

25, 2015], the heads of each basic research entity shall each submit to the congressional defense committees [Committees on Armed Services and Appropriations of the Senate and the House of Representatives] the strategy developed by the head under subsection (a)(1).

“(2) OFFICE OF THE SECRETARY.—Not later than one year after the date of the enactment of this Act, the Secretary of Defense shall submit to the congressional defense committees the strategy developed under subsection (b).

“(d) COVERED INSTITUTION DEFINED.—In this section:

“(1) The term ‘basic research entity’ means an entity of the Department of Defense that executes research, development, test, and evaluation budget activity 1 funding, as described in the Department of Defense Financial Management Regulation.

“(2) The term ‘covered educational institution’ has the meaning given that term in section 2362(e) of title 10, United States Code [now 10 U.S.C. 4144(f)].”

[§§ 4145 to 4147. Omitted]

Editorial Notes

CODIFICATION

Sections 4145 to 4147 were initially transferred from sections 2350f, 2368, and 2367 of this title, respectively, by Pub. L. 116-283, div. A, title XVIII, §1844(b), Jan. 1, 2021, 134 Stat. 4246, to become effective Jan. 1, 2022. Subsequently, Pub. L. 117-81, div. A, title XVII, §1701(u)(5)(B), Dec. 27, 2021, 135 Stat. 2154, struck out and added a new section 1844(b) of Pub. L. 116-283, effective as if included therein. The new section 1844(b) did not direct any transfers to sections 4145 to 4147, thereby omitting these sections before they took effect. After other amendments by Pub. L. 117-81, section 2350f was not transferred, and sections 2368 and 2367 were transferred to sections 4124 and 4126 of this title, respectively.

CHAPTER 307—TEST AND EVALUATION

Sec.	
4171.	Operational test and evaluation of defense acquisition programs.
4172.	Major systems and munitions programs: survivability testing and lethality testing required before full-scale production.
4173.	Department of Defense Test Resource Management Center.
4174.	Contracts: acquisition, construction, or furnishing of test facilities and equipment.
4175.	Use of test and evaluation installations by commercial entities.

Editorial Notes

CODIFICATION

Pub. L. 116-283, div. A, title XVIII, §1844(a), Jan. 1, 2021, 134 Stat. 4245, initially enacted chapter 307 of this title, consisting of sections 4141 to 4147, which was to become effective Jan. 1, 2022. However, Pub. L. 117-81, div. A, title XVII, §1701(u)(5)(A), Dec. 27, 2021, 135 Stat. 2153, amended section 1844(a) of Pub. L. 116-283, effective as if included therein, so that instead of enacting chapter 307, it enacted chapter 305 of this title consisting of sections 4141 to 4144.

AMENDMENTS

2021—Pub. L. 117-81, div. A, title XVII, §1701(u)(6)(A), (C), Dec. 27, 2021, 135 Stat. 2154, amended Pub. L. 116-283, div. A, title XVIII, §1845(a), Jan. 1, 2021, 134 Stat. 4247, which added this analysis, by redesignating chapter 309 as this chapter and by adding items 4174 and 4175.

Statutory Notes and Related Subsidiaries

PILOT PROGRAM TO TEST MACHINE-VISION TECHNOLOGIES TO DETERMINE THE AUTHENTICITY AND SECURITY OF MICROELECTRONIC PARTS IN WEAPON SYSTEMS

Pub. L. 115-232, div. A, title VIII, §843, Aug. 13, 2018, 132 Stat. 1878, as amended by Pub. L. 116-283, div. A, title XVIII, §§1806(e)(3)(C), 1866(d)(1), Jan. 1, 2021, 134 Stat. 4156, 4280, provided that:

“(a) PILOT PROGRAM AUTHORIZED.—The Undersecretary of Defense for Research and Engineering, in coordination with the Defense Microelectronics Activity, shall establish a pilot program to test the feasibility and reliability of using machine-vision technologies to determine the authenticity and security of microelectronic parts in weapon systems.

“(b) OBJECTIVES OF PILOT PROGRAM.—The Undersecretary of Defense for Research and Engineering, in coordination with the Defense Microelectronics Activity, shall design any pilot program conducted under this section to determine the following:

“(1) The effectiveness and technology readiness level of machine-vision technologies to determine the authenticity of microelectronic parts at the time of the creation of such part through final insertion of such part into weapon systems.

“(2) The best method of incorporating machine-vision technologies into the process of developing, transporting, and inserting microelectronics into weapon systems.

“(3) The rules, regulations, or processes that hinder the development and incorporation of machine-vision technologies, and the application of such rules, regulations, or processes to mitigate counterfeit microelectronics proliferation throughout the Department of Defense.

“(c) CONSULTATION.—To develop the pilot program under this section, the Undersecretary of Defense for Research and Engineering, in coordination with the Defense Microelectronics Activity, may consult with the following entities:

“(1) Manufacturers of semiconductors or electronics.

“(2) Industry associations relating to semiconductors or electronics.

“(3) Original equipment manufacturers of products for the Department of Defense.

“(4) Nontraditional defense contractors (as defined in section 3014 of title 10, United States Code) that are machine vision companies.

“(5) Federal laboratories (as defined in section 4801(5) of title 10, United States Code).

“(6) Other elements of the Department of Defense that fall under the authority of the Undersecretary of Defense for Research and Engineering.

“(d) COMMENCEMENT AND DURATION.—The pilot program established under this section shall be established not later than April 1, 2019, and all activities under such pilot program shall terminate not later than December 31, 2020.”

[Pub. L. 116-283, §1866(d)(1)(A), which directed amendment of section 843(c)(4) of Pub. L. 115-232, set out above, by substituting “section 3021” for “section 2302(9)”, could not be executed because of the intervening amendment by section 1806(e)(3)(C) of Pub. L. 116-283, which had substituted “section 3014” for “section 2302(9)”.]

§ 4171. Operational test and evaluation of defense acquisition programs

(a) CONDITION FOR PROCEEDING BEYOND LOW-RATE INITIAL PRODUCTION.—(1) The Secretary of Defense shall provide that a covered major defense acquisition program, a covered designated major subprogram, or an element of the ballistic missile defense system may not proceed beyond low-rate initial production until initial oper-

ational test and evaluation of the program, subprogram, or element is completed.

(2) In this subsection:

(A) The term “covered major defense acquisition program” means a major defense acquisition program that involves the acquisition of a weapon system that is a major system.

(B) The term “covered designated major subprogram” means a major subprogram designated under section 4203(a)(1) of this title that is a major subprogram of a covered major defense acquisition program.

(b) OPERATIONAL TEST AND EVALUATION.—(1) Operational testing of a major defense acquisition program may not be conducted until the Director of Operational Test and Evaluation of the Department of Defense approves (in writing) the adequacy of the plans (including the projected level of funding) for operational test and evaluation to be conducted in connection with that program.

(2) The Director shall analyze the results of the operational test and evaluation conducted for each major defense acquisition program. At the conclusion of such testing, the Director shall prepare a report stating—

(A) the opinion of the Director as to—

(i) whether the test and evaluation performed were adequate; and

(ii) whether the results of such test and evaluation confirm that the items or components actually tested are effective and suitable for combat; and

(B) additional information on the operational capabilities of the items or components that the Director considers appropriate based on the testing conducted.

(3) The Director shall submit each report under paragraph (2) to the Secretary of Defense, the Under Secretary of Defense for Acquisition and Sustainment, the Under Secretary of Defense for Research and Engineering, and the congressional defense committees. Each such report shall be submitted to those committees in precisely the same form and with precisely the same content as the report originally was submitted to the Secretary and Under Secretary and shall be accompanied by such comments as the Secretary may wish to make on the report.

(4) A final decision within the Department of Defense to proceed with a major defense acquisition program beyond low-rate initial production may not be made until the Director has submitted to the Secretary of Defense the report with respect to that program under paragraph (2) and the congressional defense committees have received that report.

(5) If, before a final decision described in paragraph (4) is made for a major defense acquisition program, a decision is made within the Department of Defense to proceed to operational use of that program or to make procurement funds available for that program, the Director shall submit to the Secretary of Defense and the congressional defense committees the report with respect to that program under paragraph (2) as soon as practicable after the decision described in this paragraph is made.

(6) In this subsection, the term “major defense acquisition program” has the meaning given that term in section 139(a)(2)(B) of this title.

(c) DETERMINATION OF QUANTITY OF ARTICLES REQUIRED FOR OPERATIONAL TESTING.—The quantity of articles of a new system that are to be procured for operational testing shall be determined by—

(1) the Director of Operational Test and Evaluation of the Department of Defense, in the case of a new system that is a major defense acquisition program (as defined in section 139(a)(2)(B) of this title); or

(2) the operational test and evaluation agency of the military department concerned, in the case of a new system that is not a major defense acquisition program.

(d) IMPARTIALITY OF CONTRACTOR TESTING PERSONNEL.—In the case of a major defense acquisition program (as defined in subsection (a)(2)), no person employed by the contractor for the system being tested may be involved in the conduct of the operational test and evaluation required under subsection (a). The limitation in the preceding sentence does not apply to the extent that the Secretary of Defense plans for persons employed by that contractor to be involved in the operation, maintenance, and support of the system being tested when the system is deployed in combat.

(e) IMPARTIAL CONTRACTED ADVISORY AND ASSISTANCE SERVICES.—(1) The Director may not contract with any person for advisory and assistance services with regard to the test and evaluation of a system if that person participated in (or is participating in) the development, production, or testing of such system for a military department or Defense Agency (or for another contractor of the Department of Defense).

(2) The Director may waive the limitation under paragraph (1) in any case if the Director determines in writing that sufficient steps have been taken to ensure the impartiality of the contractor in providing the services. The Inspector General of the Department of Defense shall review each such waiver and shall include in the Inspector General’s semi-annual report an assessment of those waivers made since the last such report.

(3)(A) A contractor that has participated in (or is participating in) the development, production, or testing of a system for a military department or Defense Agency (or for another contractor of the Department of Defense) may not be involved (in any way) in the establishment of criteria for data collection, performance assessment, or evaluation activities for the operational test and evaluation.

(B) The limitation in subparagraph (A) does not apply to a contractor that has participated in such development, production, or testing solely in testing for the Federal Government.

(f) SOURCE OF FUNDS FOR TESTING.—The costs for all tests required under subsection (a) shall be paid from funds available for the system being tested.

(g) DIRECTOR’S ANNUAL REPORT.—As part of the annual report of the Director under section 139 of this title, the Director shall describe for each program covered in the report the status of test and evaluation activities in comparison with the test and evaluation master plan for that program, as approved by the Director. The

Director shall include in such annual report a description of each waiver granted under subsection (e)(2) since the last such report.

(h) OPERATIONAL TEST AND EVALUATION DEFINED.—In this section, the term “operational test and evaluation” has the meaning given that term in section 139(a)(2)(A) of this title. For purposes of subsection (a), that term does not include an operational assessment based exclusively on—

- (1) computer modeling;
- (2) simulation; or

(3) an analysis of system requirements, engineering proposals, design specifications, or any other information contained in program documents.

(Added Pub. L. 101–189, div. A, title VIII, § 802(a)(1), Nov. 29, 1989, 103 Stat. 1484, § 2399; amended Pub. L. 102–484, div. A, title VIII, § 819, Oct. 23, 1992, 106 Stat. 2458; Pub. L. 103–160, div. A, title IX, § 904(d)(1), Nov. 30, 1993, 107 Stat. 1728; Pub. L. 103–337, div. A, title X, § 1070(a)(11), (f), Oct. 5, 1994, 108 Stat. 2856, 2859; Pub. L. 104–106, div. A, title XV, § 1502(a)(19), Feb. 10, 1996, 110 Stat. 504; Pub. L. 106–65, div. A, title X, § 1067(1), Oct. 5, 1999, 113 Stat. 774; Pub. L. 107–107, div. A, title X, § 1048(b)(2), Dec. 28, 2001, 115 Stat. 1225; Pub. L. 107–314, div. A, title X, § 1062(a)(9), Dec. 2, 2002, 116 Stat. 2650; Pub. L. 108–136, div. A, title X, § 1043(b)(14), Nov. 24, 2003, 117 Stat. 1611; Pub. L. 109–364, div. A, title II, § 231(a), Oct. 17, 2006, 120 Stat. 2131; Pub. L. 111–383, div. A, title VIII, § 814(d), Jan. 7, 2011, 124 Stat. 4267; Pub. L. 115–91, div. A, title XVI, § 1677(a), Dec. 12, 2017, 131 Stat. 1774; Pub. L. 116–92, div. A, title IX, § 902(62), Dec. 20, 2019, 133 Stat. 1550; renumbered § 4171 and amended Pub. L. 116–283, div. A, title XVIII, §§ 1845(b), 1883(b)(2), Jan. 1, 2021, 134 Stat. 4247, 4294; Pub. L. 117–81, div. A, title XVII, § 1701(d)(10), (u)(6)(B), Dec. 27, 2021, 135 Stat. 2137, 2154.)

Editorial Notes

AMENDMENTS

2021—Pub. L. 116–283, § 1845(b), as amended by Pub. L. 117–81, § 1701(u)(6)(B), renumbered section 2399 of this title as this section.

Subsec. (a)(2)(A). Pub. L. 117–81, § 1701(d)(10)(A), struck out “within the meaning of that term in section 3041 of this title” before period at end.

Pub. L. 116–283, § 1883(b)(2), substituted “section 3041” for “section 2302(5)”.

Subsec. (a)(2)(B). Pub. L. 117–81, § 1701(d)(10)(B), which directed the substitution of “under section 4203(a)(1) of this title” for “under” and all that followed through “this title”, was not executed in light of the prior amendment by section 1883(b)(2) of Pub. L. 116–283, to reflect the probable intent of Congress. See note below.

Pub. L. 116–283, § 1883(b)(2), substituted “section 4203(a)(1)” for “section 2430a(a)(1)”.

2019—Subsec. (b)(3). Pub. L. 116–92 substituted “Under Secretary of Defense for Acquisition and Sustainment, the Under Secretary of Defense for Research and Engineering,” for “Under Secretary of Defense for Acquisition, Technology, and Logistics.”.

2017—Subsec. (a)(1). Pub. L. 115–91 substituted “, a covered designated major subprogram, or an element of the ballistic missile defense system” for “or a covered designated major subprogram” and “program, subprogram, or element” for “program or subprogram”.

2011—Subsec. (a). Pub. L. 111–383 amended subsec. (a) generally. Prior to amendment, text read as follows:

“(1) The Secretary of Defense shall provide that a major defense acquisition program may not proceed be-

yond low-rate initial production until initial operational test and evaluation of the program is completed.

“(2) In this subsection, the term ‘major defense acquisition program’ means a conventional weapons system that—

“(A) is a major system within the meaning of that term in section 2302(5) of this title; and

“(B) is designed for use in combat.”

2006—Subsec. (b)(2). Pub. L. 109–364, § 231(a)(1), amended par. (2) generally. Prior to amendment, par. (2) read as follows: “The Director shall analyze the results of the operational test and evaluation conducted for each major defense acquisition program. At the conclusion of such testing, the Director shall prepare a report stating the opinion of the Director as to—

“(A) whether the test and evaluation performed were adequate; and

“(B) whether the results of such test and evaluation confirm that the items or components actually tested are effective and suitable for combat.”

Subsec. (b)(5), (6). Pub. L. 109–364, § 231(a)(2), (3), added par. (5) and redesignated former par. (5) as (6).

2003—Subsec. (h). Pub. L. 108–136 substituted “Operational Test and Evaluation Defined” for “Definitions” in heading, struck out introductory provisions which read “In this section:”, substituted “In this section, the term” for “(1) The term”, redesignated subpars. (A) to (C) of former par. (1) as pars. (1) to (3), respectively, realigned margins, and struck out former par. (2) which defined “congressional defense committees” to mean the Committees on Armed Services and Appropriations of the Senate and the House of Representatives.

2002—Subsec. (a)(2). Pub. L. 107–314 substituted “means a conventional weapons system that” for “means” in introductory provisions and struck out “a conventional weapons system that” before “is a major system” in subpar. (A).

2001—Subsec. (b)(3). Pub. L. 107–107 substituted “Under Secretary of Defense for Acquisition, Technology, and Logistics” for “Under Secretary of Defense for Acquisition and Technology”.

1999—Subsec. (h)(2)(B). Pub. L. 106–65 substituted “Committee on Armed Services” for “Committee on National Security”.

1996—Subsec. (h)(2). Pub. L. 104–106 substituted “means—” and subpars. (A) and (B) for “means the Committees on Armed Services and the Committees on Appropriations of the Senate and House of Representatives.”

1994—Subsecs. (b)(5), (c)(1). Pub. L. 103–337, § 1070(a)(11)(A), substituted “139(a)(2)(B)” for “138(a)(2)(B)”.

Subsec. (e)(3)(B). Pub. L. 103–337, § 1070(f), substituted “solely in testing for” for “solely as a representative of”.

Subsec. (g). Pub. L. 103–337, § 1070(a)(11)(B), substituted “139” for “138”.

Subsec. (h)(1). Pub. L. 103–337, § 1070(a)(11)(C), substituted “139(a)(2)(A)” for “138(a)(2)(A)”.

1993—Subsec. (b)(3). Pub. L. 103–160 substituted “Under Secretary of Defense for Acquisition and Technology” for “Under Secretary of Defense for Acquisition”.

1992—Subsec. (e)(3). Pub. L. 102–484 designated existing provisions as subpar. (A) and added subpar. (B).

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE OF 2021 AMENDMENT

Amendment by section 1701(d)(10) of Pub. L. 117–81 to take effect immediately after the amendments made by title XVIII of Pub. L. 116–283 have taken effect, see section 1701(a)(3) of Pub. L. 117–81, set out in a note preceding section 3001 of this title and note below.

Amendment by section 1701(u)(6)(B) of Pub. L. 117–81 applicable as if included in the enactment of title XVIII of Pub. L. 116–283 as enacted, see section 1701(a)(2) of Pub. L. 117–81, set out in a note preceding section 3001 of this title and note below.

Amendment by Pub. L. 116-283 effective Jan. 1, 2022, with additional provisions for delayed implementation and applicability of existing law, see section 1801(d) of Pub. L. 116-283, set out as a note preceding section 3001 of this title.

TERMINATION OF REPORTING REQUIREMENTS

For termination, effective Dec. 31, 2021, of provisions in subsec. (g) of this section requiring submittal of annual report to Congress, see section 1061 of Pub. L. 114-328, set out as a note under section 111 of this title.

ENHANCEMENTS TO TRANSPARENCY IN TEST AND EVALUATION PROCESSES AND DATA

Pub. L. 115-91, div. A, title VIII, § 839, Dec. 12, 2017, 131 Stat. 1475, provided that:

“(a) ADDITIONAL TEST AND EVALUATION DUTIES OF MILITARY SECRETARIES AND DEFENSE AGENCY HEADS.—

“(1) REPORT ON COMPARISON OF OPERATIONAL TEST AND EVALUATION RESULTS TO LEGACY ITEMS OR COMPONENTS.—Concurrent with the submission of a report required under section 2399(b)(2) of title 10, United States Code [now 10 U.S.C. 4171(b)(2)], the Secretary of a military department or the head of a Defense Agency may provide to the congressional defense committees [Committees on Armed Services and Appropriations of the Senate and the House of Representatives] and the Secretary of Defense a report describing the performance of the items or components evaluated as part of the operational test and evaluation for each major defense acquisition program conducted under such section by the Director of Operational Test and Evaluation in relation to comparable legacy items or components, if such items or components exist and relevant data are available without requiring additional testing.

“(2) ADDITIONAL REPORT ON OPERATIONAL TEST AND EVALUATION ACTIVITIES.—Within 45 days after the submission of an annual report required by section 139(h) of title 10, United States Code, the Secretaries of the military departments may each submit to the congressional defense committees a report addressing any concerns related to information included in the annual report, or providing updated or additional information, as appropriate.

“(b) REQUIREMENTS FOR COLLECTION OF COST DATA ON TEST AND EVALUATION.—

“(1) IN GENERAL.—Not later than one year after the date of the enactment of this Act [Dec. 12, 2017] and subject to paragraph (2), the Director of Operational Test and Evaluation, the senior official of the Department of Defense with responsibility for developmental testing, and the Director of the Test Resource Management Center shall jointly develop policies, procedures, guidance, and a method to collect data that ensures that consistent and high quality data are collected on the full range of estimated and actual developmental, live fire, and operational testing costs for major defense acquisition programs.

“(2) CONCURRENCE AND COORDINATION REQUIRED.—Before implementing the policies, procedures, guidance, and method developed under paragraph (1), the Director of Operational Test and Evaluation, the senior official of the Department of Defense with responsibility for developmental testing, and the Director of the Test Resource Management Center shall—

“(A) obtain the concurrence of the Director for Cost Assessment and Program Evaluation; and

“(B) coordinate with the Secretaries of the military departments.

“(3) DATA REQUIREMENTS.—

“(A) ELECTRONIC DATABASE.—Data on estimated and actual developmental, live fire, and operational testing costs shall be maintained in an electronic database maintained by the Director for Cost Assessment and Program Evaluation or another appropriate official of the Department of Defense, and shall be made available for analysis by testing, acquisition, and other appropriate officials of the De-

partment of Defense, as determined by the Director of Operational Test and Evaluation, the senior official of the Department of Defense with responsibility for developmental testing, or the Director of the Test Resource Management Center.

“(B) DIAGGREGATION [sic] BY COSTS.—To the maximum extent practicable, data collected under this subsection shall be set forth separately by costs for developmental testing, operational testing, and training.

“(c) MAJOR DEFENSE ACQUISITION PROGRAM DEFINED.—In this section, the term ‘major defense acquisition program’ has the meaning provided in section 2430 of title 10, United States Code [now 10 U.S.C. 4201].”

§ 4172. Major systems and munitions programs: survivability testing and lethality testing required before full-scale production

(a) REQUIREMENTS.—(1) The Secretary of Defense shall provide that—

(A) a covered system may not proceed beyond low-rate initial production until realistic survivability testing of the system is completed in accordance with this section and the report required by subsection (d) with respect to that testing is submitted in accordance with that subsection; and

(B) a major munition program or a missile program may not proceed beyond low-rate initial production until realistic lethality testing of the program is completed in accordance with this section and the report required by subsection (d) with respect to that testing is submitted in accordance with that subsection.

(2) The Secretary of Defense shall provide that a covered product improvement program may not proceed beyond low-rate initial production until—

(A) in the case of a product improvement to a covered system, realistic survivability testing is completed in accordance with this section; and

(B) in the case of a product improvement to a major munitions program or a missile program, realistic lethality testing is completed in accordance with this section.

(b) TEST GUIDELINES.—(1) Survivability and lethality tests required under subsection (a) shall be carried out sufficiently early in the development phase of the system or program (including a covered product improvement program) to allow any design deficiency demonstrated by the testing to be corrected in the design of the system, munition, or missile (or in the product modification or upgrade to the system, munition, or missile) before proceeding beyond low-rate initial production.

(2) The costs of all tests required under that subsection shall be paid from funds available for the system being tested.

(c) WAIVER AUTHORITY.—(1) The Secretary of Defense may waive the application of the survivability and lethality tests of this section to a covered system, munitions program, missile program, or covered product improvement program if the Secretary determines that live-fire testing of such system or program would be unreasonably expensive and impractical and submits a certification of that determination to Congress—