

HISTORICAL AND REVISION NOTES—CONTINUED

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
44911(c) .....	49 App.:1358d (note).	Nov. 16, 1990, Pub. L. 101-604, §111(b), 104 Stat. 3080.
44911(d) .....	49 App.:1358d (note).	Nov. 16, 1990, Pub. L. 101-604, §111(c), 104 Stat. 3080.
44911(e) .....	49 App.:1358d (note).	Nov. 16, 1990, Pub. L. 101-604, §111(d), 104 Stat. 3080.

In this section, the word “units” is substituted for “agencies” for consistency in the revised title and with other titles of the United States Code.

In subsections (b) and (e), the words “Not later than 180 days after the date of enactment of this Act” in section 111(a) and (d) of the Aviation Security Improvement Act of 1990 (Public Law 101-640, 104 Stat. 3080) are omitted as obsolete.

In subsection (b), the words “the heads of other units in the intelligence community, the Secretary of Transportation, and the Administrator of the Federal Aviation Administration” are substituted for “other members of the intelligence community, the Department of Transportation, and the Federal Aviation Administration” for clarity and consistency in the revised title and with other titles of the Code.

In subsections (c) and (e), the words “heads of units in the intelligence community” are substituted for “intelligence community” for clarity and consistency in the revised title and with other titles of the Code.

In subsection (e), the words “memorandums of understanding” are omitted as being included in “written working agreements”.

AMENDMENTS

2001—Subsec. (b). Pub. L. 107-71, §102(b), struck out “international” before “terrorism”.

Pub. L. 107-71, §101(f)(7), (9), substituted “Under Secretary of Transportation for Security” for “Administrator of the Federal Aviation Administration”.

Subsec. (c). Pub. L. 107-71, §102(c), substituted “place” for “consider placing”.

Subsec. (e). Pub. L. 107-71, §101(f)(7), substituted “Under Secretary” for “Administrator” in two places.

CHANGE OF NAME

Reference to the Director of Central Intelligence or the Director of the Central Intelligence Agency in the Director’s capacity as the head of the intelligence community deemed to be a reference to the Director of National Intelligence. Reference to the Director of Central Intelligence or the Director of the Central Intelligence Agency in the Director’s capacity as the head of the Central Intelligence Agency deemed to be a reference to the Director of the Central Intelligence Agency. See section 1081(a), (b) of Pub. L. 108-458, set out as a note under section 401 of Title 50, War and National Defense.

TRANSFER OF FUNCTIONS

For transfer of functions, personnel, assets, and liabilities of the Transportation Security Administration of the Department of Transportation, including the functions of the Secretary of Transportation, and of the Under Secretary of Transportation for Security, relating thereto, to the Secretary of Homeland Security, and for treatment of related references, see sections 203(2), 551(d), 552(d), and 557 of Title 6, Domestic Security, and the Department of Homeland Security Reorganization Plan of November 25, 2002, as modified, set out as a note under section 542 of Title 6.

§ 44912. Research and development

(a) PROGRAM REQUIREMENT.—(1) The Under Secretary of Transportation for Security shall establish and carry out a program to accelerate and expand the research, development, and implementation of technologies and procedures to

counteract terrorist acts against civil aviation. The program shall provide for developing and having in place, not later than November 16, 1993, new equipment and procedures necessary to meet the technological challenges presented by terrorism. The program shall include research on, and development of, technological improvements and ways to enhance human performance.

(2) In designing and carrying out the program established under this subsection, the Under Secretary shall—

(A) consult and coordinate activities with other departments, agencies, and instrumentalities of the United States Government doing similar research;

(B) identify departments, agencies, and instrumentalities that would benefit from that research; and

(C) seek cost-sharing agreements with those departments, agencies, and instrumentalities.

(3) In carrying out the program established under this subsection, the Under Secretary shall review and consider the annual reports the Secretary of Transportation submits to Congress on transportation security and intelligence.

(4)(A) In carrying out the program established under this subsection, the Administrator shall designate an individual to be responsible for engineering, research, and development with respect to security technology under the program.

(B) The individual designated under subparagraph (A) shall use appropriate systems engineering and risk management models in making decisions regarding the allocation of funds for engineering, research, and development with respect to security technology under the program.

(C) The individual designated under subparagraph (A) shall, on an annual basis, submit to the Research, Engineering and Development Advisory Committee a report on activities under this paragraph during the preceding year. Each report shall include, for the year covered by such report, information on—

(i) progress made in engineering, research, and development with respect to security technology;

(ii) the allocation of funds for engineering, research, and development with respect to security technology; and

(iii) engineering, research, and development with respect to any technologies drawn from other agencies, including the rationale for engineering, research, and development with respect to such technologies.

(5) The Under Secretary may—

(A) make grants to institutions of higher learning and other appropriate research facilities with demonstrated ability to carry out research described in paragraph (1) of this subsection, and fix the amounts and terms of the grants; and

(B) make cooperative agreements with governmental authorities the Under Secretary decides are appropriate.

(b) REVIEW OF THREATS.—(1) The Under Secretary shall periodically review threats to civil aviation, with particular focus on—

(A) a comprehensive systems analysis (employing vulnerability analysis, threat attribute definition, and technology roadmaps) of the civil aviation system, including—

(i) the destruction, commandeering, or diversion of civil aircraft or the use of civil aircraft as a weapon; and

(ii) the disruption of civil aviation service, including by cyber attack;

(B) explosive material that presents the most significant threat to civil aircraft;

(C) the minimum amounts, configurations, and types of explosive material that can cause, or would reasonably be expected to cause, catastrophic damage to aircraft in air transportation;

(D) the amounts, configurations, and types of explosive material that can be detected reliably by existing, or reasonably anticipated, near-term explosive detection technologies;

(E) the potential release of chemical, biological, or similar weapons or devices either within an aircraft or within an airport;

(F) the feasibility of using various ways to minimize damage caused by explosive material that cannot be detected reliably by existing, or reasonably anticipated, near-term explosive detection technologies;

(G) the ability to screen passengers, carry-on baggage, checked baggage, and cargo; and

(H) the technologies that might be used in the future to attempt to destroy or otherwise threaten commercial aircraft and the way in which those technologies can be countered effectively.

(2) The Under Secretary shall use the results of the review under this subsection to develop the focus and priorities of the program established under subsection (a) of this section.

(c) SCIENTIFIC ADVISORY PANEL.—(1) The Administrator shall establish a scientific advisory panel, as a subcommittee of the Research, Engineering, and Development Advisory Committee, to review, comment on, advise the progress of, and recommend modifications in, the program established under subsection (a) of this section, including the need for long-range research programs to detect and prevent catastrophic damage to commercial aircraft, commercial aviation facilities, commercial aviation personnel and passengers, and other components of the commercial aviation system by the next generation of terrorist weapons.

(2)(A) The advisory panel shall consist of individuals who have scientific and technical expertise in—

(i) the development and testing of effective explosive detection systems;

(ii) aircraft structure and experimentation to decide on the type and minimum weights of explosives that an effective explosive detection technology must be capable of detecting;

(iii) technologies involved in minimizing airframe damage to aircraft from explosives; and

(iv) other scientific and technical areas the Administrator considers appropriate.

(B) In appointing individuals to the advisory panel, the Administrator should consider individuals from academia and the national laboratories, as appropriate.

(3) The Administrator shall organize the advisory panel into teams capable of undertaking the review of policies and technologies upon request.

(4) Not later than 90 days after the date of the enactment of the Aviation and Transportation Security Act, and every two years thereafter, the Administrator shall review the composition of the advisory panel in order to ensure that the expertise of the individuals on the panel is suited to the current and anticipated duties of the panel.

(Pub. L. 103-272, §1(e), July 5, 1994, 108 Stat. 1212; Pub. L. 107-71, title I, §§101(f)(7), (9), 112, Nov. 19, 2001, 115 Stat. 603, 620.)

#### HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
44912(a) .....	49 App.:1357(d)(3)(A), (D), (4)-(7).	Aug. 23, 1958, Pub. L. 85-726, 72 Stat. 731, §316(d)(3)-(8); added Nov. 16, 1990, Pub. L. 101-604, §107, 104 Stat. 3076.
44912(b) .....	49 App.:1357(d)(3)(B), (C).	
44912(c) .....	49 App.:1357(d)(8).	

In subsection (a)(1), the words “It shall be the purpose of the program established under paragraph (3)” and “established under paragraph (3)” are omitted as unnecessary.

In subsection (a)(2)(A), the word “activities” is added for clarity. The words “departments, agencies, and instrumentalities of the United States Government” are substituted for “Federal agencies” for consistency in the revised title and with other titles of the United States Code.

In subsection (a)(4), the words “The Administrator may . . . make grants” are substituted for “Amounts appropriated for each fiscal year under paragraph (9) shall be made available by the Administrator, by way of grants” to eliminate unnecessary words. In clause (A), the words “institutions of higher learning” are substituted for “colleges, universities”, and the word “institutions” is substituted for “institutions and facilities”, for clarity and consistency in the revised title and with other titles of the Code. In clause (B), the words “governmental authorities” are substituted for “governmental entities” for consistency in the revised title and with other titles of the Code.

In subsection (b)(1), before clause (A), the words “Not later than 180 days after November 16, 1990” are omitted as obsolete. Clause (B) is substituted for 49 App.:1357(d)(3)(B)(ii) and (iii) for clarity and to eliminate unnecessary words.

In subsection (b)(1)(E), the word “mail” is omitted as being included in “cargo”.

#### REFERENCES IN TEXT

The date of the enactment of the Aviation and Transportation Security Act, referred to in subsec. (c)(4), is the date of enactment of Pub. L. 107-71, which was approved Nov. 19, 2001.

#### AMENDMENTS

2001—Subsec. (a)(1). Pub. L. 107-71, §101(f)(7), (9), substituted “Under Secretary of Transportation for Security” for “Administrator of the Federal Aviation Administration”.

Subsec. (a)(2), (3). Pub. L. 107-71, §101(f)(7), substituted “Under Secretary” for “Administrator”.

Subsec. (a)(4). Pub. L. 107-71, §112(b)(1)(B), added par. (4). Former par. (4) redesignated (5).

Pub. L. 107-71, §101(f)(7), substituted “Under Secretary” for “Administrator” in two places.

Subsec. (a)(5). Pub. L. 107-71, §112(b)(1)(A), redesignated par. (4) as (5).

Subsec. (b)(1). Pub. L. 107-71, §§101(f)(7), 112(a)(1), in introductory provisions, substituted “Under Secretary” for “Administrator” and “periodically review” for “complete an intensive review of”.

Subsec. (b)(1)(A). Pub. L. 107-71, § 112(b)(2)(B), added subpar. (A). Former subpar. (A) redesignated (B).

Subsec. (b)(1)(B). Pub. L. 107-71, § 112(b)(2)(A), redesignated subpar. (A) as (B). Former subpar. (B) redesignated (C).

Pub. L. 107-71, § 112(a)(2), substituted “aircraft in air transportation;” for “commercial aircraft in service and expected to be in service in the 10-year period beginning on November 16, 1990;”.

Subsec. (b)(1)(C). Pub. L. 107-71, § 112(b)(2)(A), redesignated subpar. (B) as (C). Former subpar. (C) redesignated (D).

Subsec. (b)(1)(D). Pub. L. 107-71, § 112(b)(2)(A), redesignated subpar. (C) as (D). Former subpar. (D) redesignated (E).

Pub. L. 107-71, § 112(a)(3), added subpar. (D). Former subpar. (D) redesignated (E).

Subsec. (b)(1)(E) to (G). Pub. L. 107-71, § 112(b)(2)(A), redesignated subpars. (D) to (F) as (E) to (G), respectively. Former subpar. (G) redesignated (H).

Pub. L. 107-71, § 112(a)(3), redesignated subpars. (D) to (F) as (E) to (G), respectively.

Subsec. (b)(1)(H). Pub. L. 107-71, § 112(b)(2)(A), redesignated subpar. (G) as (H).

Subsec. (b)(2). Pub. L. 107-71, § 101(f)(7), substituted “Under Secretary” for “Administrator”.

Subsec. (c). Pub. L. 107-71, § 112(b)(3), amended heading and text of subsec. (c) generally. Prior to amendment, text read as follows: “The Administrator shall establish a scientific advisory panel, as a subcommittee of the Research, Engineering and Development Advisory Committee, to review, comment on, advise on the progress of, and recommend modifications in, the program established under subsection (a) of this section, including the need for long-range research programs to detect and prevent catastrophic damage to commercial aircraft by the next generation of terrorist weapons. The panel shall consist of individuals with scientific and technical expertise in—

“(1) the development and testing of effective explosive detection systems;

“(2) aircraft structure and experimentation to decide on the type and minimum weights of explosives that an effective technology must be capable of detecting;

“(3) technologies involved in minimizing airframe damage to aircraft from explosives; and

“(4) other scientific and technical areas the Administrator considers appropriate.”

#### TRANSFER OF FUNCTIONS

For transfer of functions, personnel, assets, and liabilities of the Transportation Security Administration of the Department of Transportation, including the functions of the Secretary of Transportation, and of the Under Secretary of Transportation for Security, relating thereto, to the Secretary of Homeland Security, and for treatment of related references, see sections 203(2), 551(d), 552(d), and 557 of Title 6, Domestic Security, and the Department of Homeland Security Reorganization Plan of November 25, 2002, as modified, set out as a note under section 542 of Title 6.

#### RESEARCH AND DEVELOPMENT OF AVIATION SECURITY TECHNOLOGY

Pub. L. 107-71, title I, § 137, Nov. 19, 2001, 115 Stat. 637, as amended by Pub. L. 110-53, title XVI, § 1608, Aug. 3, 2007, 121 Stat. 484, provided that:

“(a) FUNDING.—To augment the programs authorized in section 44912(a)(1) of title 49, United States Code, there is authorized to be appropriated an additional \$50,000,000 for each of fiscal years 2006 through 2011 and such sums as are necessary for each fiscal year thereafter to the Transportation Security Administration, for research, development, testing, and evaluation of the following technologies which may enhance transportation security in the future. Grants to industry, academia, and Government entities to carry out the provisions of this section shall be available for fiscal years 2006 through 2011 for—

“(1) the acceleration of research, development, testing, and evaluation of explosives detection technology for checked baggage, specifically, technology that is—

“(A) more cost-effective for deployment for explosives detection in checked baggage at small- to medium-sized airports, and is currently under development as part of the Argus research program at the Transportation Security Administration;

“(B) faster, to facilitate screening of all checked baggage at larger airports; or

“(C) more accurate, to reduce the number of false positives requiring additional security measures;

“(2) acceleration of research, development, testing, and evaluation of new screening technology for carry-on items to provide more effective means of detecting and identifying weapons, explosives, and components of weapons of mass destruction, including advanced x-ray technology;

“(3) acceleration of research, development, testing, and evaluation of threat screening technology for other categories of items being loaded onto aircraft, including cargo, catering, and duty-free items;

“(4) acceleration of research, development, testing, and evaluation of threats carried on persons boarding aircraft or entering secure areas, including detection of weapons, explosives, and components of weapons of mass destruction;

“(5) acceleration of research, development, testing and evaluation of integrated systems of airport security enhancement, including quantitative methods of assessing security factors at airports selected for testing such systems;

“(6) expansion of the existing program of research, development, testing, and evaluation of improved methods of education, training, and testing of key airport security personnel; and

“(7) acceleration of research, development, testing, and evaluation of aircraft hardening materials, and techniques to reduce the vulnerability of aircraft to terrorist attack.

“(b) GRANTS.—Grants awarded under this subtitle [probably should be “this section”] shall identify potential outcomes of the research, and propose a method for quantitatively assessing effective increases in security upon completion of the research program. At the conclusion of each grant, the grant recipient shall submit a final report to the Transportation Security Administration that shall include sufficient information to permit the Under Secretary of Transportation for Security to prepare a cost-benefit analysis of potential improvements to airport security based upon deployment of the proposed technology. The Under Secretary shall begin awarding grants under this subtitle within 90 days of the date of enactment of this Act [Nov. 19, 2001].

“(c) BUDGET SUBMISSION.—A budget submission and detailed strategy for deploying the identified security upgrades recommended upon completion of the grants awarded under subsection (b), shall be submitted to Congress as part of the Department of Transportation’s annual budget submission.

“(d) DEFENSE RESEARCH.—There is authorized to be appropriated \$20,000,000 to the Transportation Security Administration to issue research grants in conjunction with the Defense Advanced Research Projects Agency. Grants may be awarded under this section for—

“(1) research and development of longer-term improvements to airport security, including advanced weapons detection;

“(2) secure networking and sharing of threat information between Federal agencies, law enforcement entities, and other appropriate parties;

“(3) advances in biometrics for identification and threat assessment; or

“(4) other technologies for preventing acts of terrorism in aviation.”

[For definitions of terms used in section 137 of Pub. L. 107-71, set out above, see section 133 of Pub. L. 107-71, set out as a note under section 40102 of this title.]

## TERMINATION OF ADVISORY PANELS

Advisory panels established after Jan. 5, 1973, to terminate not later than expiration of 2-year period beginning on the date of their establishment, unless, in the case of a panel established by the President or an officer of the Federal Government, such panel is renewed by appropriate action prior to expiration of such 2-year period, or in the case of a panel established by Congress, its duration is otherwise provided for by law. See sections 3(2) and 14 of Pub. L. 92-463, Oct. 6, 1972, 86 Stat. 770, 776, set out in the Appendix to Title 5, Government Organization and Employees.

**§ 44913. Explosive detection**

(a) DEPLOYMENT AND PURCHASE OF EQUIPMENT.—(1) A deployment or purchase of explosive detection equipment under section 108.7(b)(8) or 108.20 of title 14, Code of Federal Regulations, or similar regulation is required only if the Under Secretary of Transportation for Security certifies that the equipment alone, or as part of an integrated system, can detect under realistic air carrier operating conditions the amounts, configurations, and types of explosive material that would likely be used to cause catastrophic damage to commercial aircraft. The Under Secretary shall base the certification on the results of tests conducted under protocols developed in consultation with expert scientists outside of the Transportation Security Administration. Those tests shall be completed not later than April 16, 1992.

(2) Before completion of the tests described in paragraph (1) of this subsection, but not later than April 16, 1992, the Under Secretary may require deployment of explosive detection equipment described in paragraph (1) if the Under Secretary decides that deployment will enhance aviation security significantly. In making that decision, the Under Secretary shall consider factors such as the ability of the equipment alone, or as part of an integrated system, to detect under realistic air carrier operating conditions the amounts, configurations, and types of explosive material that would likely be used to cause catastrophic damage to commercial aircraft. The Under Secretary shall notify the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives of a deployment decision made under this paragraph.

(3) Until such time as the Under Secretary determines that equipment certified under paragraph (1) is commercially available and has successfully completed operational testing as provided in paragraph (1), the Under Secretary shall facilitate the deployment of such approved commercially available explosive detection devices as the Under Secretary determines will enhance aviation security significantly. The Under Secretary shall require that equipment deployed under this paragraph be replaced by equipment certified under paragraph (1) when equipment certified under paragraph (1) becomes commercially available. The Under Secretary is authorized, based on operational considerations at individual airports, to waive the required installation of commercially available equipment under paragraph (1) in the interests of aviation security. The Under Secretary may permit the requirements of this paragraph to be met at air-

ports by the deployment of dogs or other appropriate animals to supplement equipment for screening passengers, baggage, mail, or cargo for explosives or weapons.

(4) This subsection does not prohibit the Under Secretary from purchasing or deploying explosive detection equipment described in paragraph (1) of this subsection.

(b) GRANTS.—The Secretary of Transportation may provide grants to continue the Explosive Detection K-9 Team Training Program to detect explosives at airports and on aircraft.

(Pub. L. 103-272, §1(e), July 5, 1994, 108 Stat. 1214; Pub. L. 104-264, title III, §305(a), Oct. 9, 1996, 110 Stat. 3252; Pub. L. 104-287, §5(9), Oct. 11, 1996, 110 Stat. 3389; Pub. L. 107-71, title I, §101(f)(2), (7), (9), Nov. 19, 2001, 115 Stat. 603.)

## HISTORICAL AND REVISION NOTES

Revised Section	Source (U.S. Code)	Source (Statutes at Large)
44913(a)(1) ..	49 App.:1358c(a), (b).	Aug. 23, 1958, Pub. L. 85-726, 72 Stat. 731, §320; added Nov. 16, 1990, Pub. L. 101-604, §108, 104 Stat. 3077.
44913(a)(2) ..	49 App.:1358c(c).	
44913(a)(3) ..	49 App.:1358c(d).	
44913(b) .....	49 App.:2225.	Sept. 3, 1982, Pub. L. 97-248, §529, 96 Stat. 699; Dec. 30, 1987, Pub. L. 100-223, §114, 101 Stat. 1505.

In subsection (a), the words “after November 16, 1990” are omitted as executed. The words “The Administrator shall base the certification on” are substituted for “based on” because of the restatement.

In subsection (b), the words “but not be limited to” are omitted as unnecessary.

## AMENDMENTS

2001—Subsec. (a)(1). Pub. L. 107-71, §101(f)(9), substituted “of Transportation for Security” for “of the Federal Aviation Administration”.

Pub. L. 107-71, §101(f)(7), substituted “Under Secretary” for “Administrator” in two places.

Pub. L. 107-71, §101(f)(2), substituted “of the Transportation Security Administration” for “of the Administration” in second sentence.

Subsec. (a)(2) to (4). Pub. L. 107-71, §101(f)(7), substituted “Under Secretary” for “Administrator” wherever appearing.

1996—Subsec. (a)(2). Pub. L. 104-287 substituted “Transportation and Infrastructure” for “Public Works and Transportation”.

Subsec. (a)(3), (4). Pub. L. 104-264 added par. (3) and redesignated former par. (3) as (4).

## EFFECTIVE DATE OF 1996 AMENDMENT

Except as otherwise specifically provided, amendment by Pub. L. 104-264 applicable only to fiscal years beginning after Sept. 30, 1996, and not to be construed as affecting funds made available for a fiscal year ending before Oct. 1, 1996, see section 3 of Pub. L. 104-264, set out as a note under section 106 of this title.

## TRANSFER OF FUNCTIONS

For transfer of functions, personnel, assets, and liabilities of the Transportation Security Administration of the Department of Transportation, including the functions of the Secretary of Transportation, and of the Under Secretary of Transportation for Security, relating thereto, to the Secretary of Homeland Security, and for treatment of related references, see sections 203(2), 551(d), 552(d), and 557 of Title 6, Domestic Security, and the Department of Homeland Security Reorganization Plan of November 25, 2002, as modified, set out as a note under section 542 of Title 6.