (1).”

Pub. L. 107-107, div. A, title X, § 1044(a), Dec. 28, 2001, 115 Stat. 1219, provided that:

“(1) The Secretary of Defense shall carry out a program to aggressively accelerate the research, development, testing, and licensure of new medical countermeasures for defense against the biological warfare agents that are the highest threat.

“(2) The program shall include the following activities:

“(A) As the program’s first priority, investment in multiple new technologies for medical countermeasures for defense against the biological warfare agents that are the highest threat, including for the prevention and treatment of anthrax.

“(B) Leveraging of ideas and technologies from the biological technology industry.”

VEHICLE FUEL CELL PROGRAM

Pub. L. 107-314, div. A, title II, § 245, Dec. 2, 2002, 116 Stat. 2500, provided that:

“(a) PROGRAM REQUIRED.—The Secretary of Defense shall carry out a program for the development of vehicle fuel cell technology.

“(b) GOALS AND OBJECTIVES.—The goals and objectives of the program shall be as follows:

“(1) To identify and support technological advances that are necessary for the development of fuel cell technology for use in vehicles of types to be used by the Department of Defense.

“(2) To ensure that critical technology advances are shared among the various fuel cell technology programs within the Federal Government.

“(3) To maximize the leverage of Federal funds that are used for the development of fuel cell technology.

“(c) CONTENT OF PROGRAM.—The program shall include—

“(1) development of vehicle propulsion technologies and fuel cell auxiliary power units, together with pilot projects for the demonstration of such technologies, as appropriate; and

“(2) development of technologies necessary to address critical issues with respect to vehicle fuel cells, such as issues relating to hydrogen storage and hydrogen fuel infrastructure.

“(d) COOPERATION WITH INDUSTRY.—(1) The Secretary shall carry out the program in cooperation with companies selected by the Secretary. The Secretary shall select such companies from among—

“(A) companies in the automobile and truck manufacturing industry;

“(B) companies in the business of supplying systems and components to that industry; and

“(C) companies in any other industries that the Secretary considers appropriate.

“(2) The Secretary may enter into a cooperative agreement with one or more companies selected under paragraph (1) to establish an entity for carrying out activities required by subsection (c).

“(3) The Secretary shall ensure that companies referred to in paragraph (1) collectively contribute, in cash or in kind, not less than one-half of the total cost of carrying out the program under this section.

“(e) COORDINATION WITH OTHER FEDERAL AGENCIES.—The Secretary shall carry out the program using a coordinating mechanism for sharing information and resources with the Department of Energy and other Federal agencies.

“(f) INITIAL [SIC] FUNDING.—Of the funds authorized to be appropriated by section 201(4) [116 Stat. 2479], \$10,000,000 shall be available for the program required by this section.”

DEFENSE NANOTECHNOLOGY RESEARCH AND
DEVELOPMENT PROGRAM

Pub. L. 107-314, div. A, title II, §246, Dec. 2, 2002, 116 Stat. 2500, as amended by Pub. L. 110-181, div. A, title II, §240, Jan. 28, 2008, 122 Stat. 48; Pub. L. 111-84, div. A, title II, §242, Oct. 28, 2009, 123 Stat. 2237; Pub. L. 111-383, div. A, title IX, §901(a)(2), Jan. 7, 2011, 124 Stat. 4317, provided that:

“(a) ESTABLISHMENT.—The Secretary of Defense shall carry out a defense nanotechnology research and development program.

“(b) PURPOSES.—The purposes of the program are as follows:

“(1) To ensure United States global superiority in nanotechnology necessary for meeting national security requirements.

“(2) To coordinate all nanoscale research and development within the Department of Defense, and to provide for interagency cooperation and collaboration on nanoscale research and development between the Department of Defense and other departments and agencies of the United States that are involved in the National Nanotechnology Initiative and with the National Nanotechnology Coordination Office under section 3 of the 21st Century Nanotechnology Research and Development Act (15 U.S.C. 7502).

“(3) To develop and manage a portfolio of nanotechnology research and development initiatives that is stable, consistent, and balanced across scientific disciplines.

“(4) To accelerate the transition and deployment of technologies and concepts derived from nanoscale research and development into the Armed Forces, and to establish policies, procedures, and standards for measuring the success of such efforts.

“(5) To collect, synthesize, and disseminate critical information on nanoscale research and development.

“(c) ADMINISTRATION.—In carrying out the program, the Secretary shall act through the Under Secretary of Defense for Acquisition, Technology, and Logistics, who shall supervise the planning, management, and coordination of the program. The Under Secretary, in consultation with the Secretaries of the military departments and the heads of participating Defense Agencies and other departments and agencies of the United States, shall—

“(1) prescribe a set of long-term challenges and a set of specific technical goals for the program;

“(2) develop a coordinated and integrated research and investment plan for meeting the long-term challenges and achieving the specific technical goals that builds upon investments by the Department and other departments and agencies participating in the National Nanotechnology Initiative in nanotechnology research and development;

“(3) develop memoranda of agreement, joint funding agreements, and other cooperative arrangements necessary for meeting the long-term challenges and achieving the specific technical goals; and

“(4) oversee Department of Defense participation in interagency coordination of the program with other departments and agencies participating in the National Nanotechnology Initiative.

“(d) STRATEGIC PLAN.—The Under Secretary shall develop and maintain a strategic plan for defense nanotechnology research and development that—

“(1) is integrated with the strategic plan for the National Nanotechnology Initiative and the strategic plans of the Assistant Secretary of Defense for Research and Engineering, the military departments, and the Defense Agencies; and

“(2) includes a clear strategy for transitioning the research into products needed by the Department.

“(e) REPORTS.—The Under Secretary of Defense for Acquisition, Technology, and Logistics shall submit to

the National Science and Technology Council information on the program that covers the information described in paragraphs (1) through (5) of section 2(d) of the 21st Century Nanotechnology Research and Development Act (15 U.S.C. 7501(d)) to be included in the annual report submitted by the Council under that section.”

REPORT ON WEAPONS AND CAPABILITIES TO DEFEAT
HARDENED AND DEEPLY BURIED TARGETS

Pub. L. 107-314, div. A, title X, §1032, Dec. 2, 2002, 116 Stat. 2643, as amended by Pub. L. 108-136, div. C, title XXXI, §3135, Nov. 24, 2003, 117 Stat. 1752, as amended by Pub. L. 110-181, div. A, title X, §1041, Jan. 28, 2008, 122 Stat. 310; Pub. L. 111-383, div. A, title X, §1075(j), Jan. 7, 2011, 124 Stat. 4378, provided that:

“(a) REPORT.—Not later than March 1, 2009, and every two years thereafter, the Secretary of Defense, the Secretary of Energy, and the Director of National Intelligence shall jointly submit to the congressional defense committees [Committees on Armed Services and Appropriations of the Senate and the House of Representatives], the Select Committee on Intelligence of the Senate, and the Permanent Select Committee on Intelligence of the House of Representatives a report on the research and development, procurement, and other activities undertaken during the preceding two fiscal years and planned for the current fiscal year and the next fiscal year by the Department of Defense, the Department of Energy, and the intelligence community to develop weapons and capabilities to defeat hardened and deeply buried targets.

“(b) REPORT ELEMENTS.—A report submitted under subsection (a) shall—

“(1) include a discussion of the integration and interoperability of the activities referred to in that subsection that were or will be undertaken during the four-fiscal-year period covered by the report, including a discussion of the relevance of such activities to applicable recommendations by the Chairman of the Joint Chiefs of Staff, assisted under section 181(b) of title 10, United States Code, by the Joint Requirements Oversight Council; and

“(2) set forth separately a description of the activities referred to in that subsection, if any, that were or will be undertaken during the four-fiscal-year period covered by the report by each element of—

“(A) the Department of Defense;

“(B) the Department of Energy; and

“(C) the intelligence community.

“(c) DEFINITION.—In this section, the term ‘intelligence community’ has the meaning given such term in section 3(4) of the National Security Act of 1947 (50 U.S.C. 401a(4)).

“(d) TERMINATION.—No report is required under this section after the submission of the report that is due on March 1, 2013.

“(e) INTEGRATION ACTIVITIES IN FISCAL YEAR 2003 WITH RESPECT TO RNEP.—The report under subsection (a) that is due on April 1, 2004, shall include, in addition to the elements specified in subsection (b), a description of the integration and interoperability of the research and development, procurement, and other activities undertaken during fiscal year 2003 by the Department of Defense and the Department of Energy with respect to the Robust Nuclear Earth Penetrator.”

PILOT PROGRAMS FOR REVITALIZING LABORATORIES AND
TEST AND EVALUATION CENTERS OF DEPARTMENT OF
DEFENSE

Pub. L. 107-314, div. A, title II, §241, Dec. 2, 2002, 116 Stat. 2492, provided that:

“(a) ADDITIONAL PILOT PROGRAM.—(1) The Secretary of Defense may carry out a pilot program to demonstrate improved efficiency in the performance of research, development, test, and evaluation functions of the Department of Defense.

“(2) Under the pilot program, the Secretary of Defense shall provide the director of one science and tech-

nology laboratory, and the director of one test and evaluation laboratory, of each military department with authority for the following:

“(A) To use innovative methods of personnel management appropriate for ensuring that the selected laboratories can—

“(i) employ and retain a workforce appropriately balanced between permanent and temporary personnel and among workers with appropriate levels of skills and experience; and

“(ii) effectively shape workforces to ensure that the workforces have the necessary sets of skills and experience to fulfill their organizational missions.

“(B) To develop or expand innovative methods of entering into and expanding cooperative relationships and arrangements with private sector organizations, educational institutions (including primary and secondary schools), and State and local governments to facilitate the training of a future scientific and technical workforce that will contribute significantly to the accomplishment of organizational missions.

“(C) To develop or expand innovative methods of establishing cooperative relationships and arrangements with private sector organizations and educational institutions to promote the establishment of the technological industrial base in areas critical for Department of Defense technological requirements.

“(D) To waive any restrictions not required by law that apply to the demonstration and implementation of methods for achieving the objectives set forth in subparagraphs (A), (B), and (C).

“(3) The Secretary may carry out the pilot program under this subsection at each selected laboratory for a period of three years beginning not later than March 1, 2003.

“(b) RELATIONSHIP TO FISCAL YEARS 1999 AND 2000 REVITALIZATION PILOT PROGRAMS.—The pilot program under this section is in addition to, but may be carried out in conjunction with, the fiscal years 1999 and 2000 revitalization pilot programs.

“(c) REPORTS.—(1) Not later than January 1, 2003, the Secretary shall submit to Congress a report on the experience under the fiscal years 1999 and 2000 revitalization pilot programs in exercising the authorities provided for the administration of those programs. The report shall include a description of—

“(A) barriers to the exercise of the authorities that have been encountered;

“(B) the proposed solutions for overcoming the barriers; and

“(C) the progress made in overcoming the barriers.

“(2) Not later than September 1, 2003, the Secretary of Defense shall submit to Congress a report on the implementation of the pilot program under subsection (a) and the fiscal years 1999 and 2000 revitalization pilot programs. The report shall include, for each such pilot program, the following:

“(A) Each laboratory selected for the pilot program.

“(B) To the extent practicable, a description of the innovative methods that are to be tested at each laboratory.

“(C) The criteria to be used for measuring the success of each method to be tested.

“(3) Not later than 90 days after the expiration of the period for the participation of a laboratory in a pilot program referred to in paragraph (2), the Secretary of Defense shall submit to Congress a final report on the participation of that laboratory in the pilot program. The report shall include the following:

“(A) A description of the methods tested.

“(B) The results of the testing.

“(C) The lessons learned.

“(D) Any proposal for legislation that the Secretary recommends on the basis of the experience at that laboratory under the pilot program.

“(d) EXTENSION OF AUTHORITY FOR OTHER REVITALIZATION PILOT PROGRAMS.—(1) [Amended section 246(a)(4) of Pub. L. 105-261, formerly set out as a note below.]

“(2) [Amended section 245(a)(4) of Pub. L. 106-65, formerly set out as a note below.]

“(e) PARTNERSHIPS UNDER PILOT PROGRAM.—(1) The Secretary of Defense may authorize one or more laboratories and test centers participating in the pilot program under subsection (a) or in one of the fiscal years 1999 and 2000 revitalization pilot programs to enter into a cooperative arrangement (in this subsection referred to as a ‘public-private partnership’) with entities in the private sector and institutions of higher education for the performance of work.

“(2) A competitive process shall be used for the selection of entities outside the Government to participate in a public-private partnership.

“(3)(A) Not more than one public-private partnership may be established as a limited liability company.

“(B) An entity participating in a limited liability company as a party to a public-private partnership under the pilot program may contribute funds to the company, accept contributions of funds for the company, and provide materials, services, and use of facilities for research, technology, and infrastructure of the company, if it is determined under regulations prescribed by the Secretary of Defense that doing so will improve the efficiency of the performance of research, test, and evaluation functions of the Department of Defense.

“(f) FISCAL YEARS 1999 AND 2000 REVITALIZATION PILOT PROGRAMS DEFINED.—In this section, the term ‘fiscal years 1999 and 2000 revitalization pilot programs’ means—

“(1) the pilot programs authorized by section 246 of the Strom Thurmond National Defense Authorization Act for Fiscal Year 1999 (Public Law 105-261; 112 Stat. 1955; [former] 10 U.S.C. 2358 note); and

“(2) the pilot programs authorized by section 245 of the National Defense Authorization Act for Fiscal Year 2000 (Public Law 106-65; 113 Stat. 552; [former] 10 U.S.C. 2358 note).”

Pub. L. 106-65, div. A, title II, §245, Oct. 5, 1999, 113 Stat. 552, as amended by Pub. L. 107-314, div. A, title II, §241(d)(2), Dec. 2, 2002, 116 Stat. 2493, authorized the Secretary of Defense to carry out a pilot program for up to five years beginning not later than Mar. 1, 2000, to demonstrate improved efficiency in the performance of research, development, test, and evaluation functions of the Department of Defense, and directed the Secretary to submit to Congress a report on the implementation of the program not later than Mar. 1, 2000, and a final report promptly after the expiration of the period for participation in the program.

Pub. L. 105-261, div. A, title II, §246, Oct. 17, 1998, 112 Stat. 1955, as amended by Pub. L. 107-314, div. A, title II, §241(d)(1), Dec. 2, 2002, 116 Stat. 2493, authorized the Secretary of Defense to carry out a pilot program for up to six years beginning not later than Mar. 1, 1999, to demonstrate improved cooperative relationships with universities and other private sector entities for the performance of research and development functions, and directed the Secretary to submit a report on the implementation of the program to Congress not later than Mar. 1, 1999, and a final report on participation in the program promptly after the expiration of the period for participation.

DEFENSE EXPERIMENTAL PROGRAM TO STIMULATE COMPETITIVE RESEARCH

Pub. L. 105-18, title I, §307, June 12, 1997, 111 Stat. 169, provided that: “For the purposes of implementing the 1997 Defense Experimental Program to Stimulate Competitive Research (DEPSCoR), the term ‘State’ means a State of the United States, the District of Columbia, Puerto Rico, Guam and the Virgin Islands of the United States, American Samoa and the Commonwealth of the Northern Mariana Islands.”

Pub. L. 103-337, div. A, title II, §257, Oct. 5, 1994, 108 Stat. 2705, as amended by Pub. L. 104-106, div. A, title II, §273, Feb. 10, 1996, 110 Stat. 239; Pub. L. 104-201, div. A, title II, §264, Sept. 23, 1996, 110 Stat. 2465; Pub. L. 105-85, div. A, title II, §243, Nov. 18, 1997, 111 Stat. 1667;

Pub. L. 106-65, div. A, title IX, §911(a)(1), Oct. 5, 1999, 113 Stat. 717; Pub. L. 107-314, div. A, title II, §247, Dec. 2, 2002, 116 Stat. 2502; Pub. L. 110-181, div. A, title II, §239, Jan. 28, 2008, 122 Stat. 48; Pub. L. 111-383, div. A, title IX, §901(a)(2), Jan. 7, 2011, 124 Stat. 4317, provided that:

“(a) PROGRAM REQUIRED.—The Secretary of Defense, acting through the Assistant Secretary of Defense for Research and Engineering, shall carry out a Defense Experimental Program to Stimulate Competitive Research (DEPSCoR) as part of the university research programs of the Department of Defense.

“(b) PROGRAM OBJECTIVES.—The objectives of the program are as follows:

“(1) To enhance the capabilities of institutions of higher education in eligible States to develop, plan, and execute science and engineering research that is competitive under the peer-review systems used for awarding Federal research assistance.

“(2) To increase the probability of long-term growth in the competitively awarded financial assistance that institutions of higher education in eligible States receive from the Federal Government for science and engineering research.

“(c) PROGRAM ACTIVITIES.—In order to achieve the program objectives, the following activities are authorized under the program:

“(1) Competitive award of grants for research and instrumentation to support such research.

“(2) Competitive award of financial assistance for graduate students.

“(3) Any other activities that are determined necessary to further the achievement of the objectives of the program.

“(d) ELIGIBLE STATES.—(1) The Under Secretary of Defense for Acquisition, Technology, and Logistics shall designate which States are eligible States for the purposes of this section.

“(2) The Under Secretary of Defense for Acquisition, Technology, and Logistics shall designate a State as an eligible State if, as determined by the Under Secretary—

“(A) the average annual amount of all Department of Defense obligations for science and engineering research and development that were in effect with institutions of higher education in the State for the three fiscal years preceding the fiscal year for which the designation is effective or for the last three fiscal years for which statistics are available is less than the amount determined by multiplying 60 percent times the amount equal to 1/50 of the total average annual amount of all Department of Defense obligations for science and engineering research and development that were in effect with institutions of higher education in the United States for such three preceding or last fiscal years, as the case may be; and

“(B) the State has demonstrated a commitment to developing research bases in the State and to improving science and engineering research and education programs at institutions of higher education in the State.

“(e) COORDINATION WITH SIMILAR FEDERAL PROGRAMS.—(1) The Secretary shall consult with the Director of the National Science Foundation and the Director of the Office of Science and Technology Policy in the planning, development, and execution of the program and shall coordinate the program with the Experimental Program to Stimulate Competitive Research conducted by the National Science Foundation and with similar programs sponsored by other departments and agencies of the Federal Government.

“(2) All solicitations under the Defense Experimental Program to Stimulate Competitive Research may be made to, and all awards may be made through, the State committees established for purposes of the Experimental Program to Stimulate Competitive Research conducted by the National Science Foundation.

“(3) A State committee referred to in paragraph (2) shall ensure that activities carried out in the State of that committee under the Defense Experimental Program to Stimulate Competitive Research are coordi-

nated with the activities carried out in the State under other similar initiatives of the Federal Government to stimulate competitive research.

“(f) STATE DEFINED.—In this section, the term ‘State’ means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, the Virgin Islands, American Samoa, and the Commonwealth of the Northern Mariana Islands.”

DEFENSE LABORATORIES PERSONNEL DEMONSTRATION PROJECTS

Pub. L. 111-84, div. A, title XI, §1105, Oct. 28, 2009, 123 Stat. 2486, provided that:

“(a) DESIGNATION OF LABORATORIES.—Each of the following is hereby designated as a Department of Defense science and technology reinvention laboratory (as described in section 342(b) of the National Defense Authorization Act for Fiscal Year 1995 (Public Law 103-337; 108 Stat. 2721) [set out below], as amended by section 1114 of the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001):

“(1) The Aviation and Missile Research Development and Engineering Center.

“(2) The Army Research Laboratory.

“(3) The Medical Research and Materiel Command.

“(4) The Engineer Research and Development Command.

“(5) The Communications-Electronics Command.

“(6) The Soldier and Biological Chemical Command.

“(7) The Naval Sea Systems Command Centers.

“(8) The Naval Research Laboratory.

“(9) The Office of Naval Research.

“(10) The Air Force Research Laboratory.

“(11) The Tank and Automotive Research Development and Engineering Center.

“(12) The Armament Research Development and Engineering Center.

“(13) The Naval Air Warfare Center, Weapons Division.

“(14) The Naval Air Warfare Center, Aircraft Division.

“(15) The Space and Naval Warfare Systems Center, Pacific.

“(16) The Space and Naval Warfare Systems Center, Atlantic.

“(17) The laboratories within the Army Research Development and Engineering Command.

“(b) CONVERSION PROCEDURES.—The Secretary of Defense shall implement procedures to convert the civilian personnel of each Department of Defense science and technology reinvention laboratory, as so designated by subsection (a), from the personnel system which applies as of the date of the enactment of this Act [Oct. 28, 2009] to the personnel system under an appropriate demonstration project (as referred to in such section 342(b)). Any conversion under this subsection—

“(1) shall not adversely affect any employee with respect to pay or any other term or condition of employment;

“(2) shall be consistent with section 4703(f) of title 5, United States Code;

“(3) shall be completed within 18 months after the date of the enactment of this Act; and

“(4) shall not apply to prevailing rate employees (as defined by section 5342(a)(2) of title 5, United States Code) or senior executives (as defined by section 3132(a)(3) of such title).

“(c) LIMITATION.—The science and technology reinvention laboratories, as so designated by subsection (a), may not implement any personnel system, other than a personnel system under an appropriate demonstration project (as referred to in such section 342(b) [set out below]), without prior congressional authorization.”

Pub. L. 110-181, div. A, title XI, §1107, Jan. 28, 2008, 122 Stat. 357, as amended by Pub. L. 110-417, [div. A], title XI, §1109, Oct. 14, 2008, 122 Stat. 4618; Pub. L. 111-84, div. A, title X, §1073(d), Oct. 28, 2009, 123 Stat. 2475; Pub. L. 111-383, div. A, title XI, §1101(b), Jan. 7, 2011, 124 Stat. 4382; Pub. L. 112-81, div. A, title X, §1066(b)(2), Dec. 31, 2011, 125 Stat. 1588, provided that:

“(a) REQUIREMENT.—The Secretary of Defense shall take all necessary actions to fully implement and use the authorities provided to the Secretary under section 342(b) of the National Defense Authorization Act for Fiscal Year 1995 (Public Law 103-337; 108 Stat. 2721) [set out below], as amended by section 1114 of the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001 (as enacted into law by Public Law 106-398; 114 Stat. 1654A-315), to carry out personnel management demonstration projects at Department of Defense laboratories designated by section 1105(a) of the National Defense Authorization Act for Fiscal Year 2010 (Public Law 111-84; 123 Stat. 2486; 10 U.S.C. 2358 note) as Department of Defense science and technology reinvention laboratories.

“(b) PROCESS FOR FULL IMPLEMENTATION.—The Secretary of Defense shall also implement a process and implementation plan to fully utilize the authorities described in subsection (a) to enhance the performance of the missions of the laboratories.

“(c) OTHER LABORATORIES.—Any flexibility available to any demonstration laboratory shall be available for use at any other laboratory designated by section 1105(a) of the National Defense Authorization Act for Fiscal Year 2010 (Public Law 111-84; 123 Stat. 2486) as a Department of Defense science and technology reinvention laboratory.

“(d) SUBMISSION OF LIST AND DESCRIPTION.—Not later than March 1 of each year, the Secretary of Defense shall submit to Congress a report containing a list and description of the demonstration project notices, amendments, and changes requested by the laboratories during the preceding calendar year. The list shall include all approved and disapproved notices, amendments, and changes, and the reasons for disapproval or delay in approval.

“(e) STATUS REPORTS.—

“(1) IN GENERAL.—The Secretary shall include in each report under subsection (d) the information described in paragraph (2).

“(2) INFORMATION REQUIRED.—Each report under subsection (d) shall describe the following:

“(A) The actions taken by the Secretary of Defense under subsection (a) during the year covered by the report.

“(B) The progress made by the Secretary of Defense during such year in developing and implementing the plan required by subsection (b), including the anticipated date for completion of such plan and a list and description of any issues relating to the development or implementation of such plan.

“(C) With respect to any applications by any Department of Defense laboratories seeking to be designated as a demonstration laboratory or to otherwise obtain any of the personnel flexibilities available to a demonstration laboratory—

“(i) the number of applications that were received, pending, or acted on during such year;

“(ii) the status or disposition of any applications under clause (i), including, in the case of any application on which a final decision was rendered, the laboratory involved, what the laboratory had requested, the decision reached, and the reasons for the decision; and

“(iii) in the case of any applications under clause (i) on which a final decision was not rendered, the date by which a final decision is anticipated.

“(3) DEFINITION.—For purposes of this subsection, the term ‘demonstration laboratory’ means a laboratory designated by the Secretary of Defense under the provisions of section 342(b) of the National Defense Authorization Act for Fiscal Year 1995 [Pub. L. 103-337, set out below] (as cited in subsection (a)).”

Pub. L. 103-337, div. A, title III, §342(b), Oct. 5, 1994, 108 Stat. 2721, as amended by Pub. L. 106-65, div. A, title XI, §1109, Oct. 5, 1999, 113 Stat. 779; Pub. L. 106-398, §1 [div. A], title XI, §1114, Oct. 30, 2000, 114 Stat. 1654, 1654A-315, provided that:

“(1) The Secretary of Defense may carry out personnel demonstration projects at Department of Defense

laboratories designated by the Secretary as Department of Defense science and technology reinvention laboratories.

“(2)(A) Each personnel demonstration project carried out under the authority of paragraph (1) shall be generally similar in nature to the China Lake demonstration project.

“(B) For purposes of subparagraph (A), the China Lake demonstration project is the demonstration project that is authorized by section 6 of the Civil Service Miscellaneous Amendments Act of 1983 [Pub. L. 98-224, 98 Stat. 49] to be continued at the Naval Weapons Center, China Lake, California, and at the Naval Ocean Systems Center, San Diego, California.

“(3) If the Secretary carries out a demonstration project at a laboratory pursuant to paragraph (1), section 4703 of title 5, United States Code, shall apply to the demonstration project, except that—

“(A) subsection (d) of such section 4703 shall not apply to the demonstration project;

“(B) the authority of the Secretary to carry out the demonstration project is that which is provided in paragraph (1) rather than the authority which is provided in such section 4703; and

“(C) the Secretary shall exercise the authorities granted to the Office of Personnel Management under such section 4703.

“(4) The employees of a laboratory covered by a personnel demonstration project carried out under this section [enacting this note] shall be exempt from, and may not be counted for the purposes of, any constraint or limitation in a statute or regulation in terms of supervisory ratios or maximum number of employees in any specific category or categories of employment that may otherwise be applicable to the employees. The employees shall be managed by the director of the laboratory subject to the supervision of the Under Secretary of Defense for Acquisition, Technology, and Logistics.

“(5) The limitations in section 5373 of title 5, United States Code, do not apply to the authority of the Secretary under this section to prescribe salary schedules and other related benefits.”

INCLUSION OF WOMEN AND MINORITIES IN CLINICAL RESEARCH PROJECTS

Section 252 of Pub. L. 103-160 provided that:

“(a) GENERAL RULE.—In conducting or supporting clinical research, the Secretary of Defense shall ensure that—

“(1) women who are members of the Armed Forces are included as subjects in each project of such research; and

“(2) members of minority groups who are members of the Armed Forces are included as subjects of such research.

“(b) WAIVER AUTHORITY.—The requirement in subsection (a) regarding women and members of minority groups who are members of the Armed Forces may be waived by the Secretary of Defense with respect to a project of clinical research if the Secretary determines that the inclusion, as subjects in the project, of women and members of minority groups, respectively—

“(1) is inappropriate with respect to the health of the subjects;

“(2) is inappropriate with respect to the purpose of the research; or

“(3) is inappropriate under such other circumstances as the Secretary of Defense may designate.

“(c) REQUIREMENT FOR ANALYSIS OF RESEARCH.—In the case of a project of clinical research in which women or members of minority groups will under subsection (a) be included as subjects of the research, the Secretary of Defense shall ensure that the project is designed and carried out so as to provide for a valid analysis of whether the variables being tested in the research affect women or members of minority groups, as the case may be, differently than other persons who are subjects of the research.”

UNIVERSITY RESEARCH INITIATIVE SUPPORT PROGRAM

Pub. L. 103-160, div. A, title VIII, §802, Nov. 30, 1993, 107 Stat. 1701, as amended by Pub. L. 104-106, div. A,

title II, §275, Feb. 10, 1996, 110 Stat. 241; Pub. L. 104-201, div. A, title II, §263, Sept. 23, 1996, 110 Stat. 2465; Pub. L. 111-383, div. A, title IX, §901(a)(2), Jan. 7, 2011, 124 Stat. 4317, provided that:

“(a) ESTABLISHMENT.—The Secretary of Defense, through the Assistant Secretary of Defense for Research and Engineering, may establish a University Research Initiative Support Program.

“(b) PURPOSE.—Under the program, the Assistant Secretary may award grants and contracts to eligible institutions of higher education to support the conduct of research and development relevant to requirements of the Department of Defense.

“(c) ELIGIBILITY.—An institution of higher education is eligible for a grant or contract under the program if the institution has received less than a total of \$2,000,000 in grants and contracts from the Department of Defense in the two most recent fiscal years for which complete statistics are available when proposals are requested for such grant or contract.

“(d) COMPETITION REQUIRED.—The Assistant Secretary shall use competitive procedures in awarding grants and contracts under the program.

“(e) SELECTION PROCESS.—In awarding grants and contracts under the program, the Assistant Secretary shall use a merit-based selection process that is consistent with the provisions of section 2361(a) of title 10, United States Code.

“(f) REGULATIONS.—Not later than 90 days after the date of the enactment of this Act [Nov. 30, 1993], the Assistant Secretary shall prescribe regulations for carrying out the program.

“(g) FUNDING.—Of the amounts authorized to be appropriated under section 201 [107 Stat. 1583], \$20,000,000 shall be available for the University Research Initiative Support Program.”

INDEPENDENT RESEARCH AND DEVELOPMENT; BID AND PROPOSAL COSTS; NEGOTIATION OF ADVANCE AGREEMENTS WITH CONTRACTORS; ANNUAL REPORT TO CONGRESS

Pub. L. 91-441, title II, §203, Oct. 7, 1970, 84 Stat. 906, as amended by Pub. L. 96-342, title II, §208, Sept. 8, 1980, 94 Stat. 1081, provided that no funds authorized to be appropriated to Department of Defense by this or any other Act were to be used to finance independent research and development or bid and proposal costs unless such work had, in opinion of Secretary of Defense, potential relationship to military functions or operations, and advance agreements regarding payment for such work had been negotiated, prior to repeal by Pub. L. 101-510, div. A, title VIII, §824(b), Nov. 5, 1990, 104 Stat. 1604. See section 2372 of this title.

RELATIONSHIP OF RESEARCH PROJECTS OR STUDIES TO MILITARY FUNCTION OR OPERATION

Pub. L. 91-441, title II, §204, Oct. 7, 1970, 84 Stat. 908, which provided that no funds authorized to be appropriated to the Department of Defense by this or any other Act may be used to finance any research project or study unless such project or study has, in the opinion of the Secretary of Defense, a potential relationship to a military function or operation, was repealed and restated in subsec. (b) of this section by Pub. L. 100-370, §1(g)(3)(C), (5), July 19, 1988, 102 Stat. 847.

HERBICIDES AND DEFOLIATION PROGRAM; COMPREHENSIVE STUDY AND INVESTIGATION; REPORT BY JANUARY 31, 1972; TRANSMITTAL TO PRESIDENT AND CONGRESS BY MARCH 1, 1972

Pub. L. 91-441, title V, §506(c), Oct. 7, 1970, 84 Stat. 913, directed Secretary of Defense to enter into appropriate arrangements with National Academy of Sciences to conduct a comprehensive study and investigation to determine (A) ecological and physiological dangers inherent in use of herbicides, and (B) ecological and physiological effects of defoliation program carried out by Department of Defense in South Vietnam, with

a report on the study to be transmitted to President and Congress by Mar. 1, 1972.

CAMPUSES BARRING MILITARY RECRUITERS; CESSATION OF PAYMENTS; NOTIFICATION OF SECRETARY OF DEFENSE

Pub. L. 92-436, title VI, §606, Sept. 29, 1972, 86 Stat. 740, provided that:

“(a) No part of the funds appropriated pursuant to this or any other Act for the Department of Defense or any of the Armed Forces may be used at any institution of higher learning if the Secretary of Defense or his designee determines that recruiting personnel of any of the Armed Forces of the United States are being barred by the policy of such institution from the premises of the institution: except in a case where the Secretary of the service concerned certifies to the Congress in writing that a specific course of instruction is not available at any other institution of higher learning and furnishes to the Congress the reasons why such course of instruction is of vital importance to the security of the United States.

“(b) The prohibition made by subsection (a) of this section as it applies to research and development funds shall not apply if the Secretary of Defense or his designee determines that the expenditure is a continuation or a renewal of a previous program with such institution which is likely to make a significant contribution to the defense effort.

“(c) The Secretaries of the military departments shall furnish to the Secretary of Defense or his designee within 60 days after the date of enactment of this Act [Sept. 29, 1972] and each January 31 and June 30 thereafter the names of any institution of higher learning which the Secretaries determine on such dates are affected by the prohibitions contained in this section.”

Similar provisions were contained in the following prior authorization acts:

Pub. L. 92-156, title V, §502, Nov. 17, 1971, 85 Stat. 427.
Pub. L. 91-441, title V, §510, Oct. 7, 1970, 84 Stat. 914.

FEDERAL CONTRACT RESEARCH CENTERS; OFFICERS' COMPENSATION; NOTIFICATION TO CONGRESS

Pub. L. 91-121, title IV, §407, Nov. 19, 1969, 83 Stat. 208, related to restrictions on use of appropriations for compensation of officers and employees of Federal contract research centers, and notice requirements respecting such payments, prior to repeal by Pub. L. 96-107, title VIII, §819(c), Nov. 9, 1979, 93 Stat. 819. See section 2359 of this title.

§ 2359. Science and technology programs to be conducted so as to foster the transition of science and technology to higher levels of research, development, test, and evaluation

(a) POLICY.—Each official specified in subsection (b) shall ensure that the management and conduct of the science and technology programs under the authority of that official are carried out in a manner that will foster the transition of science and technology to higher levels of research, development, test, and evaluation.

(b) COVERED OFFICIALS.—Subsection (a) applies to the following officials of the Department of Defense:

- (1) The Under Secretary of Defense for Acquisition, Technology, and Logistics.
- (2) The Secretary of each military department.
- (3) The Director of the Defense Advanced Research Projects Agency.
- (4) The directors and heads of other offices and agencies of the Department of Defense with assigned research, development, test, and evaluation responsibilities.