

TITLE II—RESEARCH, DEVELOPMENT, TEST, AND EVALUATION

SUBTITLE A—AUTHORIZATION OF APPROPRIATIONS

Authorization of appropriations (sec. 201)

The Senate bill contained a provision (sec. 201) that would authorize appropriations for Research, Development, Test, and Evaluation at the levels identified in section 4201 of division D of this Act.

The House amendment contained an identical provision (sec. 201).

The conference agreement includes this provision.

SUBTITLE B—PROGRAM REQUIREMENTS, RESTRICTIONS, AND LIMITATIONS

Laboratory quality enhancement program (sec. 211)

The House amendment contained a provision (sec. 211) that would require the establishment of a Laboratory Quality Enhancement Program to support the analysis and implementation of current policies, as well as make recommendations for new initiatives to support the improvement and enhancement of the Department of Defense's Science and Technology Reinvention Laboratories. The House provision would also align management of the laboratory demonstration program with the Assistant Secretary of Defense for Research and Engineering.

The Senate bill contained a provision (sec. 1126) that would align management of the laboratory demonstration program with the Under Secretary of Defense for Acquisition, Technology, and Logistics.

The Senate recedes with an amendment to adjust the membership of the panel and to emphasize that the goal of the laboratory personnel system should be to support the efficient operations of those institutions.

Modification of mechanisms to provide funds for defense laboratories for research and development of technologies for military missions (sec. 212)

The Senate bill contained a provision (sec. 211) that would raise the limit of funds authorized under Section 219 of the Duncan Hunter National Defense Authorization Act for Fiscal Year 2009 (Public Law 110-417) up to four percent of all funds available to a laboratory. The provision would also eliminate the sunset date for authorization of this authority.

The House amendment contained a similar provision (sec. 212) that would set the level of funding at three percent, eliminate the sunset date, and allow certain federally funded research and development centers to use this authority.

The House recedes with an amendment that would set the level of Section 219 funding at between two and four percent.

Making permanent authority for defense research and development rapid innovation program (sec. 213)

The Senate bill contained a provision (sec. 212) that would repeal the sunset provision of the Rapid Innovation Program and make the authorization of the program permanent.

The House amendment contained no similar provision.
The House recesses.

Authorization for National Defense University and Defense Acquisition University to enter into cooperative research and development agreements (sec. 214)

The Senate bill contained a provision (sec. 213) that would authorize the Defense Acquisition University and the National Defense University to enter into cooperative agreements, which involve the provision of grant money, and cooperative research and development agreements with universities, not-for-profit institutions, and other entities to support their designated missions.

The House amendment contained no similar provision.
The House recesses.

Manufacturing Engineering Education Grant Program (sec. 215)

The Senate bill contained a provision (sec. 214) that would allow the Department of Defense to provide grants to institutions of higher education, including technical and community colleges, for the purposes of enhancing education in manufacturing engineering.

The House amendment contained no similar provision.

The House recesses with technical amendments to clarify several aspects of the grant program.

Notification requirement for certain rapid prototyping, experimentation, and demonstration activities (sec. 216)

The House amendment contained a provision (sec. 213) that would require the Secretary of the Navy to provide written notification to the congressional defense committees within 10 days before initiating a rapid prototyping, experimentation, or demonstration activity using funds from PE 63382N (Navy Advanced Combat Systems Technology).

The Senate bill contained no similar provision.
The Senate recesses.

Increased micro-purchase threshold for research programs and entities (sec. 217)

The Senate bill contained a provision (sec. 215) that would increase the micro-purchase threshold in Department of Defense research and laboratories activities from \$3,000 to \$10,000. In raising the limit, this provision would allow

appropriate organizations, such as universities, defense labs, and other performers, to facilitate easy and administratively efficient purchasing of small dollar items.

The House amendment contained no similar provision.

The House recesses with an amendment to extend the increase in micro-purchase threshold to all research activities government-wide.

Improved biosafety for handling of select agents and toxins (sec. 218)

The House amendment contained a provision (sec. 214) that would direct the Department of Defense to implement several improvements for handling of select agents and toxins, as recommended from an Army 15-6 investigative report on the individual and institutional accountability for the shipment of viable Bacillus Anthracis from Dugway Proving Ground. This section would require the Department to implement a quality assurance and quality control program for any facility producing biological select agents and toxins, and for the Secretary of Defense to submit a report to the congressional defense committees by February 1, 2017, on the potential consolidation of facilities that work with biological select agents and toxins. This section would also require the Comptroller General of the United States to submit a report to the congressional defense committees by September 1, 2017, on the effectiveness and completeness of the Department of Defense's actions taken to address the findings and recommendations of the Army 15-6 investigation.

The Senate bill contained no similar provision.

The Senate recesses with a technical amendment.

Designation of Department of Defense senior official with principal responsibility for directed energy weapons (sec. 219)

The Senate bill contained a provision (sec. 216) that would grant rapid acquisition authorities for directed energy weapons systems to accelerate the development and fielding of directed energy technology and to help offset the gains of potential adversaries. The Senate provision would also establish a joint directed energy program office at the Department of Defense.

The House amendment contained a provision (sec. 220) that would require the Secretary of Defense to designate a senior official already serving within the Department of Defense as a senior official with principal responsibility for the

development and demonstration of directed energy weapons for the Department.

The Senate recedes with an amendment that would require the senior designated official to develop a strategic roadmap for the development and fielding of directed energy technology and to accelerate such development and fielding. The amendment would also rename the joint technology office for high energy lasers to the joint directed energy transition office, and would expand its mission to work with the senior designated official to push the demonstration and transition of directed energy systems, as well as the development of key technologies.

The conferees expect and encourage the Department of Defense to use rapid acquisition authorities authorized to the department in Section 806 of the Bob Stump National Defense Authorization Act for Fiscal Year 2003 (Public Law 107-314; 10 U.S.C. 2302 note) to speed the development and deployment of operational directed energy capabilities. The committee believes that this provision allows the Secretary of Defense to better use the range of acquisition authorities already at the disposal of the department for the purposes of directed energy weapons system acquisition, including:

(1) Rapid acquisition authority provided under Section 806;

(2) Use of other transactions authority provided under section 2371 of Title 10, United States Code;

(3) Simplified acquisition procedures for the acquisition of commercial items; and

(4) Authority for procurement for experimental purposes provided under section 2373 of Title 10, United States Code.

Restructuring of the distributed common ground system of the Army (sec. 220)

The House amendment contained a provision (sec. 219) that would require the Secretary of the Army to restructure versions of the distributed common ground system of the Army after Increment 1. The Secretary of the Army shall discontinue development of new software code of any component of the system for which there is commercial, open source, or Government off the self software that is capable of fulfilling at least 80 percent of the system requirements; and conduct a review of the acquisition strategy for the program to ensure that procurement of commercial software is the preferred method of meeting program requirements. The Secretary of the Army shall not award any contract for the development of a new component software capability if such a capability is already a commercial item.

The Senate bill contained no similar provision.

The Senate recedes with an amendment.

The conferees expect the Secretary of the Army to rapidly execute this acquisition so as to quickly improve the field performance of the existing distributed common ground system for the Army, which we do not believe is adequately serving the needs of units at division, brigade and battalion levels.

Limitation on availability of funds for countering weapons of mass destruction system Constellation (sec. 221)

The House amendment contained a provision (sec. 216) that would prohibit the Department of Defense from obligating or expending any funds in fiscal year 2017 for research, development, and prototyping of the countering weapons of mass destruction situational awareness information system, known as ``Constellation.'`

The Senate bill contained no similar provision.

The Senate recedes with an amendment that would limit half the funds available for Constellation until the Secretary of Defense provides an independent review and assessment of the requirements and implementation plan for this system. In addition congressional defense committees shall receive periodic updates prior to the completion of the review.

Limitation on availability of funds for Defense Innovation Unit Experimental (sec. 222)

The House amendment contained a provision (sec. 217) that would limit the amount of authorized funds available to be obligated or expended for the Defense Innovation Unit Experimental (DIUx) to no more than 80 percent until the Secretary of Defense provides a report the congressional defense committees on the charter for and the use of funds to establish and expand DIUx.

The Senate bill contained no similar provision.

The Senate recedes with an amendment that would alter the amount of funds subject to limitation and add additional specificity to the reporting requirement.

The conferees remain cautiously optimistic that the changes to the organizational structure and functions of DIUx could become important tools for the Department of Defense (DoD) to engage with new and non-traditional commercial sources of innovation, as well as rapidly identify and integrate new technologies into defense systems. The conferees believe that outreach to commercial companies, small businesses and other

non-traditional defense contractors, in Silicon Valley and across the nation, will be a key element in all efforts at modernizing defense systems and pursuing offsetting technology strategies. However, the conferees are concerned that investments made by DIUx to-date were not focused on rapid delivery of much needed game-changing technologies. Additionally, DIUx's customer base is not as diverse as expected and includes organizations, such U.S. Special Operations Command, with their own acquisition authority and entity established to leverage innovation. Although the conferees are not opposed to any organization partnering with DIUx, the conferees encourage DIUx to establish relationships with services and other Department of Defense organizations that do not have their own funding, authorities, and innovation hubs.

Additionally, the conferees remain concerned that in the Department's rush to try something new, defense leaders have not taken the time to determine how effective recent organizational and management changes are before seeking a rapid expansion of resources. Nor do the conferees believe that the Department has postured DIUx to be successful in the innovation ecosystem with partners across the Department, finding ways to multiply the effectiveness and networking potential of DIUx by leveraging the personnel, expertise, authorities, and resources of existing successful research, development, innovation, and tech transfer mechanisms. These existing mechanisms include the Small Business Innovative Research and Small Business Technology Transition programs, the Department of Defense research laboratories, and other entities that look at technology in classified settings.

Additionally, the conferees are concerned that the Department has found useful mechanisms to identify and engage with new commercial entities, without making demonstrable progress in reducing the acquisition and contractual barriers of entry for these non-traditional providers, as well as all commercial entities wishing to do business with the Department. Without such progress, the conferees are concerned that these non-traditional vendors will become frustrated over time, as has happened in the past, and will revert back to a posture that, at best, reluctantly partners in defense work, and at worst, actively rejects all work with the Department of Defense because the acquisition system is too burdensome and bureaucratic.

Limitation on availability of funds for Joint Surveillance Target Attack Radar System (JSTARS) Recapitalization Program (sec. 223)

The Senate bill contained a provision (Sec. 146) that would limit the availability of fiscal year 2017 and beyond

funds for the Joint Surveillance Target Attack Radar System recapitalization program unless the contract for engineering and manufacturing development uses a firm fixed price contract structure.

The House amendment contained no similar provision.

The House recedes with an amendment that provides the Secretary of Defense with authority to waive the limitation in the provision if the Secretary determines the waiver is in the national security interests of the United States, and includes other minor technical corrections.

The conferees note that to ensure the integrity of the full and open competition nature of this program, they caution the Air Force to guard against the potential prejudicing of this source selection by other Air Force recapitalization programs.

Acquisition program baseline and annual reports on follow-on modernization program for F-35 Joint Strike Fighter (sec. 224)

The Senate bill contained a provision (sec. 1087) that would require the Department of Defense to treat the F-35 Follow-on Modernization program as a separate Major Defense Acquisition Program (MDAP).

The House amendment contained no similar provision.

The House recedes with an amendment that would remove the requirement to treat the Follow-on Modernization program as a separate MDAP and require the Secretary of Defense, not later than March 31, 2017, to submit to the congressional defense committees a report that contains the basic elements of an acquisition program baseline for Block 4 modernization.

SUBTITLE C—REPORTS AND OTHER MATTERS

Strategy for assured access to trusted microelectronics (sec. 231)

The House amendment contained a provision (sec. 231) that would require the Secretary of Defense to develop and implement a strategy for developing and acquiring trusted microelectronics from various sources by 2020. The House provision would further require the Secretary of Defense to certify by September 30, 2020, that the Department has implemented the recommendations of the strategy, and has created an assured means of accessing sufficient supply of trusted microelectronics.

The Senate bill contained no similar provision.

The Senate recedes with an amendment that would add additional elements to the required strategy.

*Pilot program on evaluation of commercial information technology
(sec. 232)*

The House amendment contained a provision (sec. 232) that would require the Defense Information Systems Agency to establish a pilot program to evaluate commercially available information technology tools to better understand and characterize their potential impact on Department of Defense networks and computing environments through prototyping, experimentation, operational demonstration, military user assessment, or other means to get quantitative and qualitative feedback on the commercial item.

The Senate bill contained no similar provision.

The Senate recedes with a clarifying amendment.

Pilot program for the enhancement of the research, development, test, and evaluation centers of the Department of Defense (sec. 233)

The Senate bill contained a provision (sec. 948) that would allow directors of Department of Defense research and development laboratories, as well as the director of the Defense Advanced Research Projects Agency to waive on a temporary basis regulations, instructions, publications, policies, and procedures of the Department of Defense as the director believes appropriate.

The House amendment contained a similar provision (sec. 233) that would allow the services to demonstrate methods for the more effective development of research, development, test, and evaluation functions.

The Senate recedes with an amendment that would combine features of both provisions and create a pilot program open to research and development laboratories, test and evaluation centers, and the Defense Advanced Research Projects Agency. The amended provision would allow directors of these entities to waive on a temporary basis any regulation, restriction, requirement, guidance, policy, procedure, or departmental instruction that would generate greater value and efficiencies in research and development activities, enable more efficient and effective operations, and enable more rapid deployment of warfighter capabilities.

In this provision, the conferees expect the secretaries of the services to ensure that participation in the program includes at least five science and technology reinvention laboratories and at least five test and evaluation centers from each service with the highest likelihood to use innovatively the authority for this new management flexibility to demonstrate the

value for the entire Department. In addition, the conferees expect that the assistant secretaries of the services will work with their appropriate counterparts within the services to complete evaluation of waiver requests in a timely and responsive manner.

Pilot program on modernization and fielding of electromagnetic spectrum warfare systems and electronic warfare capabilities (sec. 234)

The Senate bill contained a provision (sec.897) that would stipulate that funds for electromagnetic spectrum warfare systems and EW systems may be used for the development and fielding of such systems. The provision would also amend section 806(c)(1) of the Bob Stump National Defense Authorization Act for Fiscal Year 2003 (Public Law 107-314) to add a new subparagraph addressing the rapid acquisition of electronic warfare capabilities.

The House amendment contained a provision (sec. 234) that would authorize the Secretary of Defense to carry out a pilot program on the modernization of electromagnetic spectrum warfare systems and electronic warfare (EW) systems. The House provision would direct the Electronic Warfare Executive Committee (EWEC) to select a total of five such systems currently in sustainment for modernization under the pilot program.

The Senate recedes with an amendment that would including fielding of EW systems, increases the number of systems to be selected for the pilot program from 5 to 10, adds a termination date of September 30, 2023 to the pilot program, and authorizes appropriated electromagnetic spectrum warfare and electronic warfare funds to be used for the development and fielding of electromagnetic spectrum warfare systems and electronic warfare capabilities.

Pilot program on disclosure of certain sensitive information to federally funded research and development centers (sec. 235)

The Senate bill contained a provision (sec. 218) that would permit the Department of Defense to provide personnel of a Defense federally-funded research and development center with access to sensitive information necessary to carry out their assigned duties and functions.

The House amendment contained no similar provision.

The House recedes with an amendment to clarify certain elements of the program and further prevent any unauthorized disclosure of sensitive information.

Pilot program on enhanced interaction between the Defense Advanced Research Projects Agency and the service academies (sec. 236)

The Senate bill contained a provision (sec. 219) that would authorize the Secretary of Defense to establish a pilot program to assess the feasibility and advisability of enhanced interaction between the Defense Advanced Research Projects Agency and the military service academies.

The House amendment contained no similar provision.

The House recedes with technical amendments to streamline the pilot program.

Independent review of F/A-18 physiological episodes and corrective actions (sec. 237)

The House amendment contained a provision that would require the Secretary of the Navy to establish an independent review team to review the Navy's data on, and mitigation efforts related to, the increase in F/A-18 physiological events since January 1, 2009 and submit a report on the findings of said review team.

The Senate bill contained no similar provision.

The Senate recedes.

B-21 bomber development program accountability matrices (sec. 238)

The Senate bill contained a provision (Sec. 844) that would establish specific cost growth thresholds and cost controls for the Air Force's B-21 bomber program, directs the Secretary of the Air Force to provide quarterly program performance data to the Comptroller General of the United States, and directs the transfer of the difference between the Department of Defense's annual program budget funding amount and the contract award value to the Defense Rapid Prototyping Fund for each budget year submission.

The House amendment contained no similar provision.

The House recedes with an amendment that strikes the cost growth thresholds and cost controls, and strikes the requirement to transfer funds into the Defense Rapid Prototyping Fund. The amendment also changes the program performance data submission from a quarterly to semi-annual reporting frequency, and includes other minor technical corrections.

Study on helicopter crash prevention and mitigation technology (sec. 239)

The House amendment contained a provision (Sec. 236) that would require the Secretary of Defense to enter into a contract with a federally funded research and development center to conduct a study on technologies with the potential to prevent and mitigate helicopter crashes.

The Senate bill contained no similar provision.

The Senate recesses.

Strategy for Improving Electronic and Electromagnetic Spectrum Warfare Capabilities (sec. 240)

The House amendment contained a provision (sec. 237) that would require the Under Secretary of Defense for Acquisition, Technology, and Logistics, acting through the Electronic Warfare Executive Committee, to submit to the congressional defense committees a report by April 1, 2017, on future electronic warfare concepts and technologies.

The Senate bill contained no similar provision.

The Senate recesses with an amendment that would require a strategy for improving electronic and electromagnetic spectrum warfare capabilities.

Sense of Congress on development and fielding of fifth generation airborne systems (sec. 241)

The Senate bill contained a provision (Sec. 1057) that would express the sense of the Senate on the definition of and need for continued prioritization, development, and fielding of fifth-generation airborne capabilities.

The House amendment contained no similar provision.

The House recesses with an amendment that replaces the term "the Senate" with "Congress" in each instance where it occurs in the title and body of the provision, and includes other minor technical corrections.

LEGISLATIVE PROVISIONS NOT ADOPTED

Report on cost of B-21 aircraft

The Senate bill contained a provision (Sec. 217) that would limit the funds authorized to be appropriated by this Act or otherwise made available for fiscal year 2017 to be made available for the B-21 Engineering and Manufacturing Development (EMD) program until the Air Force releases the value of the B-21 EMD contract award made on October 27, 2015, to the congressional defense committees.

The House amendment contained a similar provision (Sec. 136) that would require the Secretary of Defense to submit to the congressional defense committees a report on the cost of the B-21 aircraft.

The Senate recesses.

The House recesses.

Neither provision was adopted.