

[§ 44514. Repealed. Pub. L. 118–63, title III, § 337, May 16, 2024, 138 Stat. 1093]

Section, Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1183, related to closing, reopening, and reducing hours of certain flight service stations and establishment of manned auxiliary flight service stations.

[§ 44515. Repealed. Pub. L. 118–63, title IV, § 401(a), May 16, 2024, 138 Stat. 1148]

Section, Pub. L. 103–272, §1(e), July 5, 1994, 108 Stat. 1184, related to grants for advanced training facilities for maintenance technicians for air carrier aircraft.

§ 44516. Human factors program

(a) HUMAN FACTORS TRAINING.—

(1) AIR TRAFFIC CONTROLLERS.—The Administrator of the Federal Aviation Administration shall—

- (A) address the problems and concerns raised by the National Research Council in its report “The Future of Air Traffic Control” on air traffic control automation; and
- (B) respond to the recommendations made by the National Research Council.

(2) PILOTS AND FLIGHT CREWS.—The Administrator shall work with representatives of the aviation industry and appropriate aviation programs associated with universities to develop specific training curricula to address critical safety problems, including problems of pilots—

- (A) in recovering from loss of control of an aircraft, including handling unusual attitudes and mechanical malfunctions;
- (B) in deviating from standard operating procedures, including inappropriate responses to emergencies and hazardous weather;
- (C) in awareness of altitude and location relative to terrain to prevent controlled flight into terrain; and
- (D) in landing and approaches, including nonprecision approaches and go-around procedures.

(b) TEST PROGRAM.—The Administrator shall establish a test program in cooperation with air carriers to use model Jeppesen approach plates or other similar tools to improve precision-like landing approaches for aircraft.

(c) REPORT.—Not later than 1 year after the date of the enactment of this section, the Administrator shall transmit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a report on the status of the Administration’s efforts to encourage the adoption and implementation of advanced qualification programs for air carriers under this section.

(d) ADVANCED QUALIFICATION PROGRAM DEFINED.—In this section, the term “advanced qualification program” means an alternative method for qualifying, training, certifying, and ensuring the competency of flight crews and other commercial aviation operations personnel subject to the training and evaluation requirements of parts 121 and 135 of title 14, Code of Federal Regulations.

(Added Pub. L. 106–181, title VII, §713(a), Apr. 5, 2000, 114 Stat. 160.)

Editorial Notes

REFERENCES IN TEXT

The date of the enactment of this section, referred to in subsec. (c), is the date of enactment of Pub. L. 106–181, which was approved Apr. 5, 2000.

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE

Section applicable only to fiscal years beginning after Sept. 30, 1999, see section 3 of Pub. L. 106–181, set out as an Effective Date of 2000 Amendments note under section 106 of this title.

HUMAN FACTORS PROFESSIONALS

Pub. L. 118–63, title IV, §410, May 16, 2024, 138 Stat. 1156, provided that: “The Administrator [of the Federal Aviation Administration] shall take such actions as may be necessary to establish a new work code for human factors professionals who—

- “(1) perform work involving the design and testing of technologies, processes, and systems which require effective and safe human performance;
- “(2) generate and apply theories, principles, practical concepts, systems, and processes related to the design and testing of technologies, systems, and training programs to support and evaluate human performance in work contexts; and
- “(3) meet education or experience requirements as determined by the Administrator.”

HUMAN FACTORS EDUCATION PROGRAM

Pub. L. 116–260, div. V, title I, §124, Dec. 27, 2020, 134 Stat. 2346, provided that:

“(a) HUMAN FACTORS EDUCATION PROGRAM.—

“(1) IN GENERAL.—The Administrator shall develop a human factors education program that addresses the effects of modern flight deck systems, including automated systems, on human performance for transport airplanes and the approaches for better integration of human factors in aircraft design and certification.

“(2) TARGET AUDIENCE.—The human factors education program shall be integrated into the training protocols (as in existence as of the date of enactment of this title [Dec. 27, 2020]) for, and be routinely administered to, the following:

- “(A) Appropriate employees within the Flight Standards Service.
- “(B) Appropriate employees within the Aircraft Certification Service.
- “(C) Other employees or authorized representatives determined to be necessary by the Administrator.

“(b) TRANSPORT AIRPLANE MANUFACTURER INFORMATION SHARING.—The Administrator shall—

- “(1) require each transport airplane manufacturer to provide the Administrator with the information or findings necessary for flight crew to be trained on flight deck systems;
- “(2) ensure the information or findings under paragraph (1) adequately includes consideration of human factors; and
- “(3) ensure that each transport airplane manufacturer identifies any technical basis, justification or rationale for the information and findings under paragraph (1).”

[For definitions of “Administrator” and “transport airplanes” as used in section 124 of div. V of Pub. L. 116–260, set out above, see section 137 of div. V of Pub. L. 116–260, set out as a note under section 40101 of this title.]

§ 44517. Program to permit cost sharing of air traffic modernization projects

(a) IN GENERAL.—Subject to the requirements of this section, the Secretary may carry out a

program under which the Secretary may make grants to project sponsors for not more than 10 eligible projects per fiscal year for the purpose of improving aviation safety and enhancing mobility of the Nation's air transportation system by encouraging non-Federal investment in critical air traffic control equipment and software.

(b) **FEDERAL SHARE.**—The Federal share of the cost of an eligible project carried out under the program shall not exceed 33 percent. The non-Federal share of the cost of an eligible project shall be provided from non-Federal sources, including revenues collected pursuant to section 40117.

(c) **LIMITATION ON GRANT AMOUNTS.**—No eligible project may receive more than \$5,000,000 in Federal funds under the program.

(d) **FUNDING.**—The Secretary shall use amounts appropriated under section 48101(a) to carry out the program.

(e) **DEFINITIONS.**—In this section, the following definitions apply:

(1) **ELIGIBLE PROJECT.**—The term “eligible project” means a project to purchase equipment or software relating to the Nation's air traffic control system that is certified or approved by the Administrator of the Federal Aviation Administration and that promotes safety, efficiency, or mobility. Such projects may include—

(A) airport-specific air traffic facilities and equipment, including local area augmentation systems, instrument landing systems, weather and wind shear detection equipment, and lighting improvements;

(B) automation tools to effect improvements in airport capacity, including passive final approach spacing tools and traffic management advisory equipment; and

(C) equipment and software that enhance airspace control procedures or assist in en route surveillance, including oceanic and offshore flight tracking.

(2) **PROJECT SPONSOR.**—The term “project sponsor” means any major user of the national airspace system, as determined by the Secretary, including a public-use airport or a joint venture between a public-use airport and one or more air carriers.

(f) **TRANSFERS OF EQUIPMENT.**—Notwithstanding any other provision of law, and upon agreement by the Administrator, a project sponsor may transfer, without consideration, to the Federal Aviation Administration, facilities, equipment, or automation tools, the purchase of which was assisted by a grant made under this section, if such facilities, equipment or tools meet Federal Aviation Administration operation and maintenance criteria.

(g) **GUIDELINES.**—The Administrator shall issue advisory guidelines on the implementation of the program. The guidelines shall not be subject to administrative rulemaking requirements under subchapter II of chapter 5 of title 5.

(Added Pub. L. 108-176, title I, §183(a), Dec. 12, 2003, 117 Stat. 2516.)

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE

Section applicable only to fiscal years beginning after Sept. 30, 2003, except as otherwise specifically pro-

vided, see section 3 of Pub. L. 108-176, set out as an Effective Date of 2003 Amendment note under section 106 of this title.

§ 44518. Advanced Materials Center of Excellence

(a) **IN GENERAL.**—

(1) **CONTINUED OPERATIONS.**—The Administrator shall—

(A) continue operation of the Advanced Materials Center of Excellence (referred to in this section as the “Center”); and

(B) make a determination on whether to award a grant to the Center not later than 90 days after the date on which the grants officer of the Federal Aviation Administration recommends a proposal for award of such grant to the Administrator.

(2) **PURPOSES.**—The Center shall—

(A) focus on applied research and training on the safe use of composites and advanced materials, and related manufacturing practices, in airframe structures; and

(B) conduct research and development into aircraft structure crash worthiness and passenger safety, as well as address safe and accessible air travel of individuals with a disability (as defined in section 382.3 of title 14, Code of Federal Regulations (or any successor regulation)), including materials required to facilitate safe wheelchair restraint systems on commercial aircraft.

(b) **RESPONSIBILITIES.**—The Center shall—

(1) promote and facilitate collaboration among member universities, academia, the Administration, the commercial aircraft industry, including manufacturers, commercial air carriers, and suppliers, and other appropriate stakeholders for the purposes under subsection (a) and the activities described in paragraphs (2) through (4);

(2) carry out research and development activities to advance technology, improve engineering practices, and facilitate continuing education in relevant areas of study, which shall include—

(A) all structural materials, including—

(i) metallic and non-metallic based additive materials, ceramic materials, carbon fiber polymers, and thermoplastic composites;

(ii) the long-term material and structural behavior of such materials; and

(iii) evaluating the resiliency and long-term durability of advanced materials in high temperature conditions and in engines for applications in advanced aircraft; and

(B) structural technologies, such as additive manufacturing, to be used in applications within the commercial aircraft industry, including traditional fixed-wing aircraft, rotorcraft, and emerging aircraft types such as advanced air mobility aircraft; and

(3) conduct research activities for the purpose of improving the safety and certification of aviation structures, materials, and additively manufactured aviation products and components; and