

One Hundred Eleventh Congress
of the
United States of America

AT THE SECOND SESSION

*Begun and held at the City of Washington on Tuesday,
the fifth day of January, two thousand and ten*

An Act

To enact certain laws relating to national and commercial space programs as title 51, United States Code, "National and Commercial Space Programs".

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. TABLE OF CONTENTS.

The table of contents for this Act is as follows:

- Sec. 1. Table of contents.
- Sec. 2. Purpose; conformity with original intent.
- Sec. 3. Enactment of title 51, United States Code.
- Sec. 4. Conforming amendments to other laws.
- Sec. 5. Transitional and savings provisions.
- Sec. 6. Repeals.

SEC. 2. PURPOSE; CONFORMITY WITH ORIGINAL INTENT.

(a) **PURPOSE.**—The purpose of this Act is to codify certain existing laws related to national and commercial space programs as a positive law title of the United States Code.

(b) **CONFORMITY WITH ORIGINAL INTENT.**—In the codification of laws by this Act, the intent is to conform to the understood policy, intent, and purpose of Congress in the original enactments, with such amendments and corrections as will remove ambiguities, contradictions, and other imperfections, in accordance with section 205(c)(1) of House Resolution No. 988, 93d Congress, as enacted into law by Public Law 93–554 (2 U.S.C. 285b(1)).

SEC. 3. ENACTMENT OF TITLE 51, UNITED STATES CODE.

Title 51, United States Code, "National and Commercial Space Programs", is enacted as follows:

**TITLE 51—NATIONAL AND COMMERCIAL
SPACE PROGRAMS**

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Subtitle I—General

CHAPTER 101—DEFINITIONS

Sec.

10101. Definitions.

§ 10101. Definitions

In this title:

(1) **ADMINISTRATION.**—The term “Administration” means the National Aeronautics and Space Administration.

(2) **ADMINISTRATOR.**—The term “Administrator” means the Administrator of the National Aeronautics and Space Administration.

Subtitle II—General Program and Policy Provisions

CHAPTER 201—NATIONAL AERONAUTICS AND SPACE PROGRAM

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SUBCHAPTER I—SHORT TITLE, DECLARATION OF POLICY, AND DEFINITIONS

§ 20101. Short title

This chapter may be cited as the “National Aeronautics and Space Act”.

§ 20102. Congressional declaration of policy and purpose

(a) DEVOTION OF SPACE ACTIVITIES TO PEACEFUL PURPOSES FOR BENEFIT OF ALL HUMANKIND.—Congress declares that it is the policy of the United States that activities in space should be devoted to peaceful purposes for the benefit of all humankind.

(b) AERONAUTICAL AND SPACE ACTIVITIES FOR WELFARE AND SECURITY OF UNITED STATES.—Congress declares that the general

welfare and security of the United States require that adequate provision be made for aeronautical and space activities. Congress further declares that such activities shall be the responsibility of, and shall be directed by, a civilian agency exercising control over aeronautical and space activities sponsored by the United States, except that activities peculiar to or primarily associated with the development of weapons systems, military operations, or the defense of the United States (including the research and development necessary to make effective provision for the defense of the United States) shall be the responsibility of, and shall be directed by, the Department of Defense; and that determination as to which agency has responsibility for and direction of any such activity shall be made by the President.

(c) COMMERCIAL USE OF SPACE.—Congress declares that the general welfare of the United States requires that the Administration seek and encourage, to the maximum extent possible, the fullest commercial use of space.

(d) OBJECTIVES OF AERONAUTICAL AND SPACE ACTIVITIES.—The aeronautical and space activities of the United States shall be conducted so as to contribute materially to one or more of the following objectives:

(1) The expansion of human knowledge of the Earth and of phenomena in the atmosphere and space.

(2) The improvement of the usefulness, performance, speed, safety, and efficiency of aeronautical and space vehicles.

(3) The development and operation of vehicles capable of carrying instruments, equipment, supplies, and living organisms through space.

(4) The establishment of long-range studies of the potential benefits to be gained from, the opportunities for, and the problems involved in the utilization of aeronautical and space activities for peaceful and scientific purposes.

(5) The preservation of the role of the United States as a leader in aeronautical and space science and technology and in the application thereof to the conduct of peaceful activities within and outside the atmosphere.

(6) The making available to agencies directly concerned with national defense of discoveries that have military value or significance, and the furnishing by such agencies, to the civilian agency established to direct and control nonmilitary aeronautical and space activities, of information as to discoveries which have value or significance to that agency.

(7) Cooperation by the United States with other nations and groups of nations in work done pursuant to this chapter and in the peaceful application of the results thereof.

(8) The most effective utilization of the scientific and engineering resources of the United States, with close cooperation among all interested agencies of the United States in order to avoid unnecessary duplication of effort, facilities, and equipment.

(9) The preservation of the United States preeminent position in aeronautics and space through research and technology development related to associated manufacturing processes.

(e) GROUND PROPULSION SYSTEMS RESEARCH AND DEVELOPMENT.—Congress declares that the general welfare of the United States requires that the unique competence in scientific and engineering systems of the Administration also be directed toward

ground propulsion systems research and development. Such development shall be conducted so as to contribute to the objectives of developing energy and petroleum-conserving ground propulsion systems, and of minimizing the environmental degradation caused by such systems.

(f) **BIOENGINEERING RESEARCH, DEVELOPMENT, AND DEMONSTRATION PROGRAMS.**—Congress declares that the general welfare of the United States requires that the unique competence of the Administration in science and engineering systems be directed to assisting in bioengineering research, development, and demonstration programs designed to alleviate and minimize the effects of disability.

(g) **WARNING AND MITIGATION OF POTENTIAL HAZARDS OF NEAR-EARTH OBJECTS.**—Congress declares that the general welfare and security of the United States require that the unique competence of the Administration be directed to detecting, tracking, cataloguing, and characterizing near-Earth asteroids and comets in order to provide warning and mitigation of the potential hazard of such near-Earth objects to the Earth.

(h) **PURPOSE OF CHAPTER.**—It is the purpose of this chapter to carry out and effectuate the policies declared in subsections (a) to (g).

§ 20103. Definitions

In this chapter:

(1) **AERONAUTICAL AND SPACE ACTIVITIES.**—The term “aeronautical and space activities” means—

(A) research into, and the solution of, problems of flight within and outside the Earth’s atmosphere;

(B) the development, construction, testing, and operation for research purposes of aeronautical and space vehicles;

(C) the operation of a space transportation system including the space shuttle, upper stages, space platforms, and related equipment; and

(D) such other activities as may be required for the exploration of space.

(2) **AERONAUTICAL AND SPACE VEHICLES.**—The term “aeronautical and space vehicles” means aircraft, missiles, satellites, and other space vehicles, manned and unmanned, together with related equipment, devices, components, and parts.

SUBCHAPTER II—COORDINATION OF AERONAUTICAL AND SPACE ACTIVITIES

§ 20111. National Aeronautics and Space Administration

(a) **ESTABLISHMENT AND APPOINTMENT OF ADMINISTRATOR.**—There is established the National Aeronautics and Space Administration. The Administration shall be headed by an Administrator, who shall be appointed from civilian life by the President by and with the advice and consent of the Senate. Under the supervision and direction of the President, the Administrator shall be responsible for the exercise of all powers and the discharge of all duties of the Administration and shall have authority and control over all personnel and activities thereof.

(b) **DEPUTY ADMINISTRATOR.**—There shall be in the Administration a Deputy Administrator, who shall be appointed from civilian life by the President by and with the advice and consent of the

Senate. The Deputy Administrator shall perform such duties and exercise such powers as the Administrator may prescribe. The Deputy Administrator shall act for, and exercise the powers of, the Administrator during the Administrator's absence or disability.

(c) RESTRICTION ON OTHER BUSINESS OR EMPLOYMENT.—The Administrator and the Deputy Administrator shall not engage in any other business, vocation, or employment while serving as such.

§ 20112. Functions of the Administration

(a) PLANNING, DIRECTING, AND CONDUCTING AERONAUTICAL AND SPACE ACTIVITIES.—The Administration, in order to carry out the purpose of this chapter, shall—

- (1) plan, direct, and conduct aeronautical and space activities;
- (2) arrange for participation by the scientific community in planning scientific measurements and observations to be made through use of aeronautical and space vehicles, and conduct or arrange for the conduct of such measurements and observations;
- (3) provide for the widest practicable and appropriate dissemination of information concerning its activities and the results thereof;
- (4) seek and encourage, to the maximum extent possible, the fullest commercial use of space; and
- (5) encourage and provide for Federal Government use of commercially provided space services and hardware, consistent with the requirements of the Federal Government.

(b) RESEARCH AND DEVELOPMENT IN CERTAIN TECHNOLOGIES.—

(1) GROUND PROPULSION TECHNOLOGIES.—The Administration shall, to the extent of appropriated funds, initiate, support, and carry out such research, development, demonstration, and other related activities in ground propulsion technologies as are provided for in sections 4 to 10 of the Electric and Hybrid Vehicle Research, Development, and Demonstration Act of 1976 (15 U.S.C. 2503 to 2509).

(2) SOLAR HEATING AND COOLING TECHNOLOGIES.—The Administration shall initiate, support, and carry out such research, development, demonstrations, and other related activities in solar heating and cooling technologies (to the extent that funds are appropriated therefor) as are provided for in sections 5, 6, and 9 of the Solar Heating and Cooling Demonstration Act of 1974 (42 U.S.C. 5503, 5504, 5507).

§ 20113. Powers of the Administration in performance of functions

(a) RULES AND REGULATIONS.—In the performance of its functions, the Administration is authorized to make, promulgate, issue, rescind, and amend rules and regulations governing the manner of its operations and the exercise of the powers vested in it by law.

(b) OFFICERS AND EMPLOYEES.—In the performance of its functions, the Administration is authorized to appoint and fix the compensation of officers and employees as may be necessary to carry out such functions. The officers and employees shall be appointed in accordance with the civil service laws and their compensation fixed in accordance with chapter 51 and subchapter III of chapter 53 of title 5, except that—

(1) to the extent the Administrator deems such action necessary to the discharge of the Administrator's responsibilities, the Administrator may appoint not more than 425 of the scientific, engineering, and administrative personnel of the Administration without regard to such laws, and may fix the compensation of such personnel not in excess of the rate of basic pay payable for level III of the Executive Schedule; and

(2) to the extent the Administrator deems such action necessary to recruit specially qualified scientific and engineering talent, the Administrator may establish the entrance grade for scientific and engineering personnel without previous service in the Federal Government at a level up to 2 grades higher than the grade provided for such personnel under the General Schedule, and fix their compensation accordingly.

(c) PROPERTY.—In the performance of its functions, the Administration is authorized—

(1) to acquire (by purchase, lease, condemnation, or otherwise), construct, improve, repair, operate, and maintain laboratories, research and testing sites and facilities, aeronautical and space vehicles, quarters and related accommodations for employees and dependents of employees of the Administration, and such other real and personal property (including patents), or any interest therein, as the Administration deems necessary within and outside the continental United States;

(2) to acquire by lease or otherwise, through the Administrator of General Services, buildings or parts of buildings in the District of Columbia for the use of the Administration for a period not to exceed 10 years without regard to section 8141 of title 40;

(3) to lease to others such real and personal property;

(4) to sell and otherwise dispose of real and personal property (including patents and rights thereunder) in accordance with the provisions of chapters 1 to 11 of title 40 and in accordance with title III of the Federal Property and Administrative Services Act of 1949 (41 U.S.C. 251 et seq.); and

(5) to provide by contract or otherwise for cafeterias and other necessary facilities for the welfare of employees of the Administration at its installations and purchase and maintain equipment therefor.

(d) GIFTS.—In the performance of its functions, the Administration is authorized to accept unconditional gifts or donations of services, money, or property, real, personal, or mixed, tangible or intangible.

(e) CONTRACTS, LEASES, AND AGREEMENTS.—In the performance of its functions, the Administration is authorized, without regard to subsections (a) and (b) of section 3324 of title 31, to enter into and perform such contracts, leases, cooperative agreements, or other transactions as may be necessary in the conduct of its work and on such terms as it may deem appropriate, with any agency or instrumentality of the United States, or with any State, territory, or possession, or with any political subdivision thereof, or with any person, firm, association, corporation, or educational institution. To the maximum extent practicable and consistent with the accomplishment of the purpose of this chapter, such contracts, leases, agreements, and other transactions shall be allocated by the Administrator in a manner which will enable small-business

concerns to participate equitably and proportionately in the conduct of the work of the Administration.

(f) COOPERATION WITH FEDERAL AGENCIES AND OTHERS.—In the performance of its functions, the Administration is authorized to use, with their consent, the services, equipment, personnel, and facilities of Federal and other agencies with or without reimbursement, and on a similar basis to cooperate with other public and private agencies and instrumentalities in the use of services, equipment, and facilities. Each department and agency of the Federal Government shall cooperate fully with the Administration in making its services, equipment, personnel, and facilities available to the Administration, and any such department or agency is authorized, notwithstanding any other provision of law, to transfer to or to receive from the Administration, without reimbursement, aeronautical and space vehicles, and supplies and equipment other than administrative supplies or equipment.

(g) ADVISORY COMMITTEES.—In the performance of its functions, the Administration is authorized to appoint such advisory committees as may be appropriate for purposes of consultation and advice to the Administration.

(h) OFFICES AND PROCEDURES.—In the performance of its functions, the Administration is authorized to establish within the Administration such offices and procedures as may be appropriate to provide for the greatest possible coordination of its activities under this chapter with related scientific and other activities being carried on by other public and private agencies and organizations.

(i) TEMPORARY OR INTERMITTENT SERVICES OF EXPERTS OR CONSULTANTS.—In the performance of its functions, the Administration is authorized to obtain services as provided by section 3109 of title 5, but at rates for individuals not to exceed the per diem rate equivalent to the maximum rate payable under section 5376 of title 5.

(j) ALIENS.—In the performance of its functions, the Administration is authorized, when determined by the Administrator to be necessary, and subject to such security investigations as the Administrator may determine to be appropriate, to employ aliens without regard to statutory provisions prohibiting payment of compensation to aliens.

(k) CONCESSIONS FOR VISITORS' FACILITIES.—

(1) IN GENERAL.—In the performance of its functions, the Administration is authorized to provide by concession, without regard to section 1302 of title 40, on such terms as the Administrator may deem to be appropriate and necessary to protect the concessioner against loss of the concessioner's investment in property (but not anticipated profits) resulting from the Administration's discretionary acts and decisions, for the construction, maintenance, and operation of all manner of facilities and equipment for visitors to the several installations of the Administration and, in connection therewith, to provide services incident to the dissemination of information concerning its activities to such visitors, without charge or with a reasonable charge therefor (with this authority being in addition to any other authority that the Administration may have to provide facilities, equipment, and services for visitors to its installations).

(2) PUBLIC NOTICE AND DUE CONSIDERATION OF PROPOSALS.—A concession agreement under this subsection may be negotiated with any qualified proposer following due consideration of all proposals received after reasonable public notice of the intention to contract.

(3) REASONABLE OPPORTUNITY FOR PROFIT.—The concessioner shall be afforded a reasonable opportunity to make a profit commensurate with the capital invested and the obligations assumed. The consideration paid by the concessioner for the concession shall be based on the probable value of the opportunity and not on maximizing revenue to the United States.

(4) RECORDS AND ACCESS TO RECORDS.—Each concession agreement shall specify the manner in which the concessioner's records are to be maintained, and shall provide for access to the records by the Administration and the Comptroller General of the United States for a period of 5 years after the close of the business year to which the records relate.

(5) POSSESSORY INTERESTS.—A concessioner may be accorded a possessory interest, consisting of all incidents of ownership except legal title (which shall vest in the United States), in any structure, fixture, or improvement the concessioner constructs or locates upon land owned by the United States. With the approval of the Administration, such possessory interest may be assigned, transferred, encumbered, or relinquished by the concessioner, and, unless otherwise provided by contract, shall not be extinguished by the expiration or other termination of the concession and may not be taken for public use without just compensation.

(l) DETAILING MEMBERS OF ARMED SERVICES.—In the performance of its functions, the Administration is authorized, with the approval of the President, to enter into cooperative agreements under which members of the Army, Navy, Air Force, and Marine Corps may be detailed by the appropriate Secretary for services in the performance of functions under this chapter to the same extent as that to which they might be lawfully assigned in the Department of Defense.

(m) CLAIMS AGAINST THE UNITED STATES.—In the performance of its functions, the Administration is authorized—

(1) to consider, ascertain, adjust, determine, settle, and pay, on behalf of the United States, in full satisfaction thereof, any claim for \$25,000 or less against the United States for bodily injury, death, or damage to or loss of real or personal property resulting from the conduct of the Administration's functions as specified in section 20112(a) of this title, where such claim is presented to the Administration in writing within 2 years after the accident or incident out of which the claim arises; and

(2) if the Administration considers that a claim in excess of \$25,000 is meritorious and would otherwise be covered by this subsection, to report the facts and circumstances to Congress for its consideration.

§ 20114. Administration and Department of Defense coordination

(a) ADVISE AND CONSULT.—The Administration and the Department of Defense, through the President, shall advise and consult with each other on all matters within their respective jurisdictions

related to aeronautical and space activities and shall keep each other fully and currently informed with respect to such activities.

(b) REFERRAL TO THE PRESIDENT.—If the Secretary of Defense concludes that any request, action, proposed action, or failure to act on the part of the Administrator is adverse to the responsibilities of the Department of Defense, or the Administrator concludes that any request, action, proposed action, or failure to act on the part of the Department of Defense is adverse to the responsibilities of the Administration, and the Administrator and the Secretary of Defense are unable to reach an agreement with respect to the matter, either the Administrator or the Secretary of Defense may refer the matter to the President for a decision (which shall be final).

§ 20115. International cooperation

The Administration, under the foreign policy guidance of the President, may engage in a program of international cooperation in work done pursuant to this chapter, and in the peaceful application of the results thereof, pursuant to agreements made by the President with the advice and consent of the Senate.

§ 20116. Reports to Congress

(a) PRESIDENTIAL REPORT.—The President shall transmit to Congress in May of each year a report, which shall include—

(1) a comprehensive description of the programmed activities and the accomplishments of all agencies of the United States in the field of aeronautics and space activities during the preceding fiscal year; and

(2) an evaluation of such activities and accomplishments in terms of the attainment of, or the failure to attain, the objectives described in section 20102(d) of this title.

(b) RECOMMENDATIONS FOR ADDITIONAL LEGISLATION.—Any report made under this section shall contain such recommendations for additional legislation as the Administrator or the President may consider necessary or desirable for the attainment of the objectives described in section 20102(d) of this title.

(c) CLASSIFIED INFORMATION.—No information that has been classified for reasons of national security shall be included in any report made under this section, unless the information has been declassified by, or pursuant to authorization given by, the President.

§ 20117. Disposal of excess land

Notwithstanding the provisions of this or any other law, the Administration may not report to a disposal agency as excess to the needs of the Administration any land having an estimated value in excess of \$50,000 that is owned by the United States and under the jurisdiction and control of the Administration, unless—

(1) a period of 30 days has passed after the receipt by the Speaker and the Committee on Science and Technology of the House of Representatives and the President and the Committee on Commerce, Science, and Transportation of the Senate of a report by the Administrator or the Administrator's designee containing a full and complete statement of the action proposed to be taken and the facts and circumstances relied upon in support of such action; or

(2) each such committee before the expiration of that period has transmitted to the Administrator written notice to the effect that the committee has no objection to the proposed action.

SUBCHAPTER III—GENERAL ADMINISTRATIVE PROVISIONS

§ 20131. Public access to information

(a) PUBLIC INSPECTION.—Information obtained or developed by the Administrator in the performance of the Administrator's functions under this chapter shall be made available for public inspection, except information—

- (1) authorized or required by Federal statute to be withheld;
- (2) classified to protect the national security; or
- (3) described in subsection (b).

(b) SPECIAL HANDLING OF TRADE SECRET OR CONFIDENTIAL INFORMATION.—

(1) IN GENERAL.—The Administrator, for a period of up to 5 years after the development of information described in paragraph (2), may provide appropriate protections against the dissemination of such information, including exemption from subchapter II of chapter 5 of title 5.

(2) INFORMATION DESCRIBED.—Information referred to in paragraph (1) is information that results from activities conducted under an agreement entered into under subsections (e) and (f) of section 20113 of this title, and that would be a trade secret or commercial or financial information that is privileged or confidential under the meaning of section 552(b)(4) of title 5 if the information had been obtained from a non-Federal party participating in such an agreement.

(c) COMMITTEES OF CONGRESS.—Nothing in this chapter authorizes the withholding of information by the Administrator from the duly authorized committees of Congress.

§ 20132. Security requirements

The Administrator shall establish such security requirements, restrictions, and safeguards as the Administrator deems necessary in the interest of the national security. The Administrator may arrange with the Director of the Office of Personnel Management for the conduct of such security or other personnel investigations of the Administration's officers, employees, and consultants, and its contractors and subcontractors and their officers and employees, actual or prospective, as the Administrator deems appropriate. If any such investigation develops any data reflecting that the individual who is the subject of the investigation is of questionable loyalty, the matter shall be referred to the Federal Bureau of Investigation for the conduct of a full field investigation, the results of which shall be furnished to the Administrator.

§ 20133. Permission to carry firearms

As the Administrator deems necessary in the public interest, the Administrator may—

(1) direct officers and employees of the Administration to carry firearms while in the conduct of their official duties; and

(2) authorize employees of contractors and subcontractors of the Administration who are engaged in the protection of

property owned by the United States, and located at facilities owned by or contracted to the United States, to carry firearms while in the conduct of their official duties.

§ 20134. Arrest authority

Under regulations prescribed by the Administrator and approved by the Attorney General, employees of the Administration and of its contractors and subcontractors authorized to carry firearms under section 20133 of this title may arrest without warrant for any offense against the United States committed in their presence, or for any felony cognizable under the laws of the United States if they have reasonable grounds to believe that the person to be arrested has committed or is committing such felony. Persons granted authority to make arrests by this section may exercise that authority only while guarding and protecting property owned or leased by, or under the control of, the United States under the administration and control of the Administration or one of its contractors or subcontractors, at facilities owned by or contracted to the Administration.

§ 20135. Property rights in inventions

(a) DEFINITIONS.—In this section:

(1) CONTRACT.—The term “contract” means any actual or proposed contract, agreement, understanding, or other arrangement, and includes any assignment, substitution of parties, or subcontract executed or entered into thereunder.

(2) MADE.—The term “made”, when used in relation to any invention, means the conception or first actual reduction to practice of such invention.

(3) PERSON.—The term “person” means any individual, partnership, corporation, association, institution, or other entity.

(b) EXCLUSIVE PROPERTY OF UNITED STATES.—

(1) IN GENERAL.—An invention shall be the exclusive property of the United States if it is made in the performance of any work under any contract of the Administration, and the Administrator determines that—

(A) the person who made the invention was employed or assigned to perform research, development, or exploration work and the invention is related to the work the person was employed or assigned to perform, or was within the scope of the person’s employment duties, whether or not it was made during working hours, or with a contribution by the Government of the use of Government facilities, equipment, materials, allocated funds, information proprietary to the Government, or services of Government employees during working hours; or

(B) the person who made the invention was not employed or assigned to perform research, development, or exploration work, but the invention is nevertheless related to the contract, or to the work or duties the person was employed or assigned to perform, and was made during working hours, or with a contribution from the Government of the sort referred to in subparagraph (A).

(2) PATENT TO UNITED STATES.—If an invention is the exclusive property of the United States under paragraph (1), and if such invention is patentable, a patent therefor shall be issued

to the United States upon application made by the Administrator, unless the Administrator waives all or any part of the rights of the United States to such invention in conformity with the provisions of subsection (g).

(c) CONTRACT PROVISIONS FOR FURNISHING REPORTS OF INVENTIONS, DISCOVERIES, IMPROVEMENTS, OR INNOVATIONS.—Each contract entered into by the Administrator with any party for the performance of any work shall contain effective provisions under which the party shall furnish promptly to the Administrator a written report containing full and complete technical information concerning any invention, discovery, improvement, or innovation which may be made in the performance of any such work.

(d) PATENT APPLICATION.—No patent may be issued to any applicant other than the Administrator for any invention which appears to the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office (hereafter in this section referred to as the “Director”) to have significant utility in the conduct of aeronautical and space activities unless the applicant files with the Director, with the application or within 30 days after request therefor by the Director, a written statement executed under oath setting forth the full facts concerning the circumstances under which the invention was made and stating the relationship (if any) of the invention to the performance of any work under any contract of the Administration. Copies of each such statement and the application to which it relates shall be transmitted forthwith by the Director to the Administrator.

(e) ISSUANCE OF PATENT TO APPLICANT.—Upon any application as to which any such statement has been transmitted to the Administrator, the Director may, if the invention is patentable, issue a patent to the applicant unless the Administrator, within 90 days after receipt of the application and statement, requests that the patent be issued to the Administrator on behalf of the United States. If, within such time, the Administrator files such a request with the Director, the Director shall transmit notice thereof to the applicant, and shall issue such patent to the Administrator unless the applicant within 30 days after receipt of the notice requests a hearing before the Board of Patent Appeals and Interferences on the question whether the Administrator is entitled under this section to receive the patent. The Board may hear and determine, in accordance with rules and procedures established for interference cases, the question so presented, and its determination shall be subject to appeal by the applicant or by the Administrator to the United States Court of Appeals for the Federal Circuit in accordance with procedures governing appeals from decisions of the Board of Patent Appeals and Interferences in other proceedings.

(f) SUBSEQUENT TRANSFER OF PATENT IN CASE OF FALSE REPRESENTATIONS.—Whenever a patent has been issued to an applicant in conformity with subsection (e), and the Administrator thereafter has reason to believe that the statement filed by the applicant in connection with the patent contained a false representation of a material fact, the Administrator, within 5 years after the date of issuance of the patent, may file with the Director a request for the transfer to the Administrator of title to the patent on the records of the Director. Notice of any such request shall be transmitted by the Director to the owner of record of the patent,

and title to the patent shall be so transferred to the Administrator unless, within 30 days after receipt of notice, the owner of record requests a hearing before the Board of Patent Appeals and Interferences on the question whether any such false representation was contained in the statement filed in connection with the patent. The question shall be heard and determined, and the determination shall be subject to review, in the manner prescribed by subsection (e) for questions arising thereunder. A request made by the Administrator under this subsection for the transfer of title to a patent, and prosecution for the violation of any criminal statute, shall not be barred by the failure of the Administrator to make a request under subsection (e) for the issuance of the patent to the Administrator, or by any notice previously given by the Administrator stating that the Administrator had no objection to the issuance of the patent to the applicant.

(g) WAIVER OF RIGHTS TO INVENTIONS.—Under such regulations in conformity with this subsection as the Administrator shall prescribe, the Administrator may waive all or any part of the rights of the United States under this section with respect to any invention or class of inventions made or which may be made by any person or class of persons in the performance of any work required by any contract of the Administration if the Administrator determines that the interests of the United States will be served thereby. Any such waiver may be made upon such terms and under such conditions as the Administrator shall determine to be required for the protection of the interests of the United States. Each such waiver made with respect to any invention shall be subject to the reservation by the Administrator of an irrevocable, nonexclusive, nontransferable, royalty-free license for the practice of such invention throughout the world by or on behalf of the United States or any foreign government pursuant to any treaty or agreement with the United States. Each proposal for any waiver under this subsection shall be referred to an Inventions and Contributions Board which shall be established by the Administrator within the Administration. Such Board shall accord to each interested party an opportunity for hearing, and shall transmit to the Administrator its findings of fact with respect to such proposal and its recommendations for action to be taken with respect thereto.

(h) PROTECTION OF TITLE.—The Administrator is authorized to take all suitable and necessary steps to protect any invention or discovery to which the Administrator has title, and to require contractors or persons who retain title to inventions or discoveries under this section to protect the inventions or discoveries to which the Administration has or may acquire a license of use.

(i) ADMINISTRATION AS DEFENSE AGENCY.—The Administration shall be considered a defense agency of the United States for the purpose of chapter 17 of title 35.

(j) OBJECTS INTENDED FOR LAUNCH, LAUNCHED, OR ASSEMBLED IN OUTER SPACE.—Any object intended for launch, launched, or assembled in outer space shall be considered a vehicle for the purpose of section 272 of title 35.

(k) USE OR MANUFACTURE OF PATENTED INVENTIONS INCORPORATED IN SPACE VEHICLES LAUNCHED FOR PERSONS OTHER THAN UNITED STATES.—The use or manufacture of any patented invention incorporated in a space vehicle launched by the United States Government for a person other than the United States shall not be considered to be a use or manufacture by or for the United

States within the meaning of section 1498(a) of title 28, unless the Administration gives an express authorization or consent for such use or manufacture.

§ 20136. Contributions awards

(a) APPLICATIONS.—Subject to the provisions of this section, the Administrator is authorized, on the Administrator's own initiative or on application of any person, to make a monetary award, in an amount and on terms the Administrator determines to be warranted, to any person (as defined by section 20135(a) of this title) for any scientific or technical contribution to the Administration which is determined by the Administrator to have significant value in the conduct of aeronautical and space activities. Each application made for such an award shall be referred to the Inventions and Contributions Board established under section 20135 of this title. Such Board shall accord to each applicant an opportunity for hearing on the application, and shall transmit to the Administrator its recommendation as to the terms of the award, if any, to be made to the applicant for the contribution. In determining the terms and conditions of an award the Administrator shall take into account—

- (1) the value of the contribution to the United States;
- (2) the aggregate amount of any sums which have been expended by the applicant for the development of the contribution;
- (3) the amount of any compensation (other than salary received for services rendered as an officer or employee of the Government) previously received by the applicant for or on account of the use of the contribution by the United States; and
- (4) any other factors the Administrator determines to be material.

(b) APPORTIONMENT OF AWARDS.—If more than one applicant under subsection (a) claims an interest in the same contribution, the Administrator shall ascertain and determine the respective interests of the applicants, and shall apportion any award to be made among the applicants in amounts the Administrator determines to be equitable.

(c) SURRENDER OF OTHER CLAIMS.—No award may be made under subsection (a) unless the applicant surrenders, by means the Administrator determines to be effective, all claims that the applicant may have to receive any compensation (other than the award made under this section) for the use of the contribution or any element thereof at any time by or on behalf of the United States, or by or on behalf of any foreign government pursuant to a treaty or agreement with the United States, within the United States or at any other place.

(d) REPORT AND WAITING PERIOD.—No award may be made under subsection (a) in an amount exceeding \$100,000 unless the Administrator transmits to the appropriate committees of Congress a full and complete report concerning the amount and terms of, and the basis for, the proposed award, and a period of 30 calendar days of regular session of Congress expires after receipt of the report by the committees.

§ 20137. Malpractice and negligence suits against United States

(a) **EXCLUSIVE REMEDY.**—The remedy against the United States provided by sections 1346(b) and 2672 of title 28, for damages for personal injury, including death, caused by the negligent or wrongful act or omission of any physician, dentist, nurse, pharmacist, or paramedical or other supporting personnel (including medical and dental technicians, nursing assistants, and therapists) of the Administration in the performance of medical, dental, or related health care functions (including clinical studies and investigations) while acting within the scope of such person's duties or employment therein or therefor shall be exclusive of any other civil action or proceeding by reason of the same subject matter against such person (or the estate of such person) whose act or omission gave rise to the action or proceeding.

(b) **ATTORNEY GENERAL TO DEFEND ANY CIVIL ACTION OR PROCEEDING FOR MALPRACTICE OR NEGLIGENCE.**—The Attorney General shall defend any civil action or proceeding brought in any court against any person referred to in subsection (a) (or the estate of such person) for any such injury. Any such person against whom such civil action or proceeding is brought shall deliver within such time after date of service or knowledge of service as determined by the Attorney General, all process served upon such person or an attested true copy thereof to such person's immediate superior or to whomever was designated by the Administrator to receive such papers. Such person shall promptly furnish copies of the pleading and process therein to the United States Attorney for the district embracing the place wherein the proceeding is brought, to the Attorney General, and to the Administrator.

(c) **REMOVAL OF ACTIONS.**—Upon a certification by the Attorney General that any person described in subsection (a) was acting in the scope of such person's duties or employment at the time of the incident out of which the suit arose, any such civil action or proceeding commenced in a State court shall be removed without bond at any time before trial by the Attorney General to the district court of the United States of the district and division embracing the place wherein it is pending and the proceeding deemed a tort action brought against the United States under the provisions of title 28, and all references thereto. Should a district court of the United States determine, on a hearing on a motion to remand held before a trial on the merits, that the case so removed is one in which a remedy by suit within the meaning of subsection (a) is not available against the United States, the case shall be remanded to the State court.

(d) **COMPROMISE OR SETTLEMENT OF CLAIMS.**—The Attorney General may compromise or settle any claim asserted in such civil action or proceeding in the manner provided in section 2677 of title 28, and with the same effect.

(e) **APPLICABILITY OF OTHER PROVISIONS OF LAW.**—For purposes of this section, the provisions of section 2680(h) of title 28 shall not apply to any cause of action arising out of a negligent or wrongful act or omission in the performance of medical, dental, or related health care functions (including clinical studies and investigations).

(f) **LIABILITY INSURANCE FOR PERSONS ASSIGNED TO FOREIGN COUNTRIES OR NON-FEDERAL AGENCIES.**—The Administrator or the Administrator's designee may, to the extent that the Administrator

or the designee deems appropriate, hold harmless or provide liability insurance for any person described in subsection (a) for damages for personal injury, including death, caused by such person's negligent or wrongful act or omission in the performance of medical, dental, or related health care functions (including clinical studies and investigations) while acting within the scope of such person's duties if such person is assigned to a foreign country or detailed for service with other than a Federal department, agency, or instrumentality or if the circumstances are such as are likely to preclude the remedies of third persons against the United States described in section 2679(b) of title 28, for such damage or injury.

§ 20138. Insurance and indemnification

(a) DEFINITIONS.—In this section:

(1) SPACE VEHICLE.—The term “space vehicle” means an object intended for launch, launched, or assembled in outer space, including the space shuttle and other components of a space transportation system, together with related equipment, devices, components, and parts.

(2) THIRD PARTY.—The term “third party” means any person who may institute a claim against a user for death, bodily injury, or loss of or damage to property.

(3) USER.—The term “user” includes anyone who enters into an agreement with the Administration for use of all or a portion of a space vehicle, who owns or provides property to be flown on a space vehicle, or who employs a person to be flown on a space vehicle.

(b) AUTHORIZATION.—The Administration is authorized on such terms and to the extent it may deem appropriate to provide liability insurance for any user of a space vehicle to compensate all or a portion of claims by third parties for death, bodily injury, or loss of or damage to property resulting from activities carried on in connection with the launch, operations, or recovery of the space vehicle. Appropriations available to the Administration may be used to acquire such insurance, but such appropriations shall be reimbursed to the maximum extent practicable by the users under reimbursement policies established pursuant to section 20113 of this title.

(c) INDEMNIFICATION.—Under such regulations in conformity with this section as the Administrator shall prescribe taking into account the availability, cost, and terms of liability insurance, any agreement between the Administration and a user of a space vehicle may provide that the United States will indemnify the user against claims (including reasonable expenses of litigation or settlement) by third parties for death, bodily injury, or loss of or damage to property resulting from activities carried on in connection with the launch, operations, or recovery of the space vehicle, but only to the extent that such claims are not compensated by liability insurance of the user. Such indemnification may be limited to claims resulting from other than the actual negligence or willful misconduct of the user.

(d) TERMS OF INDEMNIFICATION AGREEMENT.—An agreement made under subsection (c) that provides indemnification must also provide for—

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

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

(e) CERTIFICATION OF JUST AND REASONABLE AMOUNT.—No payment may be made under subsection (c) unless the Administrator or the Administrator's designee certifies that the amount is just and reasonable.

(f) PAYMENTS.—Upon the approval by the Administrator, payments under subsection (c) may be made, at the Administrator's election, either from funds available for research and development not otherwise obligated or from funds appropriated for such payments.

§ 20139. Insurance for experimental aerospace vehicles

(a) DEFINITIONS.—In this section:

(1) COOPERATING PARTY.—The term “cooperating party” means any person who enters into an agreement with the Administration for the performance of cooperative scientific, aeronautical, or space activities to carry out the purposes of this chapter.

(2) DEVELOPER.—The term “developer” means a United States person (other than a natural person) who—

(A) is a party to an agreement with the Administration for the purpose of developing new technology for an experimental aerospace vehicle;

(B) owns or provides property to be flown or situated on that vehicle; or

(C) employs a natural person to be flown on that vehicle.

(3) EXPERIMENTAL AEROSPACE VEHICLE.—The term “experimental aerospace vehicle” means an object intended to be flown in, or launched into, orbital or suborbital flight for the purpose of demonstrating technologies necessary for a reusable launch vehicle, developed under an agreement between the Administration and a developer.

(4) RELATED ENTITY.—The term “related entity” includes a contractor or subcontractor at any tier, a supplier, a grantee, and an investigator or detailee.

(b) IN GENERAL.—The Administrator may provide liability insurance for, or indemnification to, the developer of an experimental aerospace vehicle developed or used in execution of an agreement between the Administration and the developer.

(c) TERMS AND CONDITIONS.—

(1) IN GENERAL.—Except as otherwise provided in this section, the insurance and indemnification provided by the Administration under subsection (b) to a developer shall be provided on the same terms and conditions as insurance and indemnification is provided by the Administration under section 20138 of this title to the user of a space vehicle.

(2) INSURANCE.—

(A) IN GENERAL.—A developer shall obtain liability insurance or demonstrate financial responsibility in amounts to compensate for the maximum probable loss from claims by—

(i) a third party for death, bodily injury, or property damage, or loss resulting from an activity carried out in connection with the development or use of an experimental aerospace vehicle; and

(ii) the United States Government for damage or loss to Government property resulting from such an activity.

(B) MAXIMUM REQUIRED.—The Administrator shall determine the amount of insurance required, but, except as provided in subparagraph (C), that amount shall not be greater than the amount required under section 50914(a)(3) of this title for a launch. The Administrator shall publish notice of the Administrator's determination and the applicable amount or amounts in the Federal Register within 10 days after making the determination.

(C) INCREASE IN DOLLAR AMOUNTS.—The Administrator may increase the dollar amounts set forth in section 50914(a)(3)(A) of this title for the purpose of applying that section under this section to a developer after consultation with the Comptroller General and such experts and consultants as may be appropriate, and after publishing notice of the increase in the Federal Register not less than 180 days before the increase goes into effect. The Administrator shall make available for public inspection, not later than the date of publication of such notice, a complete record of any correspondence received by the Administration, and a transcript of any meetings in which the Administration participated, regarding the proposed increase.

(D) SAFETY REVIEW REQUIRED BEFORE ADMINISTRATOR PROVIDES INSURANCE.—The Administrator may not provide liability insurance or indemnification under subsection (b) unless the developer establishes to the satisfaction of the Administrator that appropriate safety procedures and practices are being followed in the development of the experimental aerospace vehicle.

(3) NO INDEMNIFICATION WITHOUT CROSS-WAIVER.—Notwithstanding subsection (b), the Administrator may not indemnify a developer of an experimental aerospace vehicle under this section unless there is an agreement between the Administration and the developer described in subsection (d).

(4) APPLICATION OF CERTAIN PROCEDURES.—If the Administrator requests additional appropriations to make payments under this section, like the payments that may be made under section 20138(c) of this title, then the request for those appropriations shall be made in accordance with the procedures established by subsections (d) and (e) of section 50915 of this title.

(d) CROSS-WAIVERS.—

(1) ADMINISTRATOR AUTHORIZED TO WAIVE.—The Administrator, on behalf of the United States, and its departments, agencies, and instrumentalities, may reciprocally waive claims with a developer or cooperating party and with the related entities of that developer or cooperating party under which each party to the waiver agrees to be responsible, and agrees to ensure that its own related entities are responsible, for damage or loss to its property for which it is responsible, or for losses resulting from any injury or death sustained by its own employees or agents, as a result of activities connected to the agreement or use of the experimental aerospace vehicle.

(2) LIMITATIONS.—

(A) CLAIMS.—A reciprocal waiver under paragraph (1) may not preclude a claim by any natural person (including, but not limited to, a natural person who is an employee of the United States, the developer, the cooperating party, or their respective subcontractors) or that natural person's estate, survivors, or subrogees for injury or death, except with respect to a subrogee that is a party to the waiver or has otherwise agreed to be bound by the terms of the waiver.

(B) LIABILITY FOR NEGLIGENCE.—A reciprocal waiver under paragraph (1) may not absolve any party of liability to any natural person (including, but not limited to, a natural person who is an employee of the United States, the developer, the cooperating party, or their respective subcontractors) or such a natural person's estate, survivors, or subrogees for negligence, except with respect to a subrogee that is a party to the waiver or has otherwise agreed to be bound by the terms of the waiver.

(C) INDEMNIFICATION FOR DAMAGES.—A reciprocal waiver under paragraph (1) may not be used as the basis of a claim by the Administration, or the developer or cooperating party, for indemnification against the other for damages paid to a natural person, or that natural person's estate, survivors, or subrogees, for injury or death sustained by that natural person as a result of activities connected to the agreement or use of the experimental aerospace vehicle.

(D) WILLFUL MISCONDUCT.—A reciprocal waiver under paragraph (1) may not relieve the United States, the developer, the cooperating party, or the related entities of the developer or cooperating party, of liability for damage or loss resulting from willful misconduct.

(3) EFFECT ON PREVIOUS WAIVERS.—This subsection applies to any waiver of claims entered into by the Administration without regard to the date on which the Administration entered into the waiver.

(e) RELATIONSHIP TO OTHER LAWS.—

(1) SECTION 20138.—This section does not apply to any object, transaction, or operation to which section 20138 of this title applies.

(2) SECTION 50919(g)(1).—The Administrator may not provide indemnification to a developer under this section for launches subject to license under section 50919(g)(1) of this title.

(f) TERMINATION.—

(1) IN GENERAL.—The provisions of this section shall terminate on December 31, 2010.

(2) EFFECT OF TERMINATION ON AGREEMENT.—The termination of this section shall not terminate or otherwise affect any cross-waiver agreement, insurance agreement, indemnification agreement, or other agreement entered into under this section, except as may be provided in that agreement.

§ 20140. Appropriations

(a) AUTHORIZATION.—

(1) IN GENERAL.—There are authorized to be appropriated such sums as may be necessary to carry out this chapter,

except that nothing in this chapter shall authorize the appropriation of any amount for—

(A) the acquisition or condemnation of any real property;

or

(B) any other item of a capital nature (such as plant or facility acquisition, construction, or expansion) which exceeds \$250,000.

(2) AVAILABILITY.—Sums appropriated pursuant to this subsection for the construction of facilities, or for research and development activities, shall remain available until expended.

(b) USE OF FUNDS FOR EMERGENCY REPAIRS OF EXISTING FACILITIES.—Any funds appropriated for the construction of facilities may be used for emergency repairs of existing facilities when such existing facilities are made inoperative by major breakdown, accident, or other circumstances and such repairs are deemed by the Administrator to be of greater urgency than the construction of new facilities.

(c) TERMINATION.—Notwithstanding any other provision of law, the authorization of any appropriation to the Administration shall expire (unless an earlier expiration is specifically provided) at the close of the third fiscal year following the fiscal year in which the authorization was enacted, to the extent that such appropriation has not theretofore actually been made.

§ 20141. Misuse of agency name and initials

(a) IN GENERAL.—No person (as defined by section 20135(a) of this title) may knowingly use the words “National Aeronautics and Space Administration” or the letters “NASA”, or any combination, variation, or colorable imitation of those words or letters either alone or in combination with other words or letters—

(1) as a firm or business name in a manner reasonably calculated to convey the impression that the firm or business has some connection with, endorsement of, or authorization from, the Administration which does not, in fact, exist; or

(2) in connection with any product or service being offered or made available to the public in a manner reasonably calculated to convey the impression that the product or service has the authorization, support, sponsorship, or endorsement of, or the development, use, or manufacture by or on behalf of the Administration which does not, in fact, exist.

(b) CIVIL PROCEEDING TO ENJOIN.—Whenever it appears to the Attorney General that any person is engaged in an act or practice which constitutes or will constitute conduct prohibited by subsection (a), the Attorney General may initiate a civil proceeding in a district court of the United States to enjoin such act or practice.

§ 20142. Contracts regarding expendable launch vehicles

(a) COMMITMENTS BEYOND AVAILABLE APPROPRIATIONS.—The Administrator may enter into contracts for expendable launch vehicle services that are for periods in excess of the period for which funds are otherwise available for obligation, provide for the payment for contingent liability which may accrue in excess of available appropriations in the event the Federal Government for its convenience terminates such contracts, and provide for advance payments reasonably related to launch vehicle and related equipment, fabrication, and acquisition costs, if any such contract limits the amount of the payments that the Government is allowed to

make under such contract to amounts provided in advance in appropriation Acts. Such contracts may be limited to sources within the United States when the Administrator determines that such limitation is in the public interest.

(b) **TERMINATION IF FUNDS NOT AVAILABLE.**—If funds are not available to continue any such contract, the contract shall be terminated for the convenience of the Government, and the costs of such contract shall be paid from appropriations originally available for performance of the contract, from other unobligated appropriations currently available for the procurement of launch services, or from funds appropriated for such payments.

§ 20143. Full cost appropriations account structure

(a) **ACCOUNTS FOR APPROPRIATIONS.**—

(1) **DESIGNATION OF 3 ACCOUNTS.**—Appropriations for the Administration shall be made in 3 accounts, “Science, Aeronautics, and Education”, “Exploration Systems and Space Operations”, and an account for amounts appropriated for the necessary expenses of the Office of the Inspector General.

(2) **REPROGRAMMING.**—Within the Exploration Systems and Space Operations account, no more than 10 percent of the funds for a fiscal year for Exploration Systems may be reprogrammed for Space Operations, and no more than 10 percent of the funds for a fiscal year for Space Operations may be reprogrammed for Exploration Systems. This paragraph shall not apply to reprogramming for the purposes described in subsection (b)(2).

(3) **AVAILABILITY.**—Appropriations shall remain available for 2 fiscal years, unless otherwise specified in law. Each account shall include the planned full costs of Administration activities.

(b) **TRANSFERS AMONG ACCOUNTS.**—

(1) **IN GENERAL.**—To ensure the safe, timely, and successful accomplishment of Administration missions, the Administration may transfer among accounts as necessary, amounts for—

- (A) Federal salaries and benefits;
- (B) training, travel, and awards;
- (C) facility and related costs;
- (D) information technology services;
- (E) publishing services;
- (F) science, engineering, fabricating, and testing services;

and

(G) other administrative services.

(2) **DISASTER, ACT OF TERRORISM, EMERGENCY RESCUE.**—The Administration may also transfer amounts among accounts for the immediate costs of recovering from damage caused by a major disaster (as defined in section 102 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5122)) or by an act of terrorism, or for the immediate costs associated with an emergency rescue of astronauts.

(c) **TRANSFER OF UNEXPIRED BALANCES.**—The unexpired balances of prior appropriations to the Administration for activities authorized under this chapter may be transferred to the new account established for such activity in subsection (a). Balances so transferred may be merged with funds in the newly established account and thereafter may be accounted for as one fund under the same terms and conditions.

§ 20144. Prize authority

(a) **IN GENERAL.**—The Administration may carry out a program to competitively award cash prizes to stimulate innovation in basic and applied research, technology development, and prototype demonstration that have the potential for application to the performance of the space and aeronautical activities of the Administration. The Administration may carry out a program to award prizes only in conformity with this section.

(b) **TOPICS.**—In selecting topics for prize competitions, the Administrator shall consult widely both within and outside the Federal Government, and may empanel advisory committees. The Administrator shall give consideration to prize goals such as the demonstration of the ability to provide energy to the lunar surface from space-based solar power systems, demonstration of innovative near-Earth object survey and deflection strategies, and innovative approaches to improving the safety and efficiency of aviation systems.

(c) **ADVERTISING.**—The Administrator shall widely advertise prize competitions to encourage participation.

(d) **REQUIREMENTS AND REGISTRATION.**—For each prize competition, the Administrator shall publish a notice in the Federal Register announcing the subject of the competition, the rules for being eligible to participate in the competition, the amount of the prize, and the basis on which a winner will be selected.

(e) **ELIGIBILITY.**—To be eligible to win a prize under this section, an individual or entity—

(1) shall have registered to participate in the competition pursuant to any rules promulgated by the Administrator under subsection (d);

(2) shall have complied with all the requirements under this section;

(3) in the case of a private entity, shall be incorporated in and maintain a primary place of business in the United States, and in the case of an individual, whether participating singly or in a group, shall be a citizen or permanent resident of the United States; and

(4) shall not be a Federal entity or Federal employee acting within the scope of their employment.

(f) **LIABILITY.**—

(1) **ASSUMPTION OF RISK.**—Registered participants must agree to assume any and all risks and waive claims against the Federal Government and its related entities, except in the case of willful misconduct, for any injury, death, damage, or loss of property, revenue, or profits, whether direct, indirect, or consequential, arising from their participation in a competition, whether such injury, death, damage, or loss arises through negligence or otherwise. For the purposes of this paragraph, the term “related entity” means a contractor or subcontractor at any tier, and a supplier, user, customer, cooperating party, grantee, investigator, or detailee.

(2) **LIABILITY INSURANCE.**—Participants must obtain liability insurance or demonstrate financial responsibility, in amounts determined by the Administrator, for claims by—

(A) a third party for death, bodily injury, or property damage, or loss resulting from an activity carried out in connection with participation in a competition, with the Federal Government named as an additional insured under

the registered participant's insurance policy and registered participants agreeing to indemnify the Federal Government against third party claims for damages arising from or related to competition activities; and

(B) the Federal Government for damage or loss to Government property resulting from such an activity.

(g) JUDGES.—For each competition, the Administration, either directly or through an agreement under subsection (h), shall assemble a panel of qualified judges to select the winner or winners of the prize competition on the basis described pursuant to subsection (d). Judges for each competition shall include individuals from outside the Administration, including from the private sector. A judge may not—

(1) have personal or financial interests in, or be an employee, officer, director, or agent of any entity that is a registered participant in a competition; or

(2) have a familial or financial relationship with an individual who is a registered participant.

(h) ADMINISTERING THE COMPETITION.—The Administrator may enter into an agreement with a private, nonprofit entity to administer the prize competition, subject to the provisions of this section.

(i) FUNDING.—

(1) SOURCES.—Prizes under this section may consist of Federal appropriated funds and funds provided by the private sector for such cash prizes. The Administrator may accept funds from other Federal agencies for such cash prizes. The Administrator may not give any special consideration to any private sector entity in return for a donation.

(2) AVAILABILITY.—

(A) DEFINITION OF PROVISIONS KNOWN AS THE ANTI-DEFICIENCY ACT.—In this paragraph, the term “provisions known as the Anti-Deficiency Act” means sections 1341, 1342, 1349(a), 1350, 1351, 1511, 1512, 1513, 1514, 1515, 1516, 1517, 1518, and 1519 of title 31.

(B) IN GENERAL.—Notwithstanding any other provision of law, funds appropriated for prize awards under this section shall remain available until expended, and may be transferred, reprogrammed, or expended for other purposes only after the expiration of 10 fiscal years after the fiscal year for which the funds were originally appropriated. No provision in this section permits obligation or payment of funds in violation of the provisions known as the Anti-Deficiency Act.

(3) APPROPRIATION OR COMMITMENT OF FUNDS REQUIRED BEFORE ANNOUNCEMENT OF PRIZE OR INCREASE.—

(A) IN GENERAL.—No prize may be announced under subsection (d) until all the funds needed to pay out the announced amount of the prize have been appropriated or committed in writing by a private source.

(B) INCREASE.—The Administrator may increase the amount of a prize after an initial announcement is made under subsection (d) if—

(i) notice of the increase is provided in the same manner as the initial notice of the prize; and

(ii) the funds needed to pay out the announced amount of the increase have been appropriated or committed in writing by a private source.

(4) NOTICE TO COMMITTEES FOR PRIZE GREATER THAN \$50,000,000.—No prize competition under this section may offer a prize in an amount greater than \$50,000,000 unless 30 days have elapsed after written notice has been transmitted to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate.

(5) APPROVAL OF ADMINISTRATOR FOR PRIZE GREATER THAN \$1,000,000.—No prize competition under this section may result in the award of more than \$1,000,000 in cash prizes without the approval of the Administrator.

(j) USE OF ADMINISTRATION NAME OR INSIGNIA.—A registered participant in a competition under this section may use the Administration's name, initials, or insignia only after prior review and written approval by the Administration.

(k) COMPLIANCE WITH EXISTING LAW.—The Federal Government shall not, by virtue of offering or providing a prize under this section, be responsible for compliance by registered participants in a prize competition with Federal law, including licensing, export control, and non-proliferation laws, and related regulations.

§ 20145. Lease of non-excess property

(a) IN GENERAL.—The Administrator may enter into a lease under this section with any person or entity (including another department or agency of the Federal Government or an entity of a State or local government) with regard to any non-excess real property and related personal property under the jurisdiction of the Administrator.

(b) CASH CONSIDERATION.—

(1) FAIR MARKET VALUE.—A person or entity entering into a lease under this section shall provide cash consideration for the lease at fair market value as determined by the Administrator.

(2) UTILIZATION.—

(A) IN GENERAL.—The Administrator may utilize amounts of cash consideration received under this subsection for a lease entered into under this section to cover the full costs to the Administration in connection with the lease. These funds shall remain available until expended.

(B) CAPITAL REVITALIZATION AND IMPROVEMENTS.—Of any amounts of cash consideration received under this subsection that are not utilized in accordance with subparagraph (A)—

(i) 35 percent shall be deposited in a capital asset account to be established by the Administrator, shall be available for maintenance, capital revitalization, and improvements of the real property assets and related personal property under the jurisdiction of the Administrator, and shall remain available until expended; and

(ii) the remaining 65 percent shall be available to the respective center or facility of the Administration engaged in the lease of nonexcess real property, and shall remain available until expended for maintenance, capital revitalization, and improvements of the real property assets and related personal property at the

respective center or facility subject to the concurrence of the Administrator.

(C) NO UTILIZATION FOR DAILY OPERATING COSTS.—Amounts utilized under subparagraph (B) may not be utilized for daily operating costs.

(c) ADDITIONAL TERMS AND CONDITIONS.—The Administrator may require such terms and conditions in connection with a lease under this section as the Administrator considers appropriate to protect the interests of the United States.

(d) RELATIONSHIP TO OTHER LEASE AUTHORITY.—The authority under this section to lease property of the Administration is in addition to any other authority to lease property of the Administration under law.

(e) LEASE RESTRICTIONS.—

(1) NO LEASE BACK OR OTHER CONTRACT.—The Administration is not authorized to lease back property under this section during the term of the out-lease or enter into other contracts with the lessee respecting the property.

(2) CERTIFICATION THAT OUT-LEASE WILL NOT HAVE NEGATIVE IMPACT ON MISSION.—The Administration is not authorized to enter into an out-lease under this section unless the Administrator certifies that the out-lease will not have a negative impact on the mission of the Administration.

(f) REPORTING REQUIREMENTS.—The Administrator shall submit an annual report by January 31st of each year. The report shall include the following:

(1) VALUE OF ARRANGEMENTS AND EXPENDITURES OF REVENUES.—Information that identifies and quantifies the value of the arrangements and expenditures of revenues received under this section.

(2) AVAILABILITY AND USE OF FUNDS FOR OPERATING PLAN.—The availability and use of funds received under this section for the Administration's operating plan.

(g) SUNSET.—The authority to enter into leases under this section shall expire 10 years after December 26, 2007. The expiration under this subsection of authority to enter into leases under this section shall not affect the validity or term of leases or the Administration's retention of proceeds from leases entered into under this section before the expiration of the authority.

§ 20146. Retrocession of jurisdiction

(a) DEFINITION OF STATE.—In this section, the term "State" means any of the several States, the District of Columbia, the Commonwealth of Puerto Rico, the United States Virgin Islands, Guam, American Samoa, the Northern Mariana Islands, and any other commonwealth, territory, or possession of the United States.

(b) RELINQUISHING LEGISLATIVE JURISDICTION.—Notwithstanding any other provision of law, the Administrator may relinquish to a State all or part of the legislative jurisdiction of the United States over lands or interests under the control of the Administrator in that State.

§ 20147. Recovery and disposition authority

(a) DEFINITIONS.—In this section:

(1) ADMINISTRATION HUMAN SPACE FLIGHT VEHICLE.—The term "Administration human space flight vehicle" means a space vehicle, as defined in section 20138(a) of this title, that—

(A) is intended to transport one or more persons;

(B) is designed to operate in outer space; and

(C) is either—

(i) owned by the Administration; or

(ii) owned by an Administration contractor or cooperating party and operated as part of an Administration mission or a joint mission with the Administration.

(2) CREWMEMBER.—The term “crewmember” means an astronaut or other person assigned to an Administration human space flight vehicle.

(b) CONTROL OF REMAINS.—

(1) IN GENERAL.—Subject to paragraphs (2) and (3), when there is an accident or mishap resulting in the death of a crewmember of an Administration human space flight vehicle, the Administrator may take control over the remains of the crewmember and order autopsies and other scientific or medical tests.

(2) TREATMENT.—Each crewmember shall provide the Administrator with the crewmember’s preferences regarding the treatment accorded to the crewmember’s remains and the Administrator shall, to the extent possible, respect those stated preferences.

(3) CONSTRUCTION.—This section shall not be construed to permit the Administrator to interfere with any Federal investigation of a mishap or accident.

SUBCHAPTER IV—UPPER ATMOSPHERE RESEARCH

§ 20161. Congressional declaration of purpose and policy

(a) PURPOSE.—The purpose of this subchapter is to authorize and direct the Administration to develop and carry out a comprehensive program of research, technology, and monitoring of the phenomena of the upper atmosphere so as to provide for an understanding of and to maintain the chemical and physical integrity of the Earth’s upper atmosphere.

(b) POLICY.—Congress declares that it is the policy of the United States to undertake an immediate and appropriate research, technology, and monitoring program that will provide for understanding the physics and chemistry of the Earth’s upper atmosphere.

§ 20162. Definition of upper atmosphere

In this subchapter, the term “upper atmosphere” means that portion of the Earth’s sensible atmosphere above the troposphere.

§ 20163. Program authorized

(a) IN GENERAL.—In order to carry out the purposes of this subchapter, the Administration, in cooperation with other Federal agencies, shall initiate and carry out a program of research, technology, monitoring, and other appropriate activities directed to understand the physics and chemistry of the upper atmosphere.

(b) ACTIVITIES.—In carrying out the provisions of this subchapter, the Administration shall—

(1) arrange for participation by the scientific and engineering community, of both the Nation’s industrial organizations and institutions of higher education, in planning and carrying out appropriate research, in developing necessary technology, and in making necessary observations and measurements;

(2) provide, by way of grant, contract, scholarships, or other arrangements, to the maximum extent practicable and consistent with other laws, for the widest practicable and appropriate participation of the scientific and engineering community in the program authorized by this subchapter; and

(3) make all results of the program authorized by this subchapter available to the appropriate regulatory agencies and provide for the widest practicable dissemination of such results.

§ 20164. International cooperation

In carrying out the provisions of this subchapter, the Administration, subject to the direction of the President and after consultation with the Secretary of State, shall make every effort to enlist the support and cooperation of appropriate scientists and engineers of other countries and international organizations.

CHAPTER 203—RESPONSIBILITIES AND VISION

Sec.

20301. General responsibilities.

20302. Vision for space exploration.

20303. Contribution to innovation.

20304. Basic research enhancement.

20305. National Academies decadal surveys.

§ 20301. General responsibilities

(a) PROGRAMS.—The Administrator shall ensure that the Administration carries out a balanced set of programs that shall include, at a minimum, programs in—

(1) human space flight, in accordance with section 20302 of this title;

(2) aeronautics research and development; and

(3) scientific research, which shall include, at a minimum—

(A) robotic missions to study the Moon and other planets and their moons, and to deepen understanding of astronomy, astrophysics, and other areas of science that can be productively studied from space;

(B) Earth science research and research on the Sun-Earth connection through the development and operation of research satellites and other means;

(C) support of university research in space science, Earth science, and microgravity science; and

(D) research on microgravity, including research that is not directly related to human exploration.

(b) CONSULTATION AND COORDINATION.—In carrying out the programs of the Administration, the Administrator shall—

(1) consult and coordinate to the extent appropriate with other relevant Federal agencies, including through the National Science and Technology Council;

(2) work closely with the private sector, including by—

(A) encouraging the work of entrepreneurs who are seeking to develop new means to launch satellites, crew, or cargo;

(B) contracting with the private sector for crew and cargo services, including to the International Space Station, to the extent practicable;

(C) using commercially available products (including software) and services to the extent practicable to support all Administration activities; and

(D) encouraging commercial use and development of space to the greatest extent practicable; and

(3) involve other nations to the extent appropriate.

§ 20302. Vision for space exploration

(a) **IN GENERAL.**—The Administrator shall establish a program to develop a sustained human presence on the Moon, including a robust precursor program, to promote exploration, science, commerce, and United States preeminence in space, and as a stepping-stone to future exploration of Mars and other destinations. The Administrator is further authorized to develop and conduct appropriate international collaborations in pursuit of these goals.

(b) **MILESTONES.**—The Administrator shall manage human space flight programs to strive to achieve the following milestones (in conformity with section 70502 of this title):

(1) Returning Americans to the Moon no later than 2020.

(2) Launching the Crew Exploration Vehicle as close to 2010 as possible.

(3) Increasing knowledge of the impacts of long duration stays in space on the human body using the most appropriate facilities available, including the International Space Station.

(4) Enabling humans to land on and return from Mars and other destinations on a timetable that is technically and fiscally possible.

§ 20303. Contribution to innovation

(a) **PARTICIPATION IN INTERAGENCY ACTIVITIES.**—The Administration shall be a full participant in any interagency effort to promote innovation and economic competitiveness through near-term and long-term basic scientific research and development and the promotion of science, technology, engineering, and mathematics education, consistent with the Administration's mission, including authorized activities.

(b) **HISTORIC FOUNDATION.**—In order to carry out the participation described in subsection (a), the Administrator shall build on the historic role of the Administration in stimulating excellence in the advancement of physical science and engineering disciplines and in providing opportunities and incentives for the pursuit of academic studies in science, technology, engineering, and mathematics.

(c) **BALANCED SCIENCE PROGRAM AND ROBUST AUTHORIZATION LEVELS.**—The balanced science program authorized by section 101(d) of the National Aeronautics and Space Administration Authorization Act of 2005 (42 U.S.C. 16611(d)) shall be an element of the contribution by the Administration to the interagency programs.

(d) **ANNUAL REPORT.**—

(1) **REQUIREMENT.**—The Administrator shall submit to Congress and the President an annual report describing the activities conducted pursuant to this section, including a description of the goals and the objective metrics upon which funding decisions were made.

(2) **CONTENT.**—Each report submitted pursuant to paragraph (1) shall include, with regard to science, technology,

engineering, and mathematics education programs, at a minimum, the following:

- (A) A description of each program.
- (B) The amount spent on each program.
- (C) The number of students or teachers served by each program.

§ 20304. Basic research enhancement

(a) DEFINITION OF BASIC RESEARCH.—In this section, the term “basic research” has the meaning given the term in Office of Management and Budget Circular No. A–11.

(b) COORDINATION.—The Administrator, the Director of the National Science Foundation, the Secretary of Energy, the Secretary of Defense, and the Secretary of Commerce shall, to the extent practicable, coordinate basic research activities related to physical sciences, technology, engineering, and mathematics.

§ 20305. National Academies decadal surveys

(a) IN GENERAL.—The Administrator shall enter into agreements on a periodic basis with the National Academies for independent assessments, also known as decadal surveys, to take stock of the status and opportunities for Earth and space science discipline fields and Aeronautics research and to recommend priorities for research and programmatic areas over the next decade.

(b) INDEPENDENT COST ESTIMATES.—The agreements described in subsection (a) shall include independent estimates of the life cycle costs and technical readiness of missions assessed in the decadal surveys whenever possible.

(c) REEXAMINATION.—The Administrator shall request that each National Academies decadal survey committee identify any conditions or events, such as significant cost growth or scientific or technological advances, that would warrant the Administration asking the National Academies to reexamine the priorities that the decadal survey had established.

Subtitle III—Administrative Provisions

CHAPTER 301—APPROPRIATIONS, BUDGETS, AND ACCOUNTING

Sec.

- 30101. Prior authorization of appropriations required.
- 30102. Working capital fund.
- 30103. Budgets.
- 30104. Baselines and cost controls.

§ 30101. Prior authorization of appropriations required

Notwithstanding the provisions of any other law, no appropriation may be made to the Administration unless previously authorized by legislation enacted by Congress.

§ 30102. Working capital fund

(a) ESTABLISHMENT.—There is hereby established in the United States Treasury an Administration working capital fund.

(b) AVAILABILITY OF AMOUNTS.—

(1) IN GENERAL.—Amounts in the fund are available for financing activities, services, equipment, information, and facilities as authorized by law to be provided—

(A) within the Administration;

(B) to other agencies or instrumentalities of the United States;

(C) to any State, territory, or possession or political subdivision thereof;

(D) to other public or private agencies; or

(E) to any person, firm, association, corporation, or educational institution on a reimbursable basis.

(2) CAPITAL REPAIRS.—The fund shall also be available for the purpose of funding capital repairs, renovations, rehabilitation, sustainment, demolition, or replacement of Administration real property, on a reimbursable basis within the Administration.

(3) NO FISCAL YEAR LIMITATION.—Amounts in the fund are available without regard to fiscal year limitation.

(c) CONTENTS.—The capital of the fund consists of—

(1) amounts appropriated to the fund;

(2) the reasonable value of stocks of supplies, equipment, and other assets and inventories on order that the Administrator transfers to the fund, less the related liabilities and unpaid obligations; and

(3) payments received for loss or damage to property of the fund.

(d) REIMBURSEMENT.—The fund shall be reimbursed, in advance, for supplies and services at rates that will approximate the expenses of operation, such as the accrual of annual leave, depreciation of plant, property, and equipment, and overhead.

§ 30103. Budgets

(a) CATEGORIES.—The proposed budget for the Administration submitted by the President for each fiscal year shall be accompanied by documents showing—

(1) by program—

(A) the budget for space operations, including the International Space Station and the space shuttle;

(B) the budget for exploration systems;

(C) the budget for aeronautics;

(D) the budget for space science;

(E) the budget for Earth science;

(F) the budget for microgravity science;

(G) the budget for education;

(H) the budget for safety oversight; and

(I) the budget for public relations;

(2) the budget for technology transfer programs;

(3) the budget for the Integrated Enterprise Management Program, by individual element;

(4) the budget for the Independent Technical Authority, both total and by center;

(5) the total budget for the prize program under section 20144 of this title, and the administrative budget for that program; and

(6) the comparable figures for at least the 2 previous fiscal years for each item in the proposed budget.

(b) **ADDITIONAL BUDGET INFORMATION UPON REQUEST BY COMMITTEES.**—The Administration shall make available, upon request from the Committee on Science and Technology of the House of Representatives or the Committee on Commerce, Science, and Transportation of the Senate—

(1) information on corporate and center general and administrative costs and service pool costs, including—

(A) the total amount of funds being allocated for those purposes for any fiscal year for which the President has submitted an annual budget request to Congress;

(B) the amount of funds being allocated for those purposes for each center, for headquarters, and for each directorate; and

(C) the major activities included in each cost category; and

(2) the figures on the amount of unobligated funds and unexpended funds, by appropriations account—

(A) that remained at the end of the fiscal year prior to the fiscal year in which the budget is being presented that were carried over into the fiscal year in which the budget is being presented;

(B) that are estimated will remain at the end of the fiscal year in which the budget is being presented that are proposed to be carried over into the fiscal year for which the budget is being presented; and

(C) that are estimated will remain at the end of the fiscal year for which the budget is being presented.

(c) **INFORMATION IN ANNUAL BUDGET JUSTIFICATION.**—The Administration shall provide, at a minimum, the following information in its annual budget justification:

(1) The actual, current, proposed funding level, and estimated budgets for the next 5 fiscal years by directorate, theme, program, project and activity within each appropriations account.

(2) The proposed programmatic and non-programmatic construction of facilities.

(3) The budget for headquarters including—

(A) the budget by office, and any division thereof, for the actual, current, proposed funding level, and estimated budgets for the next 5 fiscal years;

(B) the travel budget for each office, and any division thereof, for the actual, current, and proposed funding level; and

(C) the civil service full time equivalent assignments per headquarters office, and any division thereof, including the number of Senior Executive Service, noncareer, detailee, and contract personnel per office.

(4) Within 14 days of the submission of the budget to Congress an accompanying volume shall be provided to the Committees on Appropriations containing the following information for each center, facility managed by any center, and federally funded research and development center operated on behalf of the Administration:

(A) The actual, current, proposed funding level, and estimated budgets for the next 5 fiscal years by directorate, theme, program, project, and activity.

(B) The proposed programmatic and non-programmatic construction of facilities.

(C) The number of civil service full time equivalent positions per center for each identified fiscal year.

(D) The number of civil service full time equivalent positions considered to be uncovered capacity at each location for each identified fiscal year.

(5) The proposed budget as designated by object class for each directorate, theme, and program.

(6) Sufficient narrative shall be provided to explain the request for each program, project, and activity, and an explanation for any deviation to previously adopted baselines for all justification materials provided to the Committees.

(d) ESTIMATE OF GROSS RECEIPTS AND PROPOSED USE OF FUNDS RELATED TO LEASE OF PROPERTY.—Each annual budget request shall include an annual estimate of gross receipts and collections and proposed use of all funds collected pursuant to section 20145 of this title.

§ 30104. Baselines and cost controls

(a) DEFINITIONS.—In this section:

(1) DEVELOPMENT.—The term “development” means the phase of a program following the formulation phase and beginning with the approval to proceed to implementation, as defined in the Administration’s Procedural Requirements 7120.5c, dated March 22, 2005.

(2) DEVELOPMENT COST.—The term “development cost” means the total of all costs, including construction of facilities and civil servant costs, from the period beginning with the approval to proceed to implementation through the achievement of operational readiness, without regard to funding source or management control, for the life of the program.

(3) LIFE-CYCLE COST.—The term “life-cycle cost” means the total of the direct, indirect, recurring, and nonrecurring costs, including the construction of facilities and civil servant costs, and other related expenses incurred or estimated to be incurred in the design, development, verification, production, operation, maintenance, support, and retirement of a program over its planned lifespan, without regard to funding source or management control.

(4) MAJOR PROGRAM.—The term “major program” means an activity approved to proceed to implementation that has an estimated life-cycle cost of more than \$250,000,000.

(b) CONDITIONS FOR DEVELOPMENT.—

(1) IN GENERAL.—The Administration shall not enter into a contract for the development of a major program unless the Administrator determines that—

(A) the technical, cost, and schedule risks of the program are clearly identified and the program has developed a plan to manage those risks;

(B) the technologies required for the program have been demonstrated in a relevant laboratory or test environment; and

(C) the program complies with all relevant policies, regulations, and directives of the Administration.

(2) REPORT.—The Administrator shall transmit a report describing the basis for the determination required under paragraph (1) to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce,

Science, and Transportation of the Senate at least 30 days before entering into a contract for development under a major program.

(3) NONDELEGATION.—The Administrator may not delegate the determination requirement under this subsection, except in cases in which the Administrator has a conflict of interest.

(c) MAJOR PROGRAM ANNUAL REPORTS.—

(1) REQUIREMENT.—Annually, at the same time as the President's annual budget submission to Congress, the Administrator shall transmit to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report that includes the information required by this section for each major program for which the Administration proposes to expend funds in the subsequent fiscal year. Reports under this paragraph shall be known as Major Program Annual Reports.

(2) BASELINE REPORT.—The first Major Program Annual Report for each major program shall include a Baseline Report that shall, at a minimum, include—

(A) the purposes of the program and key technical characteristics necessary to fulfill those purposes;

(B) an estimate of the life-cycle cost for the program, with a detailed breakout of the development cost, program reserves, and an estimate of the annual costs until development is completed;

(C) the schedule for development, including key program milestones;

(D) the plan for mitigating technical, cost, and schedule risks identified in accordance with subsection (b)(1)(A); and

(E) the name of the person responsible for making notifications under subsection (d), who shall be an individual whose primary responsibility is overseeing the program.

(3) INFORMATION UPDATES.—For major programs for which a Baseline Report has been submitted, each subsequent Major Program Annual Report shall describe any changes to the information that had been provided in the Baseline Report, and the reasons for those changes.

(d) NOTIFICATION.—

(1) REQUIREMENT.—The individual identified under subsection (c)(2)(E) shall immediately notify the Administrator any time that individual has reasonable cause to believe that, for the major program for which he or she is responsible—

(A) the development cost of the program is likely to exceed the estimate provided in the Baseline Report of the program by 15 percent or more; or

(B) a milestone of the program is likely to be delayed by 6 months or more from the date provided for it in the Baseline Report of the program.

(2) REASONS.—Not later than 30 days after the notification required under paragraph (1), the individual identified under subsection (c)(2)(E) shall transmit to the Administrator a written notification explaining the reasons for the change in the cost or milestone of the program for which notification was provided under paragraph (1).

(3) NOTIFICATION OF CONGRESS.—Not later than 15 days after the Administrator receives a written notification under paragraph (2), the Administrator shall transmit the notification to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate.

(e) FIFTEEN PERCENT THRESHOLD.—

(1) DETERMINATION, REPORT, AND INITIATION OF ANALYSIS.—Not later than 30 days after receiving a written notification under subsection (d)(2), the Administrator shall determine whether the development cost of the program is likely to exceed the estimate provided in the Baseline Report of the program by 15 percent or more, or whether a milestone is likely to be delayed by 6 months or more. If the determination is affirmative, the Administrator shall—

(A) transmit to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate, not later than 15 days after making the determination, a report that includes—

(i) a description of the increase in cost or delay in schedule and a detailed explanation for the increase or delay;

(ii) a description of actions taken or proposed to be taken in response to the cost increase or delay; and

(iii) a description of any impacts the cost increase or schedule delay, or the actions described under clause (ii), will have on any other program within the Administration; and

(B) if the Administrator intends to continue with the program, promptly initiate an analysis of the program, which shall include, at a minimum—

(i) the projected cost and schedule for completing the program if current requirements of the program are not modified;

(ii) the projected cost and the schedule for completing the program after instituting the actions described under subparagraph (A)(ii); and

(iii) a description of, and the projected cost and schedule for, a broad range of alternatives to the program.

(2) COMPLETION OF ANALYSIS AND TRANSMITTAL TO COMMITTEES.—The Administration shall complete an analysis initiated under paragraph (1)(B) not later than 6 months after the Administrator makes a determination under this subsection. The Administrator shall transmit the analysis to the Committee on Science and Technology of the House of Representatives and Committee on Commerce, Science, and Transportation of the Senate not later than 30 days after its completion.

(f) THIRTY PERCENT THRESHOLD.—If the Administrator determines under subsection (e) that the development cost of a program will exceed the estimate provided in the Baseline Report of the program by more than 30 percent, then, beginning 18 months after the date the Administrator transmits a report under subsection (e)(1)(A), the Administrator shall not expend any additional funds on the program, other than termination costs, unless Congress

has subsequently authorized continuation of the program by law. An appropriation for the specific program enacted subsequent to a report being transmitted shall be considered an authorization for purposes of this subsection. If the program is continued, the Administrator shall submit a new Baseline Report for the program no later than 90 days after the date of enactment of the Act under which Congress has authorized continuation of the program.

CHAPTER 303—CONTRACTING AND PROCUREMENT

Sec.	
30301.	Guaranteed customer base.
30302.	Quality assurance personnel.
30303.	Tracking and data relay satellite services.
30304.	Award of contracts to small businesses and disadvantaged individuals.
30305.	Outreach program.
30306.	Small business contracting.
30307.	Requirement for independent cost analysis.
30308.	Cost effectiveness calculations.
30309.	Use of abandoned and underutilized buildings, grounds, and facilities.
30310.	Exception to alternative fuel procurement requirement.

§ 30301. Guaranteed customer base

No amount appropriated to the Administration may be used to fund grants, contracts, or other agreements with an expected duration of more than one year, when a primary effect of the grant, contract, or agreement is to provide a guaranteed customer base for or establish an anchor tenancy in new commercial space hardware or services unless an appropriations Act specifies the new commercial space hardware or services to be developed or used, or the grant, contract, or agreement is otherwise identified in such Act.

§ 30302. Quality assurance personnel

(a) EXCLUSION OF ADMINISTRATION PERSONNEL.—A person providing articles to the Administration under a contract entered into after December 9, 1991, may not exclude Administration quality assurance personnel from work sites except as provided in a contract provision that has been submitted to Congress as provided in subsection (b).

(b) CONTRACT PROVISIONS.—The Administration shall not enter into any contract which permits the exclusion of Administration quality assurance personnel from work sites unless the Administrator has submitted a copy of the provision permitting such exclusion to Congress at least 60 days before entering into the contract.

§ 30303. Tracking and data relay satellite services

(a) CONTRACTS.—The Administration is authorized, when so provided in an appropriation Act, to enter into and to maintain a contract for tracking and data relay satellite services. Such services shall be furnished to the Administration in accordance with applicable authorization and appropriations Acts. The Government shall incur no costs under such contract prior to the furnishing of such services except that the contract may provide for the payment for contingent liability of the Government which may accrue in the event the Government should decide for its convenience to terminate the contract before the end of the period of the contract. Facilities which may be required in the performance of the contract may be constructed on Government-owned lands if there is included

in the contract a provision under which the Government may acquire title to the facilities, under terms and conditions agreed upon in the contract, upon termination of the contract.

(b) **REPORTS TO CONGRESS.**—The Administrator shall in January of each year report to the Committee on Science and Technology and the Committee on Appropriations of the House of Representatives and the Committee on Commerce, Science, and Transportation and the Committee on Appropriations of the Senate the projected aggregate contingent liability of the Government under termination provisions of any contract authorized in this section through the next fiscal year. The authority of the Administration to enter into and to maintain the contract authorized hereunder shall remain in effect unless repealed by legislation enacted by Congress.

§ 30304. Award of contracts to small businesses and disadvantaged individuals

The Administrator shall annually establish a goal of at least 8 percent of the total value of prime and subcontracts awarded in support of authorized programs, including the space station by the time operational status is obtained, which funds will be made available to small business concerns or other organizations owned or controlled by socially and economically disadvantaged individuals (within the meaning of paragraphs (5) and (6) of section 8(a) of the Small Business Act (15 U.S.C. 637(a))), including Historically Black Colleges and Universities that are part B institutions (as defined in section 322(2) of the Higher Education Act of 1965 (20 U.S.C. 1061(2))), Hispanic-serving institutions (as defined in section 502(a)(5) of that Act (20 U.S.C. 1101a(a)(5))), Tribal Colleges or Universities (as defined in section 316(b)(3) of that Act (20 U.S.C. 1059c(b)(3))), Alaska Native-serving institutions (as defined in section 317(b)(2) of that Act (20 U.S.C. 1059d(b)(2))), Native Hawaiian-serving institutions (as defined in section 317(b)(4) of that Act (20 U.S.C. 1059d(b)(4))), and minority educational institutions (as defined by the Secretary of Education pursuant to the General Education Provisions Act (20 U.S.C. 1221 et seq.)).

§ 30305. Outreach program

(a) **ESTABLISHMENT.**—The Administration shall competitively select an organization to partner with Administration centers, aerospace contractors, and academic institutions to carry out a program to help promote the competitiveness of small, minority-owned, and women-owned businesses in communities across the United States through enhanced insight into the technologies of the Administration's space and aeronautics programs. The program shall support the mission of the Administration's Innovative Partnerships Program with its emphasis on joint partnerships with industry, academia, government agencies, and national laboratories.

(b) **PROGRAM STRUCTURE.**—In carrying out the program described in subsection (a), the organization shall support the mission of the Administration's Innovative Partnerships Program by undertaking the following activities:

(1) **FACILITATING ENHANCED INSIGHT.**—Facilitating the enhanced insight of the private sector into the Administration's technologies in order to increase the competitiveness of the private sector in producing viable commercial products.

(2) **CREATING NETWORK.**—Creating a network of academic institutions, aerospace contractors, and Administration centers

that will commit to donating appropriate technical assistance to small businesses, giving preference to socially and economically disadvantaged small business concerns, small business concerns owned and controlled by service-disabled veterans, and HUBZone small business concerns. This paragraph shall not apply to any contracting actions entered into or taken by the Administration.

(3) CREATING NETWORK OF ECONOMIC DEVELOPMENT ORGANIZATIONS.—Creating a network of economic development organizations to increase the awareness and enhance the effectiveness of the program nationwide.

(c) REPORT.—Not later than one year after October 15, 2008, and annually thereafter, the Administrator shall submit a report to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate describing the efforts and accomplishments of the program established under subsection (a) in support of the Administration's Innovative Partnerships Program. As part of the report, the Administrator shall provide—

(1) data on the number of small businesses receiving assistance, jobs created and retained, and volunteer hours donated by the Administration, contractors, and academic institutions nationwide;

(2) an estimate of the total dollar value of the economic impact made by small businesses that received technical assistance through the program; and

(3) an accounting of the use of funds appropriated for the program.

§ 30306. Small business contracting

(a) PLAN.—In consultation with the Small Business Administration, the Administrator shall develop a plan to maximize the number and amount of contracts awarded to small business concerns (within the meaning given that term in section 3 of the Small Business Act (15 U.S.C. 632)) and to meet established contracting goals for such concerns.

(b) PRIORITY.—The Administrator shall establish as a priority meeting the contracting goals developed in conjunction with the Small Business Administration to maximize the amount of prime contracts, as measured in dollars, awarded in each fiscal year by the Administration to small business concerns (within the meaning given that term in section 3 of the Small Business Act (15 U.S.C. 632)).

§ 30307. Requirement for independent cost analysis

(a) DEFINITION OF IMPLEMENTATION.—In this section, the term “implementation” means all activity in the life cycle of a project after preliminary design, independent assessment of the preliminary design, and approval to proceed into implementation, including critical design, development, certification, launch, operations, disposal of assets, and, for technology programs, development, testing, analysis, and communication of the results.

(b) REQUIREMENT.—Before any funds may be obligated for implementation of a project that is projected to cost more than \$250,000,000 in total project costs, the Administrator shall conduct and consider an independent life-cycle cost analysis of the project and shall report the results to Congress. In developing cost

accounting and reporting standards for carrying out this section, the Administrator shall, to the extent practicable and consistent with other laws, solicit the advice of experts outside of the Administration.

§ 30308. Cost effectiveness calculations

(a) DEFINITIONS.—In this section:

(1) COMMERCIAL PROVIDER.—The term “commercial provider” means any person providing space transportation services or other space-related activities, the primary control of which is held by persons other than a Federal, State, local, or foreign government.

(2) STATE.—The term “State” means each of the several States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and any other commonwealth, territory, or possession of the United States.

(b) IN GENERAL.—Except as otherwise required by law, in calculating the cost effectiveness of the cost of the Administration engaging in an activity as compared to a commercial provider, the Administrator shall compare the cost of the Administration engaging in the activity using full cost accounting principles with the price the commercial provider will charge for such activity.

§ 30309. Use of abandoned and underutilized buildings, grounds, and facilities

(a) DEFINITION OF DEPRESSED COMMUNITIES.—In this section, the term “depressed communities” means rural and urban communities that are relatively depressed, in terms of age of housing, extent of poverty, growth of per capita income, extent of unemployment, job lag, or surplus labor.

(b) IN GENERAL.—In any case in which the Administrator considers the purchase, lease, or expansion of a facility to meet requirements of the Administration, the Administrator shall consider whether those requirements could be met by the use of one of the following:

(1) Abandoned or underutilized buildings, grounds, and facilities in depressed communities that can be converted to Administration usage at a reasonable cost, as determined by the Administrator.

(2) Any military installation that is closed or being closed, or any facility at such an installation.

(3) Any other facility or part of a facility that the Administrator determines to be—

(A) owned or leased by the United States for the use of another agency of the Federal Government; and

(B) considered by the head of the agency involved to be—

- (i) excess to the needs of that agency; or
- (ii) underutilized by that agency.

§ 30310. Exception to alternative fuel procurement requirement

Section 526(a) of the Energy Independence and Security Act of 2007 (42 U.S.C. 17142(a)) does not prohibit the Administration from entering into a contract to purchase a generally available

fuel that is not an alternative or synthetic fuel or predominantly produced from a nonconventional petroleum source, if—

- (1) the contract does not specifically require the contractor to provide an alternative or synthetic fuel or fuel from a nonconventional petroleum source;
- (2) the purpose of the contract is not to obtain an alternative or synthetic fuel or fuel from a nonconventional petroleum source; and
- (3) the contract does not provide incentives for a refinery upgrade or expansion to allow a refinery to use or increase its use of fuel from a nonconventional petroleum source.

CHAPTER 305—MANAGEMENT AND REVIEW

Sec.

30501. Lessons learned and best practices.
30502. Whistleblower protection.
30503. Performance assessments.
30504. Assessment of science mission extensions.

§ 30501. Lessons learned and best practices

(a) IN GENERAL.—The Administrator shall transmit to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate an implementation plan describing the Administration's approach for obtaining, implementing, and sharing lessons learned and best practices for its major programs and projects not later than 180 days after December 30, 2005. The implementation plan shall be updated and maintained to ensure that it is current and consistent with the burgeoning culture of learning and safety that is emerging at the Administration.

(b) REQUIRED CONTENT.—The implementation plan shall contain at a minimum the lessons learned and best practices requirements for the Administration, the organizations or positions responsible for enforcement of the requirements, the reporting structure, and the objective performance measures indicating the effectiveness of the activity.

(c) INCENTIVES.—The Administrator shall provide incentives to encourage sharing and implementation of lessons learned and best practices by employees, projects, and programs, as well as penalties for programs and projects that are determined not to have demonstrated use of those resources.

§ 30502. Whistleblower protection

(a) IN GENERAL.—Not later than 1 year after December 30, 2005, the Administrator shall transmit to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a plan describing steps to be taken by the Administration to protect from retaliation Administration employees who raise concerns about substantial and specific dangers to public health and safety or about substantial and specific factors that could threaten the success of a mission. The plan shall be designed to ensure that Administration employees have the full protection required by law. The Administrator shall implement the plan not more than 1 year after its transmittal.

(b) GOAL.—The Administrator shall ensure that the plan describes a system that will protect employees who wish to raise or have raised concerns described in subsection (a).

(c) PLAN.—At a minimum, the plan shall include, consistent with Federal law—

(1) a reporting structure that ensures that the officials who are the subject of a whistleblower's complaint will not learn the identity of the whistleblower;

(2) a single point to which all complaints can be made without fear of retribution;

(3) procedures to enable the whistleblower to track the status of the case;

(4) activities to educate employees about their rights as whistleblowers and how they are protected by law;

(5) activities to educate employees about their obligations to report concerns and their accountability before and after receiving the results of the investigations into their concerns; and

(6) activities to educate all appropriate Administration Human Resources professionals, and all Administration managers and supervisors, regarding personnel laws, rules, and regulations.

(d) REPORT.—Not later than February 15 of each year beginning February 15, 2007, the Administrator shall transmit a report to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate on the concerns described in subsection (a) that were raised during the previous fiscal year. At a minimum, the report shall provide—

(1) the number of concerns that were raised, divided into the categories of safety and health, mission assurance, and mismanagement, and the disposition of those concerns, including whether any employee was disciplined as a result of a concern having been raised; and

(2) any recommendations for reforms to further prevent retribution against employees who raise concerns.

§ 30503. Performance assessments

(a) IN GENERAL.—The performance of each division in the Science directorate of the Administration shall be reviewed and assessed by the National Academy of Sciences at 5-year intervals.

(b) TIMING.—Beginning with the first fiscal year following December 30, 2005, the Administrator shall select at least one division for review under this section. The Administrator shall select divisions so that all disciplines will have received their first review within 6 fiscal years of December 30, 2005.

(c) REPORTS.—Not later than March 1 of each year, beginning with the first fiscal year after December 30, 2005, the Administrator shall transmit a report to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate—

(1) setting forth in detail the results of any external review under subsection (a);

(2) setting forth in detail actions taken by the Administration in response to any external review; and

(3) including a summary of findings and recommendations from any other relevant external reviews of the Administration's science mission priorities and programs.

§ 30504. Assessment of science mission extensions

(a) ASSESSMENT.—The Administrator shall carry out biennial reviews within each of the Science divisions to assess the cost and benefits of extending the date of the termination of data collection for those missions that have exceeded their planned mission lifetime.

(b) CONSULTATION AND CONSIDERATION OF POTENTIAL BENEFITS OF INSTRUMENTS ON MISSIONS.—For those missions that have an operational component, the National Oceanic and Atmospheric Administration or any other affected agency shall be consulted and the potential benefits of instruments on missions that are beyond their planned mission lifetime taken into account.

CHAPTER 307—INTERNATIONAL COOPERATION AND COMPETITION

Sec.
30701. Competitiveness and international cooperation.
30702. Foreign contract limitation.
30703. Foreign launch vehicles.
30704. Offshore performance of contracts for the procurement of goods and services.

§ 30701. Competitiveness and international cooperation

(a) LIMITATION.—

(1) SOLICITATION OF COMMENT.—As part of the evaluation of the costs and benefits of entering into an obligation to conduct a space mission in which a foreign entity will participate as a supplier of the spacecraft, spacecraft system, or launch system, the Administrator shall solicit comment on the potential impact of such participation through notice published in Commerce Business Daily at least 45 days before entering into such an obligation.

(2) AGREEMENTS WITH PEOPLE'S REPUBLIC OF CHINA.—The Administrator shall certify to Congress at least 15 days in advance of any cooperative agreement with the People's Republic of China, or any company owned by the People's Republic of China or incorporated under the laws of the People's Republic of China, involving spacecraft, spacecraft systems, launch systems, or scientific or technical information, that—

(A) the agreement is not detrimental to the United States space launch industry; and

(B) the agreement, including any indirect technical benefit that could be derived from the agreement, will not improve the missile or space launch capabilities of the People's Republic of China.

(3) ANNUAL AUDIT.—The Inspector General of the Administration, in consultation with appropriate agencies, shall conduct an annual audit of the policies and procedures of the Administration with respect to the export of technologies and the transfer of scientific and technical information, to assess the extent to which the Administration is carrying out its activities in compliance with Federal export control laws and with paragraph (2).

(b) NATIONAL INTERESTS.—

(1) DEFINITION OF UNITED STATES COMMERCIAL PROVIDER.— In this subsection, the term “United States commercial provider” means a commercial provider (as defined in section 30308(a) of this title), organized under the laws of the United States or of a State (as defined in section 30308(a) of this title), which is—

(A) more than 50 percent owned by United States nationals; or

(B) a subsidiary of a foreign company and the Secretary of Commerce finds that—

(i) such subsidiary has in the past evidenced a substantial commitment to the United States market through—

(I) investments in the United States in long-term research, development, and manufacturing (including the manufacture of major components and subassemblies); and

(II) significant contributions to employment in the United States; and

(ii) the country or countries in which such foreign company is incorporated or organized, and, if appropriate, in which it principally conducts its business, affords reciprocal treatment to companies described in subparagraph (A) comparable to that afforded to such foreign company’s subsidiary in the United States, as evidenced by—

(I) providing comparable opportunities for companies described in subparagraph (A) to participate in Government sponsored research and development similar to that authorized under this section, section 30307, 30308, 30309, or 30702 of this title, or the National Aeronautics and Space Administration Authorization Act of 2000 (Public Law 106–391, 114 Stat. 1577);

(II) providing no barriers to companies described in subparagraph (A) with respect to local investment opportunities that are not provided to foreign companies in the United States; and

(III) providing adequate and effective protection for the intellectual property rights of companies described in subparagraph (A).

(2) IN GENERAL.—Before entering into an obligation described in subsection (a), the Administrator shall consider the national interests of the United States described in paragraph (3) of this subsection.

(3) DESCRIPTION OF NATIONAL INTERESTS.—International cooperation in space exploration and science activities most effectively serves the United States national interest when it—

(A)(i) reduces the cost of undertaking missions the United States Government would pursue unilaterally;

(ii) enables the United States to pursue missions that it could not otherwise afford to pursue unilaterally; or

(iii) enhances United States capabilities to use and develop space for the benefit of United States citizens;

(B) is undertaken in a manner that is sensitive to the desire of United States commercial providers to develop or explore space commercially;

(C) is consistent with the need for Federal agencies to use space to complete their missions; and

(D) is carried out in a manner consistent with United States export control laws.

§ 30702. Foreign contract limitation

The Administration shall not enter into any agreement or contract with a foreign government that grants the foreign government the right to recover profit in the event that the agreement or contract is terminated.

§ 30703. Foreign launch vehicles

(a) ACCORD WITH SPACE TRANSPORTATION POLICY.—The Administration shall not launch a payload on a foreign launch vehicle except in accordance with the Space Transportation Policy announced by the President on December 21, 2004. This subsection shall not be construed to prevent the President from waiving the Space Transportation Policy.

(b) INTERAGENCY COORDINATION.—The Administration shall not launch a payload on a foreign launch vehicle unless the Administration commenced the interagency coordination required by the Space Transportation Policy announced by the President on December 21, 2004, at least 90 days before entering into a development contract for the payload.

(c) APPLICATION.—This section shall not apply to any payload for which development has begun prior to December 30, 2005, including the James Webb Space Telescope.

§ 30704. Offshore performance of contracts for the procurement of goods and services

The Administrator shall submit to Congress, not later than 120 days after the end of each fiscal year, a report on the contracts and subcontracts performed overseas and the amount of purchases directly or indirectly by the Administration from foreign entities in that fiscal year. The report shall separately indicate—

(1) the contracts and subcontracts and their dollar values for which the Administrator determines that essential goods or services under the contract are available only from a source outside the United States; and

(2) the items and their dollar values for which the Buy American Act (41 U.S.C. 10a et seq.) was waived pursuant to obligations of the United States under international agreements.

CHAPTER 309—AWARDS

Sec.
30901. Congressional Space Medal of Honor.
30902. Charles “Pete” Conrad Astronomy Awards.

§ 30901. Congressional Space Medal of Honor

(a) AUTHORITY TO AWARD.—The President may award, and present in the name of Congress, a medal of appropriate design, which shall be known as the Congressional Space Medal of Honor,

to any astronaut who in the performance of the astronaut's duties has distinguished himself or herself by exceptionally meritorious efforts and contributions to the welfare of the Nation and of humankind.

(b) APPROPRIATIONS.—There is authorized to be appropriated from time to time such sums of money as may be necessary to carry out the purposes of this section.

§ 30902. Charles “Pete” Conrad Astronomy Awards

(a) SHORT TITLE.—This section may be cited as the “Charles ‘Pete’ Conrad Astronomy Awards Act”.

(b) DEFINITIONS.—In this section:

(1) AMATEUR ASTRONOMER.—The term “amateur astronomer” means an individual whose employer does not provide any funding, payment, or compensation to the individual for the observation of asteroids and other celestial bodies, and does not include any individual employed as a professional astronomer.

(2) MINOR PLANET CENTER.—The term “Minor Planet Center” means the Minor Planet Center of the Smithsonian Astrophysical Observatory.

(3) NEAR-EARTH ASTEROID.—The term “near-Earth asteroid” means an asteroid with a perihelion distance of less than 1.3 Astronomical Units from the Sun.

(4) PROGRAM.—The term “Program” means the Charles “Pete” Conrad Astronomy Awards Program established under subsection (c).

(c) CHARLES “PETE” CONRAD ASTRONOMY AWARDS PROGRAM.—

(1) IN GENERAL.—The Administrator shall establish the Charles “Pete” Conrad Astronomy Awards Program.

(2) AWARDS.—The Administrator shall make awards under the Program based on the recommendations of the Minor Planet Center.

(3) AWARD CATEGORIES.—The Administrator shall make one annual award, unless there are no eligible discoveries or contributions, for each of the following categories:

(A) DISCOVERY OF BRIGHTEST NEAR-EARTH ASTEROID.—The amateur astronomer or group of amateur astronomers who in the preceding calendar year discovered the intrinsically brightest near-Earth asteroid among the near-Earth asteroids that were discovered during that year by amateur astronomers or groups of amateur astronomers.

(B) GREATEST CONTRIBUTION TO CATALOGUING NEAR-EARTH ASTEROIDS.—The amateur astronomer or group of amateur astronomers who made the greatest contribution to the Minor Planet Center's mission of cataloguing near-Earth asteroids during the preceding year.

(4) AWARD AMOUNT.—An award under the Program shall be in the amount of \$3,000.

(5) GUIDELINES.—

(A) CITIZEN OR PERMANENT RESIDENT.—No individual who is not a citizen or permanent resident of the United States at the time of the individual's discovery or contribution may receive an award under this section.

(B) FINALITY.—The decisions of the Administrator in making awards under this section are final.

CHAPTER 311—SAFETY

Sec.
31101. Aerospace Safety Advisory Panel.
31102. Drug and alcohol testing.

§ 31101. Aerospace Safety Advisory Panel

(a) **ESTABLISHMENT AND MEMBERS.**—There is established an Aerospace Safety Advisory Panel consisting of a maximum of 9 members who shall be appointed by the Administrator for terms of 6 years each. Not more than 4 such members shall be chosen from among the officers and employees of the Administration.

(b) **CHAIRMAN.**—One member shall be designated by the Panel as its Chairman.

(c) **DUTIES.**—The Panel shall—

(1) review safety studies and operations plans referred to it, including evaluating the Administration's compliance with the return-to-flight and continue-to-fly recommendations of the Columbia Accident Investigation Board, and make reports thereon;

(2) advise the Administrator and Congress with respect to—
(A) the hazards of proposed or existing facilities and proposed operations;

(B) the adequacy of proposed or existing safety standards; and

(C) management and culture related to safety; and

(3) perform such other duties as the Administrator may request.

(d) **COMPENSATION AND EXPENSES.**—

(1) **COMPENSATION.**—

(A) **FEDERAL OFFICERS AND EMPLOYEES.**—A member of the Panel who is an officer or employee of the Federal Government shall receive no compensation for the member's services as such.

(B) **MEMBERS APPOINTED FROM OUTSIDE THE FEDERAL GOVERNMENT.**—A member of the Panel appointed from outside the Federal Government shall receive compensation, at a rate not to exceed the per diem rate equivalent to the maximum rate payable under section 5376 of title 5, for each day the member is engaged in the actual performance of duties vested in the Panel.

(2) **EXPENSES.**—A member of the Panel shall be allowed necessary travel expenses (or in the alternative, mileage for use of a privately owned vehicle and a per diem in lieu of subsistence not to exceed the rate and amount prescribed in sections 5702 and 5704 of title 5), and other necessary expenses incurred by the member in the performance of duties vested in the Panel, without regard to the provisions of subchapter I of chapter 57 of title 5, the Standardized Government Travel Regulations, or section 5731 of title 5.

(e) **ANNUAL REPORT.**—The Panel shall submit an annual report to the Administrator and to Congress. In the first annual report submitted after December 30, 2005, the Panel shall include an evaluation of the Administration's management and culture related to safety. Each annual report shall include an evaluation of the Administration's compliance with the recommendations of the Columbia Accident Investigation Board through retirement of the space shuttle.

§ 31102. Drug and alcohol testing

(a) **DEFINITION OF CONTROLLED SUBSTANCE.**—In this section, the term “controlled substance” means any substance under section 102(6) of the Controlled Substances Act (21 U.S.C. 802(6)) specified by the Administrator.

(b) **TESTING PROGRAM.**—

(1) **EMPLOYEES OF ADMINISTRATION.**—The Administrator shall establish a program applicable to employees of the Administration whose duties include responsibility for safety-sensitive, security, or national security functions. Such program shall provide for preemployment, reasonable suspicion, random, and post-accident testing for use, in violation of applicable law or Federal regulation, of alcohol or a controlled substance. The Administrator may also prescribe regulations, as the Administrator considers appropriate in the interest of safety, security, and national security, for the conduct of periodic recurring testing of such employees for such use in violation of applicable law or Federal regulation.

(2) **EMPLOYEES OF CONTRACTORS.**—The Administrator shall, in the interest of safety, security, and national security, prescribe regulations. Such regulations shall establish a program that requires Administration contractors to conduct preemployment, reasonable suspicion, random, and post-accident testing of contractor employees responsible for safety-sensitive, security, or national security functions (as determined by the Administrator) for use, in violation of applicable law or Federal regulation, of alcohol or a controlled substance. The Administrator may also prescribe regulations, as the Administrator considers appropriate in the interest of safety, security, and national security, for the conduct of periodic recurring testing of such employees for such use in violation of applicable law or Federal regulation.

(3) **SUSPENSION, DISQUALIFICATION, OR DISMISSAL.**—In prescribing regulations under the programs required by this subsection, the Administrator shall require, as the Administrator considers appropriate, the suspension, disqualification, or dismissal of any employee to which paragraph (1) or (2) applies, in accordance with the provisions of this section, in any instance where a test conducted and confirmed under this section indicates that such employee has used, in violation of applicable law or Federal regulation, alcohol or a controlled substance.

(c) **PROHIBITION ON SERVICE.**—

(1) **PROHIBITION UNLESS PROGRAM OF REHABILITATION COMPLETED.**—No individual who is determined by the Administrator under this section to have used, in violation of applicable law or Federal regulation, alcohol or a controlled substance after December 9, 1991, shall serve as an Administration employee with responsibility for safety-sensitive, security, or national security functions (as determined by the Administrator), or as an Administration contractor employee with such responsibility, unless such individual has completed a program of rehabilitation described in subsection (d).

(2) **UNCONDITIONAL PROHIBITION.**—Any such individual determined by the Administrator under this section to have used, in violation of applicable law or Federal regulation, alcohol or a controlled substance after December 9, 1991, shall not

be permitted to perform the duties that the individual performed prior to the date of the determination, if the individual—

- (A) engaged in such use while on duty;
- (B) prior to such use had undertaken or completed a rehabilitation program described in subsection (d);
- (C) following such determination refuses to undertake such a rehabilitation program; or
- (D) following such determination fails to complete such a rehabilitation program.

(d) PROGRAM FOR REHABILITATION.—

(1) REGULATIONS AND AVAILABILITY OF PROGRAM FOR CONTRACTOR EMPLOYEES.—The Administrator shall prescribe regulations setting forth requirements for rehabilitation programs which at a minimum provide for the identification and opportunity for treatment of employees referred to in subsection (b) in need of assistance in resolving problems with the use, in violation of applicable law or Federal regulation, of alcohol or a controlled substance. Each contractor is encouraged to make such a program available to all of its employees in addition to those employees referred to in subsection (b)(2). The Administrator shall determine the circumstances under which such employees shall be required to participate in such a program. Nothing in this subsection shall preclude any Administration contractor from establishing a program under this subsection in cooperation with any other such contractor.

(2) ESTABLISHMENT AND MAINTENANCE OF PROGRAM FOR ADMINISTRATION EMPLOYEES.—The Administrator shall establish and maintain a rehabilitation program which at a minimum provides for the identification and opportunity for treatment of those employees of the Administration whose duties include responsibility for safety-sensitive, security, or national security functions who are in need of assistance in resolving problems with the use of alcohol or controlled substances.

(e) PROCEDURES FOR TESTING.—In establishing the programs required under subsection (b), the Administrator shall develop requirements which shall—

(1) promote, to the maximum extent practicable, individual privacy in the collection of specimen samples;

(2) with respect to laboratories and testing procedures for controlled substances, incorporate the Department of Health and Human Services scientific and technical guidelines dated April 11, 1988, and any subsequent amendments thereto, including mandatory guidelines which—

(A) establish comprehensive standards for all aspects of laboratory controlled substances testing and laboratory procedures to be applied in carrying out this section, including standards which require the use of the best available technology for ensuring the full reliability and accuracy of controlled substances tests and strict procedures governing the chain of custody of specimen samples collected for controlled substances testing;

(B) establish the minimum list of controlled substances for which individuals may be tested; and

(C) establish appropriate standards and procedures for periodic review of laboratories and criteria for certification and revocation of certification of laboratories to perform controlled substances testing in carrying out this section;

(3) require that all laboratories involved in the controlled substances testing of any individual under this section shall have the capability and facility, at such laboratory, of performing screening and confirmation tests;

(4) provide that all tests which indicate the use, in violation of applicable law or Federal regulation, of alcohol or a controlled substance by any individual shall be confirmed by a scientifically recognized method of testing capable of providing quantitative data regarding alcohol or a controlled substance;

(5) provide that each specimen sample be subdivided, secured, and labelled in the presence of the tested individual and that a portion thereof be retained in a secure manner to prevent the possibility of tampering, so that in the event the individual's confirmation test results are positive the individual has an opportunity to have the retained portion assayed by a confirmation test done independently at a second certified laboratory if the individual requests the independent test within 3 days after being advised of the results of the initial confirmation test;

(6) ensure appropriate safeguards for testing to detect and quantify alcohol in breath and body fluid samples, including urine and blood, through the development of regulations as may be necessary and in consultation with the Department of Health and Human Services;

(7) provide for the confidentiality of test results and medical information of employees; and

(8) ensure that employees are selected for tests by nondiscriminatory and impartial methods, so that no employee is harassed by being treated differently from other employees in similar circumstances.

(f) EFFECT ON OTHER LAWS AND REGULATIONS.—

(1) CONSISTENCY WITH FEDERAL REGULATION.—No State or local government shall adopt or have in effect any law, rule, regulation, ordinance, standard, or order that is inconsistent with the regulations promulgated under this section.

(2) CONTINUANCE OF REGULATIONS ISSUED BEFORE DECEMBER 9, 1991.—Nothing in this section shall be construed to restrict the discretion of the Administrator to continue in force, amend, or further supplement any regulations issued before December 9, 1991, that govern the use of alcohol and controlled substances by Administration employees with responsibility for safety-sensitive, security, and national security functions (as determined by the Administrator), or by Administration contractor employees with such responsibility.

CHAPTER 313—HEALTHCARE

Sec.

31301. Healthcare program.

31302. Astronaut healthcare survey.

§ 31301. Healthcare program

The Administrator shall develop a plan to better understand the longitudinal health effects of space flight on humans. In the development of the plan, the Administrator shall consider the need

for the establishment of a lifetime healthcare program for Administration astronauts and their families or other methods to obtain needed health data from astronauts and retired astronauts.

§ 31302. Astronaut healthcare survey

(a) SURVEY.—The Administrator shall administer an anonymous survey of astronauts and flight surgeons to evaluate communication, relationships, and the effectiveness of policies. The survey questions and the analysis of results shall be evaluated by experts independent of the Administration. The survey shall be administered on at least a biennial basis.

(b) REPORT.—The Administrator shall transmit a report of the results of the survey to Congress not later than 90 days following completion of the survey.

CHAPTER 315—MISCELLANEOUS

Sec.

- 31501. Orbital debris.
- 31502. Maintenance of facilities.
- 31503. Laboratory productivity.
- 31504. Cooperative unmanned aerial vehicle activities.
- 31505. Development of enhanced-use lease policy.

§ 31501. Orbital debris

The Administrator, in conjunction with the heads of other Federal agencies, shall take steps to develop or acquire technologies that will enable the Administration to decrease the risks associated with orbital debris.

§ 31502. Maintenance of facilities

In order to sustain healthy Centers that are capable of carrying out the Administration's missions, the Administrator shall ensure that adequate maintenance and upgrading of those Center facilities is performed on a regular basis.

§ 31503. Laboratory productivity

The Administration's laboratories are a critical component of the Administration's research capabilities, and the Administrator shall ensure that those laboratories remain productive.

§ 31504. Cooperative unmanned aerial vehicle activities

The Administrator, in cooperation with the Administrator of the National Oceanic and Atmospheric Administration and in coordination with other agencies that have existing civil capabilities, shall continue to utilize the capabilities of unmanned aerial vehicles as appropriate in support of Administration and interagency cooperative missions. The Administrator may enter into cooperative agreements with universities with unmanned aerial vehicle programs and related assets to conduct collaborative research and development activities, including development of appropriate applications of small unmanned aerial vehicle technologies and systems in remote areas.

§ 31505. Development of enhanced-use lease policy

(a) IN GENERAL.—The Administrator shall develop an agency-wide enhanced-use lease policy that—

(1) is based upon sound business practices and lessons learned from the demonstration centers; and

(2) establishes controls and procedures to ensure accountability and protect the interests of the Government.

(b) CONTENTS.—The policy required by subsection (a) shall include the following:

(1) CRITERIA FOR DETERMINING ECONOMIC VALUE.—Criteria for determining whether enhanced-use lease provides better economic value to the Government than other options, such as—

(A) Federal financing through appropriations; or

(B) sale of the property.

(2) SECURITY AND ACCESS.—Requirement for the identification of proposed physical and procedural changes needed to ensure security and restrict access to specified areas, coordination of proposed changes with existing site tenants, and development of estimated costs of such changes.

(3) MEASURES OF EFFECTIVENESS.—Measures of effectiveness for the enhanced-use lease program.

(4) ACCOUNTING CONTROLS.—Accounting controls and procedures to ensure accountability, such as an audit trail and documentation to readily support financial transactions.

Subtitle IV—Aeronautics and Space Research and Education

CHAPTER 401—AERONAUTICS

SUBCHAPTER I—GENERAL

Sec.

40101. Definition of institution of higher education.

40102. Governmental interest in aeronautics research and development.

40103. Cooperation with other agencies on aeronautics activities.

40104. Cooperation among Mission Directorates.

SUBCHAPTER II—HIGH PRIORITY AERONAUTICS RESEARCH AND DEVELOPMENT PROGRAMS

40111. Fundamental research program.

40112. Research and technology programs.

40113. Airspace systems research.

40114. Aviation safety and security research.

40115. Aviation weather research.

40116. University-based Centers for Research on Aviation Training.

SUBCHAPTER III—SCHOLARSHIPS

40131. Aeronautics scholarships.

SUBCHAPTER IV—DATA REQUESTS

40141. Aviation data requests.

SUBCHAPTER I—GENERAL

§ 40101. Definition of institution of higher education

In this chapter, the term “institution of higher education” has the meaning given the term by section 101 of the Higher Education Act of 1965 (20 U.S.C. 1001).

§ 40102. Governmental interest in aeronautics research and development

Congress reaffirms the national commitment to aeronautics research made in chapter 201 of this title. Aeronautics research and development remains a core mission of the Administration. The Administration is the lead agency for civil aeronautics research. Further, the government of the United States shall promote aeronautics research and development that will expand the capacity, ensure the safety, and increase the efficiency of the Nation's air transportation system, promote the security of the Nation, protect the environment, and retain the leadership of the United States in global aviation.

§ 40103. Cooperation with other agencies on aeronautics activities

The Administrator shall coordinate, as appropriate, the Administration's aeronautics activities with relevant programs in the Department of Transportation, the Department of Defense, the Department of Commerce, and the Department of Homeland Security, including the activities of the Next Generation Air Transportation System Joint Planning and Development Office established under section 709 of the Vision 100—Century of Aviation Reauthorization Act (Public Law 108–176, 49 U.S.C. 40101 note).

§ 40104. Cooperation among Mission Directorates

Research and development activities performed by the Aeronautics Research Mission Directorate with the primary objective of assisting in the development of a flight project in another Mission Directorate shall be funded by the Mission Directorate seeking assistance.

SUBCHAPTER II—HIGH PRIORITY AERONAUTICS RESEARCH AND DEVELOPMENT PROGRAMS

§ 40111. Fundamental research program

(a) **OBJECTIVE.**—In order to ensure that the Nation maintains needed capabilities in fundamental areas of aeronautics research, the Administrator shall establish a program of long-term fundamental research in aeronautical sciences and technologies that is not tied to specific development projects.

(b) **OPERATION.**—The Administrator shall conduct the program under this section, in part by awarding grants to institutions of higher education. The Administrator shall encourage the participation of institutions of higher education located in States that participate in the Experimental Program to Stimulate Competitive Research. All grants to institutions of higher education under this section shall be awarded through merit review.

§ 40112. Research and technology programs

(a) **SUPERSONIC TRANSPORT RESEARCH AND DEVELOPMENT.**—The Administrator may establish an initiative with the objective of developing and demonstrating, in a relevant environment, airframe and propulsion technologies to enable efficient, economical overland flight of supersonic civil transport aircraft with no significant impact on the environment.

(b) **ROTORCRAFT AND OTHER RUNWAY-INDEPENDENT AIR VEHICLES.**—The Administrator may establish a rotorcraft and other

runway-independent air vehicles initiative with the objective of developing and demonstrating improved safety, noise, and environmental impact in a relevant environment.

(c) **HYPERSONICS RESEARCH.**—The Administrator may establish a hypersonics research program with the objective of exploring the science and technology of hypersonic flight using air-breathing propulsion concepts, through a mix of theoretical work, basic and applied research, and development of flight research demonstration vehicles. The program may also include the transition to the hypersonic range of Mach 3 to Mach 5.

(d) **REVOLUTIONARY AERONAUTICAL CONCEPTS.**—The Administrator may establish a research program which covers a unique range of subsonic, fixed wing vehicles and propulsion concepts. This research is intended to push technology barriers beyond current subsonic technology. Propulsion concepts include advanced materials, morphing engines, hybrid engines, and fuel cells.

(e) **FUEL CELL-POWERED AIRCRAFT RESEARCH.**—

(1) **OBJECTIVE.**—The Administrator may establish a fuel cell-powered aircraft research program whose objective shall be to develop and test concepts to enable a hydrogen fuel cell-powered aircraft that would have no hydrocarbon or nitrogen oxide emissions into the environment.

(2) **APPROACH.**—The Administrator may establish a program of competitively awarded grants available to teams of researchers that may include the participation of individuals from universities, industry, and government for the conduct of this research.

(f) **MARS AIRCRAFT RESEARCH.**—

(1) **OBJECTIVE.**—The Administrator may establish a Mars Aircraft project whose objective shall be to develop and test concepts for an uncrewed aircraft that could operate for sustained periods in the atmosphere of Mars.

(2) **APPROACH.**—The Administrator may establish a program of competitively awarded grants available to teams of researchers that may include the participation of individuals from universities, industry, and government for the conduct of this research.

§ 40113. Airspace systems research

(a) **OBJECTIVE.**—The Airspace Systems Research program shall pursue research and development to enable revolutionary improvements to and modernization of the National Airspace System, as well as to enable the introduction of new systems for vehicles that can take advantage of an improved, modern air transportation system.

(b) **ALIGNMENT.**—Not later than 1 year after December 30, 2005, the Administrator shall align the projects of the Airspace Systems Research program so that they directly support the objectives of the Joint Planning and Development Office's Next Generation Air Transportation System Integrated Plan.

§ 40114. Aviation safety and security research

(a) **OBJECTIVE.**—The Aviation Safety and Security Research program shall pursue research and development activities that directly address the safety and security needs of the National Airspace System and the aircraft that fly in it. The program shall develop

prevention, intervention, and mitigation technologies aimed at causal, contributory, or circumstantial factors of aviation accidents.

(b) ALIGNMENT.—Not later than 1 year after December 30, 2005, the Administrator shall align the projects of the Aviation Safety and Security Research program so that they directly support the objectives of the Joint Planning and Development Office's Next Generation Air Transportation System Integrated Plan.

§ 40115. Aviation weather research

The Administrator may carry out a program of collaborative research with the National Oceanic and Atmospheric Administration on convective weather events, with the goal of significantly improving the reliability of 2-hour to 6-hour aviation weather forecasts.

§ 40116. University-based Centers for Research on Aviation Training

(a) IN GENERAL.—The Administrator shall award grants to institutions of higher education (or consortia thereof) to establish one or more Centers for Research on Aviation Training under cooperative agreements with appropriate Administration Centers.

(b) PURPOSE.—The purpose of the Centers for Research on Aviation Training shall be to investigate the impact of new technologies and procedures, particularly those related to the aircraft flight deck and to the air traffic management functions, on training requirements for pilots and air traffic controllers.

(c) APPLICATION.—An institution of higher education (or a consortium of such institutions) seeking funding under this section shall submit an application to the Administrator at such time, in such manner, and containing such information as the Administrator may require, including, at a minimum, a 5-year research plan.

(d) AWARD DURATION.—An award made by the Administrator under this section shall be for a period of 5 years and may be renewed on the basis of—

- (1) satisfactory performance in meeting the goals of the research plan proposed in the application submitted under subsection (c); and
- (2) other requirements as specified by the Administrator.

SUBCHAPTER III—SCHOLARSHIPS

§ 40131. Aeronautics scholarships

(a) ESTABLISHMENT.—The Administrator shall establish a program of scholarships for full-time graduate students who are United States citizens and are enrolled in, or have been accepted by and have indicated their intention to enroll in, accredited Masters degree programs in aeronautical engineering or equivalent programs at institutions of higher education. Each such scholarship shall cover the costs of room, board, tuition, and fees, and may be provided for a maximum of 2 years.

(b) IMPLEMENTATION.—Not later than 180 days after December 30, 2005, the Administrator shall publish regulations governing the scholarship program under this section.

(c) COOPERATIVE TRAINING OPPORTUNITIES.—Students who have been awarded a scholarship under this section shall have the opportunity for paid employment at one of the Administration Centers engaged in aeronautics research and development during the

summer prior to the first year of the student's Masters program, and between the first and second year, if applicable.

SUBCHAPTER IV—DATA REQUESTS

§ 40141. Aviation data requests

The Administrator shall make available upon request satellite imagery and aerial photography of remote terrain that the Administration owns at the time of the request to the Administrator of the Federal Aviation Administration or the Director of the Five Star Medallion Program, to assist and train pilots in navigating challenging topographical features of such terrain.

CHAPTER 403—NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM

Sec.

- 40301. Purposes.
- 40302. Definitions.
- 40303. National space grant college and fellowship program.
- 40304. Grants or contracts.
- 40305. Specific national needs.
- 40306. Space grant college and space grant regional consortium.
- 40307. Space grant fellowship program.
- 40308. Space grant review panel.
- 40309. Availability of other Federal personnel and data.
- 40310. Designation or award to be on competitive basis.
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§ 40301. Purposes

The purposes of this chapter are to—

- (1) increase the understanding, assessment, development, and utilization of space resources by promoting a strong educational base, responsive research and training activities, and broad and prompt dissemination of knowledge and techniques;
- (2) utilize the abilities and talents of the universities of the Nation to support and contribute to the exploration and development of the resources and opportunities afforded by the space environment;
- (3) encourage and support, within the university community of the Nation, the existence of interdisciplinary and multidisciplinary programs of space research that—
 - (A) engage in integrated activities of training, research, and public service;
 - (B) have cooperative programs with industry; and
 - (C) are coordinated with the overall program of the Administration;
- (4) encourage and support the existence of consortia, made up of university and industry members, in order to advance the exploration and development of space resources in cases in which national objectives can be better fulfilled through such consortia than through the programs of single universities;
- (5) encourage and support Federal funding for graduate fellowships in fields related to space; and
- (6) support activities in colleges and universities generally for the purpose of creating and operating a network of institutional programs that will enhance achievements resulting from efforts under this chapter.

§ 40302. Definitions

In this chapter:

(1) AERONAUTICAL AND SPACE ACTIVITIES.—The term “aeronautical and space activities” has the meaning given the term in section 20103 of this title.

(2) FIELD RELATED TO SPACE.—The term “field related to space” means any academic discipline or field of study (including the physical, natural, and biological sciences, and engineering, space technology, education, economics, sociology, communications, planning, law, international affairs, and public administration) which is concerned with or likely to improve the understanding, assessment, development, and utilization of space.

(3) PANEL.—The term “panel” means the space grant review panel established pursuant to section 40308 of this title.

(4) PERSON.—The term “person” means any individual, any public or private corporation, partnership, or other association or entity (including any space grant college, space grant regional consortium, institution of higher education, institute, or laboratory), or any State, political subdivision of a State, or agency or officer of a State or political subdivision of a State.

(5) SPACE ENVIRONMENT.—The term “space environment” means the environment beyond the sensible atmosphere of the Earth.

(6) SPACE GRANT COLLEGE.—The term “space grant college” means any public or private institution of higher education which is designated as such by the Administrator pursuant to section 40306 of this title.

(7) SPACE GRANT PROGRAM.—The term “space grant program” means any program that—

(A) is administered by any space grant college, space grant regional consortium, institution of higher education, institute, laboratory, or State or local agency; and

(B) includes 2 or more projects involving education and one or more of the following activities in the fields related to space:

- (i) Research.
- (ii) Training.
- (iii) Advisory services.

(8) SPACE GRANT REGIONAL CONSORTIUM.—The term “space grant regional consortium” means any association or other alliance that is designated as a space grant regional consortium by the Administrator pursuant to section 40306 of this title.

(9) SPACE RESOURCE.—The term “space resource” means any tangible or intangible benefit which can be realized only from—

- (A) aeronautical and space activities; or
- (B) advancements in any field related to space.

(10) STATE.—The term “State” means any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or any other territory or possession of the United States.

§ 40303. National space grant college and fellowship program

(a) ESTABLISHMENT.—The Administrator shall establish and maintain, within the Administration, a program to be known as

the national space grant college and fellowship program. The national space grant college and fellowship program shall consist of the financial assistance and other activities provided for in this chapter. The Administrator shall establish long-range planning guidelines and priorities, and adequately evaluate the program.

(b) FUNCTIONS.—Within the Administration, the program shall—

(1) apply the long-range planning guidelines and the priorities established by the Administrator under subsection (a);

(2) advise the Administrator with respect to the expertise and capabilities which are available through the national space grant college and fellowship program, and make such expertise available to the Administration as directed by the Administrator;

(3) evaluate activities conducted under grants and contracts awarded pursuant to sections 40304 and 40305 of this title to ensure that the purposes set forth in section 40301 of this title are implemented;

(4) encourage other Federal departments, agencies, and instrumentalities to use and take advantage of the expertise and capabilities which are available through the national space grant college and fellowship program, on a cooperative or other basis;

(5) encourage cooperation and coordination with other Federal programs concerned with the development of space resources and fields related to space;

(6) advise the Administrator on the designation of recipients supported by the national space grant college and fellowship program and, in appropriate cases, on the termination or suspension of any such designation; and

(7) encourage the formation and growth of space grant and fellowship programs.

(c) GENERAL AUTHORITIES.—To carry out the provisions of this chapter, the Administrator may—

(1) accept conditional or unconditional gifts or donations of services, money, or property, real, personal or mixed, tangible or intangible;

(2) accept and use funds from other Federal departments, agencies, and instrumentalities to pay for fellowships, grants, contracts, and other transactions; and

(3) issue such rules and regulations as may be necessary and appropriate.

§ 40304. Grants or contracts

(a) AUTHORITY OF ADMINISTRATOR.—The Administrator may make grants and enter into contracts or other transactions under this subsection to assist any space grant and fellowship program or project if the Administrator finds that the program or project will carry out the purposes set forth in section 40301 of this title. The total amount paid pursuant to a grant or contract may equal not more than 66 percent of the total cost of the space grant and fellowship program or project involved, except in the case of grants or contracts paid for with funds accepted by the Administrator pursuant to section 40303(c)(2) of this title.

(b) SPECIAL GRANTS.—The Administrator may make special grants under this subsection to carry out the purposes set forth in section 40301 of this title. The amount of a special grant may equal up to 100 percent of the total cost of the project involved.

A special grant may be made under this subsection only if the Administrator finds that—

- (1) no reasonable means is available through which the applicant can meet the matching requirement for a grant under subsection (a);
- (2) the probable benefit of the project outweighs the public interest in the matching requirement; and
- (3) the same or equivalent benefit cannot be obtained through the award of a contract or grant under subsection (a) or section 40305 of this title.

(c) APPLICATION.—Any person may apply to the Administrator for a grant or contract under this section. Application shall be made in such form and manner, and with such content and other submissions, as the Administrator shall by regulation prescribe.

(d) TERMS AND CONDITIONS.—

(1) IN GENERAL.—Any grant made, or contract entered into, under this section shall be subject to the limitations and provisions set forth in paragraphs (2) and (3) and to such other terms, conditions, and requirements as the Administrator considers necessary or appropriate.

(2) LIMITATIONS.—No payment under any grant or contract under this section may be applied to—

- (A) the purchase of any land;
- (B) the purchase, construction, preservation, or repair of any building; or
- (C) the purchase or construction of any launch facility or launch vehicle.

(3) LEASES.—Notwithstanding paragraph (2), the items in subparagraphs (A), (B), and (C) of such paragraph may be leased upon written approval of the Administrator.

(4) RECORDS.—Any person that receives or utilizes any proceeds of any grant or contract under this section shall keep such records as the Administrator shall by regulation prescribe as being necessary and appropriate to facilitate effective audit and evaluation, including records which fully disclose the amount and disposition by such recipient of such proceeds, the total cost of the program or project in connection with which such proceeds were used, and the amount, if any, of such cost which was provided through other sources. Such records shall be maintained for 3 years after the completion of such a program or project. The Administrator and the Comptroller General of the United States, or any of their duly authorized representatives, shall have access, for the purpose of audit and evaluation, to any books, documents, papers, and records of receipts which, in the opinion of the Administrator or the Comptroller General, may be related or pertinent to such grants and contracts.

§ 40305. Specific national needs

(a) IDENTIFICATION OF SPECIFIC NEEDS AND GRANT-MAKING AND CONTRACTING AUTHORITY.—The Administrator shall identify specific national needs and problems relating to space. The Administrator may make grants or enter into contracts under this section with respect to such needs or problems. The amount of any such grant or contract may equal up to 100 percent of the total cost of the project involved.

(b) APPLICATIONS FOR GRANTS OR CONTRACTS.—Any person may apply to the Administrator for a grant or contract under this section. In addition, the Administrator may invite applications with respect to specific national needs or problems identified under subsection (a). Application shall be made in such form and manner, and with such content and other submissions, as the Administrator shall by regulation prescribe. Any grant made, or contract entered into, under this section shall be subject to the limitations and provisions set forth in paragraphs (2) and (4) of section 40304(d) of this title and to such other terms, conditions, and requirements as the Administrator considers necessary or appropriate.

§ 40306. Space grant college and space grant regional consortium

(a) DESIGNATION AND QUALIFICATIONS.—

(1) AUTHORITY TO DESIGNATE.—The Administrator may designate—

(A) any institution of higher education as a space grant college; and

(B) any association or other alliance of 2 or more persons, other than individuals, as a space grant regional consortium.

(2) SPACE GRANT COLLEGE REQUIREMENTS.—No institution of higher education may be designated as a space grant college unless the Administrator finds that such institution—

(A) is maintaining a balanced program of research, education, training, and advisory services in fields related to space;

(B) will act in accordance with such guidelines as are prescribed under subsection (b)(2); and

(C) meets such other qualifications as the Administrator considers necessary or appropriate.

(3) SPACE GRANT REGIONAL CONSORTIUM REQUIREMENTS.—No association or other alliance of 2 or more persons may be designated as a space grant regional consortium unless the Administrator finds that such association or alliance—

(A) is established for the purpose of sharing expertise, research, educational facilities or training facilities, and other capabilities in order to facilitate research, education, training, and advisory services in any field related to space;

(B) will encourage and follow a regional approach to solving problems or meeting needs relating to space, in cooperation with appropriate space grant colleges, space grant programs, and other persons in the region;

(C) will act in accordance with such guidelines as are prescribed under subsection (b)(2); and

(D) meets such other qualifications as the Administrator considers necessary or appropriate.

(b) QUALIFICATIONS AND GUIDELINES.—The Administrator shall by regulation prescribe—

(1) the qualifications required to be met under paragraphs (2)(C) and (3)(D) of subsection (a); and

(2) guidelines relating to the activities and responsibilities of space grant colleges and space grant regional consortia.

(c) SUSPENSION OR TERMINATION OF DESIGNATION.—The Administrator may, for cause and after an opportunity for hearing, suspend or terminate any designation under subsection (a).

§ 40307. Space grant fellowship program

(a) AWARD OF FELLOWSHIPS.—The Administrator shall support a space grant fellowship program to provide educational and training assistance to qualified individuals at the graduate level of education in fields related to space. Such fellowships shall be awarded pursuant to guidelines established by the Administrator. Space grant fellowships shall be awarded to individuals at space grant colleges, space grant regional consortia, other colleges and institutions of higher education, professional associations, and institutes in such a manner as to ensure wide geographic and institutional diversity in the pursuit of research under the fellowship program.

(b) LIMITATION ON AMOUNT PROVIDED.—The total amount which may be provided for grants under the space grant fellowship program during any fiscal year shall not exceed an amount equal to 50 percent of the total funds appropriated for such year pursuant to this chapter.

(c) AUTHORITY TO SPONSOR OTHER RESEARCH FELLOWSHIP PROGRAMS UNAFFECTED.—Nothing in this section shall be construed to prohibit the Administrator from sponsoring any research fellowship program, including any special emphasis program, which is established under an authority other than this chapter.

§ 40308. Space grant review panel

(a) ESTABLISHMENT.—The Administrator shall establish an independent committee known as the space grant review panel, which shall not be subject to the provisions of the Federal Advisory Committee Act (5 App. U.S.C.).

(b) DUTIES.—The panel shall take such steps as may be necessary to review, and shall advise the Administrator with respect to—

(1) applications or proposals for, and performance under, grants and contracts awarded pursuant to sections 40304 and 40305 of this title;

(2) the space grant fellowship program;

(3) the designation and operation of space grant colleges and space grant regional consortia, and the operation of space grant and fellowship programs;

(4) the formulation and application of the planning guidelines and priorities pursuant to subsections (a) and (b)(1) of section 40303 of this title; and

(5) such other matters as the Administrator refers to the panel for review and advice.

(c) PERSONNEL AND ADMINISTRATIVE SERVICES.—The Administrator shall make available to the panel any information, personnel, and administrative services and assistance which is reasonable to carry out the duties of the panel.

(d) MEMBERS.—

(1) APPOINTMENT.—The Administrator shall appoint the voting members of the panel. A majority of the voting members shall be individuals who, by reason of knowledge, experience, or training, are especially qualified in one or more of the disciplines and fields related to space. The other voting members shall be individuals who, by reason of knowledge, experience, or training, are especially qualified in, or representative of, education, extension services, State government, industry, economics, planning, or any other activity related to efforts to enhance the understanding, assessment, development, or

utilization of space resources. The Administrator shall consider the potential conflict of interest of any individual in making appointments to the panel.

(2) CHAIRMAN AND VICE CHAIRMAN.—The Administrator shall select one voting member to serve as the Chairman and another voting member to serve as the Vice Chairman. The Vice Chairman shall act as Chairman in the absence or incapacity of the Chairman.

(3) REIMBURSEMENT FOR EXPENSES.—Voting members of the panel who are not Federal employees shall be reimbursed for actual and reasonable expenses incurred in the performance of such duties.

(4) MEETINGS.—The panel shall meet on a biannual basis and, at any other time, at the call of the Chairman or upon the request of a majority of the voting members or of the Administrator.

(5) POWERS.—The panel may exercise such powers as are reasonably necessary in order to carry out the duties enumerated in subsection (b).

§ 40309. Availability of other Federal personnel and data

Each department, agency, or other instrumentality of the Federal Government that is engaged in or concerned with, or that has authority over, matters relating to space—

(1) may, upon a written request from the Administrator, make available, on a reimbursable basis or otherwise, any personnel (with their consent and without prejudice to their position and rating), service, or facility which the Administrator considers necessary to carry out any provision of this chapter;

(2) may, upon a written request from the Administrator, furnish any available data or other information which the Administrator considers necessary to carry out any provision of this chapter; and

(3) may cooperate with the Administration.

§ 40310. Designation or award to be on competitive basis

The Administrator shall not under this chapter designate any space grant college or space grant regional consortium or award any fellowship, grant, or contract unless such designation or award is made in accordance with the competitive, merit-based review process employed by the Administration on October 30, 1987.

§ 40311. Continuing emphasis

The Administration shall continue its emphasis on the importance of education to expand opportunities for Americans to understand and participate in the Administration's aeronautics and space projects by supporting and enhancing science and engineering education, research, and public outreach efforts.

CHAPTER 405—BIOMEDICAL RESEARCH IN SPACE

Sec.

40501. Biomedical research joint working group.

40502. Biomedical research grants.

40503. Biomedical research fellowships.

40504. Establishment of electronic data archive.

40505. Establishment of emergency medical service telemedicine capability.

§ 40501. Biomedical research joint working group

(a) **ESTABLISHMENT.**—The Administrator and the Director of the National Institutes of Health shall jointly establish a working group to coordinate biomedical research activities in areas where a microgravity environment may contribute to significant progress in the understanding and treatment of diseases and other medical conditions. The joint working group shall formulate joint and complementary programs in such areas of research.

(b) **MEMBERSHIP.**—The joint working group shall include equal representation from the Administration and the National Institutes of Health, and shall include representation from National Institutes of Health councils, as selected by the Director of the National Institutes of Health, and from the National Aeronautics and Space Administration Advisory Council.

(c) **ANNUAL BIOMEDICAL RESEARCH SYMPOSIA.**—The joint working group shall organize annual symposia on biomedical research described in subsection (a) under the joint sponsorship of the Administration and the National Institutes of Health.

(d) **ANNUAL REPORTING REQUIREMENT.**—The joint working group shall report annually to Congress on its progress in carrying out this section.

§ 40502. Biomedical research grants

(a) **ESTABLISHMENT OF PROGRAM.**—The Administrator and the Director of the National Institutes of Health shall establish a joint program of biomedical research grants in areas described in section 40501(a) of this title, where such research requires access to a microgravity environment. Such program shall be consistent with actions taken by the joint working group under section 40501 of this title.

(b) **RESEARCH OPPORTUNITY ANNOUNCEMENTS.**—The grants program established under subsection (a) shall annually issue joint research opportunity announcements under the sponsorship of the National Institutes of Health and the Administration. Responses to the announcements shall be evaluated by a peer review committee whose members shall be selected by the Director of the National Institutes of Health and the Administrator, and shall include individuals not employed by the Administration or the National Institutes of Health.

§ 40503. Biomedical research fellowships

The Administrator and the Director of the National Institutes of Health shall create a joint program of graduate research fellowships in biomedical research described in section 40501(a) of this title. Fellowships under such program may provide for participation in approved research conferences and symposia.

§ 40504. Establishment of electronic data archive

The Administrator shall create and maintain a national electronic data archive for biomedical research data obtained from space-based experiments.

§ 40505. Establishment of emergency medical service telemedicine capability

The Administrator, the Administrator of the Federal Emergency Management Agency, the Director of the Office of Foreign Disaster Assistance, and the Surgeon General of the United States shall

jointly create and maintain an international telemedicine satellite consultation capability to support emergency medical services in disaster-stricken areas.

CHAPTER 407—ENVIRONMENTALLY FRIENDLY AIRCRAFT

Sec.

- 40701. Research and development initiative.
- 40702. Additional research and development initiative.
- 40703. Research alignment.
- 40704. Research program on perceived impact of sonic booms.

§ 40701. Research and development initiative

The Administrator may establish an initiative with the objective of developing, and demonstrating in a relevant environment, technologies to enable the following commercial aircraft performance characteristics:

- (1) **NOISE LEVELS.**—Noise levels on takeoff and on airport approach and landing that do not exceed ambient noise levels in the absence of flight operations in the vicinity of airports from which such commercial aircraft would normally operate.
- (2) **ENERGY CONSUMPTION.**—Twenty-five percent reduction in the energy required for medium- to long-range flights, compared to aircraft in commercial service as of December 30, 2005.
- (3) **EMISSIONS.**—Nitrogen oxides on take-off and landing that are significantly reduced, without adversely affecting hydrocarbons and smoke, relative to aircraft in commercial service as of December 30, 2005.

§ 40702. Additional research and development initiative

The Administrator shall establish an initiative involving the Administration, universities, industry, and other research organizations as appropriate, of research, development, and demonstration, in a relevant environment, of technologies to enable the following commercial aircraft performance characteristics:

- (1) **NOISE LEVELS.**—Noise levels on takeoff and on airport approach and landing that do not exceed ambient noise levels in the absence of flight operations in the vicinity of airports from which such commercial aircraft would normally operate, without increasing energy consumption or nitrogen oxide emissions compared to aircraft in commercial service as of October 15, 2008.
- (2) **GREENHOUSE GAS EMISSIONS.**—Significant reductions in greenhouse gas emissions compared to aircraft in commercial services as of October 15, 2008.

§ 40703. Research alignment

In addition to pursuing the research and development initiative described in section 40702 of this title, the Administrator shall, to the maximum extent practicable within available funding, align the fundamental aeronautics research program to address high priority technology challenges of the National Academies' Decadal Survey of Civil Aeronautics, and shall work to increase the degree of involvement of external organizations, and especially of universities, in the fundamental aeronautics research program.

§ 40704. Research program on perceived impact of sonic booms

(a) ESTABLISHMENT.—The Administrator shall establish a cooperative research program with industry, including the conduct of flight demonstrations in a relevant environment, to collect data on the perceived impact of sonic booms. The data could enable the promulgation of appropriate standards for overland commercial supersonic flight operations.

(b) COORDINATION.—The Administrator shall ensure that sonic boom research is coordinated as appropriate with the Administrator of the Federal Aviation Administration, and as appropriate make use of the expertise of the Partnership for Air Transportation Noise and Emissions Reduction Center of Excellence sponsored by the Administration and the Federal Aviation Administration.

CHAPTER 409—MISCELLANEOUS

- Sec.
40901. Science, Space, and Technology Education Trust Fund.
40902. National Aeronautics and Space Administration Endeavor Teacher Fellowship Trust Fund.
40903. Experimental Program to Stimulate Competitive Research—merit grant competition requirements.
40904. Microgravity research.
40905. Program to expand distance learning in rural underserved areas.
40906. Equal access to the Administration's education programs.
40907. Museums.
40908. Continuation of certain education programs.
40909. Compliance with title IX of Education Amendments of 1972.

§ 40901. Science, Space, and Technology Education Trust Fund

There is appropriated, by transfer from funds appropriated in the Department of Housing and Urban Development—Independent Agencies Appropriations Act, 1989 (Public Law 100–404, 102 Stat. 1014), for “Construction of facilities”, the sum of \$15,000,000 to the “Science, Space, and Technology Education Trust Fund”, which is hereby established in the Treasury of the United States. The Secretary of the Treasury shall invest these funds in the United States Treasury special issue securities, and interest shall be credited to the Trust Fund on a quarterly basis. Such interest shall be available for the purpose of making grants for programs directed at improving science, space, and technology education in the United States. The Administrator, after consultation with the Director of the National Science Foundation, shall review applications made for such grants and determine the distribution of available funds on a competitive basis. Grants shall be made available to any awardee only to the extent that the awardee provides matching funds from non-Federal sources to carry out the program for which grants from this Trust Fund are made. Of the funds made available by this Trust Fund, \$250,000 shall be disbursed each calendar quarter to the Challenger Center for Space Science Education. The Administrator shall submit to Congress an annual report on the grants made pursuant to this section.

§ 40902. National Aeronautics and Space Administration Endeavor Teacher Fellowship Trust Fund

(a) ESTABLISHMENT.—There is established in the Treasury of the United States, in tribute to the dedicated crew of the Space

Shuttle Challenger, a trust fund to be known as the National Aeronautics and Space Administration Endeavor Teacher Fellowship Trust Fund (hereafter in this section referred to as the “Trust Fund”). The Trust Fund shall consist of amounts which may from time to time, at the discretion of the Administrator, be transferred from the National Aeronautics and Space Administration Gifts and Donations Trust Fund.

(b) INVESTMENT OF TRUST FUND.—The Administrator shall direct the Secretary of the Treasury to invest and reinvest funds in the Trust Fund in public debt securities with maturities suitable for the needs of the Trust Fund, and bearing interest at rates determined by the Secretary of the Treasury, taking into consideration the current average market yield on outstanding marketable obligations of the United States of comparable maturities. Interest earned shall be credited to the Trust Fund.

(c) PURPOSE.—Income accruing from the Trust Fund principal shall be used to create the National Aeronautics and Space Administration Endeavor Teacher Fellowship Program, to the extent provided in advance in appropriation Acts. The Administrator is authorized to use such funds to award fellowships to selected United States nationals who are undergraduate students pursuing a course of study leading to certified teaching degrees in elementary education or in secondary education in mathematics, science, or technology disciplines. Awards shall be made pursuant to standards established for the fellowship program by the Administrator.

§ 40903. Experimental Program to Stimulate Competitive Research—merit grant competition requirements

(a) DEFINITION OF ELIGIBLE STATE.—In this section, the term “eligible State” means a State designated by the Administrator as eligible to compete in the National Science Foundation’s Experimental Program to Stimulate Competitive Research.

(b) COMPETITION.—Making use of the existing infrastructure established in eligible States by the National Science Foundation, the Administrator shall conduct a merit grant competition among the eligible States in areas of research important to the mission of the Administration. With respect to a grant application by an eligible State, the Administrator shall consider—

- (1) the application’s merit and relevance to the mission of the Administration;
- (2) the potential for the grant to serve as a catalyst to enhance the ability of researchers in the State to become more competitive for regular Administration funding;
- (3) the potential for the grant to improve the environment for science, mathematics, and engineering education in the State; and
- (4) the need to ensure the maximum distribution of grants among eligible States, consistent with merit.

(c) SUPPLEMENTAL GRANTS.—The Administrator shall endeavor, where appropriate, to supplement grants made under subsection (b) with such grants for fellowships, traineeships, equipment, or instrumentation as are available.

(d) INFORMATION IN ANNUAL BUDGET SUBMISSION.—In order to ensure that research expertise and talent throughout the Nation is developed and engaged in Administration research and education activities, the Administration shall, as part of its annual budget submission, detail additional steps that can be taken to further

integrate the participating eligible States in both existing and new or emerging Administration research programs and center activities.

§ 40904. Microgravity research

The Administrator shall—

(1) ensure the capacity to support ground-based research leading to space-based basic and applied scientific research in a variety of disciplines with potential direct national benefits and applications that can be advanced significantly from the uniqueness of microgravity and the space environment; and

(2) carry out, to the maximum extent practicable, basic, applied, and commercial International Space Station research in fields such as molecular crystal growth, animal research, basic fluid physics, combustion research, cellular biotechnology, low-temperature physics, and cellular research at a level that will sustain the existing United States scientific expertise and research capability in microgravity research.

§ 40905. Program to expand distance learning in rural underserved areas

(a) IN GENERAL.—The Administrator shall develop or expand programs to extend science and space educational outreach to rural communities and schools through video conferencing, interpretive exhibits, teacher education, classroom presentations, and student field trips.

(b) PRIORITIES.—In carrying out subsection (a), the Administrator shall give priority to existing programs, including Challenger Learning Centers—

(1) that utilize community-based partnerships in the field;

(2) that build and maintain video conference and exhibit capacity;

(3) that travel directly to rural communities and serve low-income populations; and

(4) with a special emphasis on increasing the number of women and minorities in the science and engineering professions.

§ 40906. Equal access to the Administration's education programs

(a) IN GENERAL.—The Administrator shall strive to ensure equal access for minority and economically disadvantaged students to the Administration's education programs.

(b) REPORT.—Every 2 years, the Administrator shall submit a report to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate describing the efforts by the Administrator to ensure equal access for minority and economically disadvantaged students under this section and the results of such efforts. As part of the report, the Administrator shall provide—

(1) data on minority participation in the Administration's education programs, at a minimum in the categories of—

(A) elementary and secondary education;

(B) undergraduate education; and

(C) graduate education; and

(2) the total value of grants the Administration made to Historically Black Colleges and Universities and to Hispanic

Serving Institutions through education programs during the period covered by the report.

(c) PROGRAM.—The Administrator shall establish the Dr. Mae C. Jemison Grant Program to work with Minority Serving Institutions to bring more women of color into the field of space and aeronautics.

§ 40907. Museums

The Administrator may provide grants to, and enter into cooperative agreements with, museums and planetariums to enable them to enhance programs related to space exploration, aeronautics, space science, Earth science, or microgravity.

§ 40908. Continuation of certain education programs

From amounts appropriated to the Administration for education programs, the Administrator shall ensure the continuation of the Space Grant Program, the Experimental Program to Stimulate Competitive Research, and, consistent with the results of the review under section 614 of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155, 119 Stat. 2933), the Administration Explorer School program, to motivate and develop the next generation of explorers.

§ 40909. Compliance with title IX of Education Amendments of 1972

To comply with title IX of the Education Amendments of 1972 (20 U.S.C. 1681 et seq.), the Administrator shall conduct compliance reviews of at least 2 grantees annually.

Subtitle V—Programs Targeting Commercial Opportunities

CHAPTER 501—SPACE COMMERCE

SUBCHAPTER I—GENERAL

Sec.

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SUBCHAPTER I—GENERAL

§ 50101. Definitions

In this chapter:

(1) **COMMERCIAL PROVIDER.**—The term “commercial provider” means any person providing space transportation services or other space-related activities, primary control of which is held by persons other than Federal, State, local, and foreign governments.

(2) **PAYLOAD.**—The term “payload” means anything that a person undertakes to transport to, from, or within outer space, or in suborbital trajectory, by means of a space transportation vehicle, but does not include the space transportation vehicle itself except for its components which are specifically designed or adapted for that payload.

(3) **SPACE-RELATED ACTIVITIES.**—The term “space-related activities” includes research and development, manufacturing, processing, service, and other associated and support activities.

(4) **SPACE TRANSPORTATION SERVICES.**—The term “space transportation services” means the preparation of a space transportation vehicle and its payloads for transportation to, from, or within outer space, or in suborbital trajectory, and the conduct of transporting a payload to, from, or within outer space, or in suborbital trajectory.

(5) **SPACE TRANSPORTATION VEHICLE.**—The term “space transportation vehicle” means any vehicle constructed for the purpose of operating in, or transporting a payload to, from, or within, outer space, or in suborbital trajectory, and includes any component of such vehicle not specifically designed or adapted for a payload.

(6) **STATE.**—The term “State” means each of the several States of the Union, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and any other commonwealth, territory, or possession of the United States.

(7) **UNITED STATES COMMERCIAL PROVIDER.**—The term “United States commercial provider” means a commercial provider, organized under the laws of the United States or of a State, that is—

(A) more than 50 percent owned by United States nationals; or

(B) a subsidiary of a foreign company and the Secretary of Transportation finds that—

(i) such subsidiary has in the past evidenced a substantial commitment to the United States market through—

(I) investments in the United States in long-term research, development, and manufacturing (including the manufacture of major components and subassemblies); and

(II) significant contributions to employment in the United States; and

(ii) the country or countries in which such foreign company is incorporated or organized, and, if appropriate, in which it principally conducts its business, affords reciprocal treatment to companies described in subparagraph (A) comparable to that afforded to such foreign company’s subsidiary in the United States, as evidenced by—

(I) providing comparable opportunities for companies described in subparagraph (A) to participate in Government-sponsored research and development similar to that authorized under this chapter;

(II) providing no barriers, to companies described in subparagraph (A) with respect to local investment opportunities, that are not provided to foreign companies in the United States; and

(III) providing adequate and effective protection for the intellectual property rights of companies described in subparagraph (A).

SUBCHAPTER II—PROMOTION OF COMMERCIAL SPACE OPPORTUNITIES

§ 50111. Commercialization of Space Station

(a) POLICY.—Congress declares that a priority goal of constructing the International Space Station is the economic development of Earth orbital space. Congress further declares that free and competitive markets create the most efficient conditions for promoting economic development, and should therefore govern the economic development of Earth orbital space. Congress further declares that the use of free market principles in operating, servicing, allocating the use of, and adding capabilities to the Space Station, and the resulting fullest possible engagement of commercial providers and participation of commercial users, will reduce Space Station operational costs for all partners and the Federal Government's share of the United States burden to fund operations.

(b) USE OF UNITED STATES COMMERCIALY PROVIDED SERVICES.—

(1) IN GENERAL.—In order to stimulate commercial use of space, help maximize the utility and productivity of the International Space Station, and enable a commercial means of providing crew transfer and crew rescue services for the International Space Station, the Administration shall—

(A) make use of United States commercially provided International Space Station crew transfer and crew rescue services to the maximum extent practicable, if those commercial services have demonstrated the capability to meet Administration-specified ascent, entry, and International Space Station proximity operations safety requirements;

(B) limit, to the maximum extent practicable, the use of the Crew Exploration Vehicle to missions carrying astronauts beyond low Earth orbit once commercial crew transfer and crew rescue services that meet safety requirements become operational;

(C) facilitate, to the maximum extent practicable, the transfer of Administration-developed technologies to potential United States commercial crew transfer and rescue service providers, consistent with United States law; and

(D) issue a notice of intent, not later than 180 days after October 15, 2008, to enter into a funded, competitively awarded Space Act Agreement with 2 or more commercial entities for a Phase 1 Commercial Orbital Transportation Services crewed vehicle demonstration program.

(2) CONGRESSIONAL INTENT.—It is the intent of Congress that funding for the program described in paragraph (1)(D) shall not come at the expense of full funding of the amounts authorized under section 101(3)(A) of the National Aeronautics and Space Administration Authorization Act of 2008 (Public Law 110–422, 122 Stat. 4783), and for future fiscal years, for Orion Crew Exploration Vehicle development, Ares I Crew Launch Vehicle development, or International Space Station cargo delivery.

(3) ADDITIONAL TECHNOLOGIES.—The Administration shall make International Space Station-compatible docking adaptors and other relevant technologies available to the commercial crew providers selected to service the International Space Station.

(4) CREW TRANSFER AND CREW RESCUE SERVICES CONTRACT.—If a commercial provider demonstrates the capability to provide International Space Station crew transfer and crew rescue services and to satisfy Administration ascent, entry, and International Space Station proximity operations safety requirements, the Administration shall enter into an International Space Station crew transfer and crew rescue services contract with that commercial provider for a portion of the Administration's anticipated International Space Station crew transfer and crew rescue requirements from the time the commercial provider commences operations under contract with the Administration through calendar year 2016, with an option to extend the period of performance through calendar year 2020.

§ 50112. Promotion of United States Global Positioning System standards

In order to support and sustain the Global Positioning System in a manner that will most effectively contribute to the national security, public safety, scientific, and economic interests of the United States, Congress encourages the President to—

(1) ensure the operation of the Global Positioning System on a continuous worldwide basis free of direct user fees;

(2) enter into international agreements that promote cooperation with foreign governments and international organizations to—

(A) establish the Global Positioning System and its augmentations as an acceptable international standard; and

(B) eliminate any foreign barriers to applications of the Global Positioning System worldwide; and

(3) provide clear direction and adequate resources to the Assistant Secretary of Commerce for Communications and Information so that on an international basis the Assistant Secretary can—

(A) achieve and sustain efficient management of the electromagnetic spectrum used by the Global Positioning System; and

(B) protect that spectrum from disruption and interference.

§ 50113. Acquisition of space science data

(a) DEFINITION OF SPACE SCIENCE DATA.—In this section, the term “space science data” includes scientific data concerning—

- (1) the elemental and mineralogical resources of the moon, asteroids, planets and their moons, and comets;
- (2) microgravity acceleration; and
- (3) solar storm monitoring.

(b) **ACQUISITION FROM COMMERCIAL PROVIDERS.**—The Administrator shall, to the extent possible and while satisfying the scientific or educational requirements of the Administration, and where appropriate, of other Federal agencies and scientific researchers, acquire, where cost effective, space science data from a commercial provider.

(c) **TREATMENT OF SPACE SCIENCE DATA AS COMMERCIAL ITEM UNDER ACQUISITION LAWS.**—Acquisitions of space science data by the Administrator shall be carried out in accordance with applicable acquisition laws and regulations (including chapters 137 and 140 of title 10). For purposes of such law and regulations, space science data shall be considered to be a commercial item. Nothing in this subsection shall be construed to preclude the United States from acquiring, through contracts with commercial providers, sufficient rights in data to meet the needs of the scientific and educational community or the needs of other government activities.

(d) **SAFETY STANDARDS.**—Nothing in this section shall be construed to prohibit the Federal Government from requiring compliance with applicable safety standards.

(e) **LIMITATION.**—This section does not authorize the Administration to provide financial assistance for the development of commercial systems for the collection of space science data.

§ 50114. Administration of commercial space centers

The Administrator shall administer the Commercial Space Center program in a coordinated manner from Administration headquarters in Washington, D.C.

§ 50115. Sources of Earth science data

(a) **ACQUISITION.**—The Administrator shall, to the extent possible and while satisfying the scientific or educational requirements of the Administration, and where appropriate, of other Federal agencies and scientific researchers, acquire, where cost-effective, space-based and airborne Earth remote sensing data, services, distribution, and applications from a commercial provider.

(b) **TREATMENT AS COMMERCIAL ITEM UNDER ACQUISITION LAWS.**—Acquisitions by the Administrator of the data, services, distribution, and applications referred to in subsection (a) shall be carried out in accordance with applicable acquisition laws and regulations (including chapters 137 and 140 of title 10). For purposes of such law and regulations, such data, services, distribution, and applications shall be considered to be a commercial item. Nothing in this subsection shall be construed to preclude the United States from acquiring, through contracts with commercial providers, sufficient rights in data to meet the needs of the scientific and educational community or the needs of other government activities.

(c) **SAFETY STANDARDS.**—Nothing in this section shall be construed to prohibit the Federal Government from requiring compliance with applicable safety standards.

(d) **ADMINISTRATION AND EXECUTION.**—This section shall be carried out as part of the Commercial Remote Sensing Program at the Stennis Space Center.

§ 50116. Commercial technology transfer program

(a) **IN GENERAL.**—The Administrator shall execute a commercial technology transfer program with the goal of facilitating the exchange of services, products, and intellectual property between the Administration and the private sector. This program shall place at least as much emphasis on encouraging the transfer of Administration technology to the private sector (“spinning out”) as on encouraging use of private sector technology by the Administration. This program shall be maintained in a manner that provides clear benefits for the Administration, the domestic economy, and the research community.

(b) **PROGRAM STRUCTURE.**—In carrying out the program described in subsection (a), the Administrator shall provide program participants with at least 45 days notice of any proposed changes to the structure of the Administration’s technology transfer and commercialization organizations that is in effect as of December 30, 2005.

**SUBCHAPTER III—FEDERAL ACQUISITION OF SPACE
TRANSPORTATION SERVICES**

§ 50131. Requirement to procure commercial space transportation services

(a) **IN GENERAL.**—Except as otherwise provided in this section, the Federal Government shall acquire space transportation services from United States commercial providers whenever such services are required in the course of its activities. To the maximum extent practicable, the Federal Government shall plan missions to accommodate the space transportation services capabilities of United States commercial providers.

(b) **EXCEPTIONS.**—The Federal Government shall not be required to acquire space transportation services under subsection (a) if, on a case-by-case basis, the Administrator or, in the case of a national security issue, the Secretary of the Air Force, determines that—

(1) a payload requires the unique capabilities of the space shuttle;

(2) cost effective space transportation services that meet specific mission requirements would not be reasonably available from United States commercial providers when required;

(3) the use of space transportation services from United States commercial providers poses an unacceptable risk of loss of a unique scientific opportunity;

(4) the use of space transportation services from United States commercial providers is inconsistent with national security objectives;

(5) the use of space transportation services from United States commercial providers is inconsistent with international agreements for international collaborative efforts relating to science and technology;

(6) it is more cost effective to transport a payload in conjunction with a test or demonstration of a space transportation vehicle owned by the Federal Government; or

(7) a payload can make use of the available cargo space on a space shuttle mission as a secondary payload, and such payload is consistent with the requirements of research,

development, demonstration, scientific, commercial, and educational programs authorized by the Administrator.

(c) AGREEMENTS WITH FOREIGN ENTITIES.—Nothing in this section shall prevent the Administrator from planning or negotiating agreements with foreign entities for the launch of Federal Government payloads for international collaborative efforts relating to science and technology.

(d) DELAYED EFFECT.—Subsection (a) shall not apply to space transportation services and space transportation vehicles acquired or owned by the Federal Government before October 28, 1998, or with respect to which a contract for such acquisition or ownership has been entered into before October 28, 1998.

(e) HISTORICAL PURPOSES.—This section shall not be construed to prohibit the Federal Government from acquiring, owning, or maintaining space transportation vehicles solely for historical display purposes.

§ 50132. Acquisition of commercial space transportation services

(a) TREATMENT OF COMMERCIAL SPACE TRANSPORTATION SERVICES AS COMMERCIAL ITEM UNDER ACQUISITION LAWS.—Acquisitions of space transportation services by the Federal Government shall be carried out in accordance with applicable acquisition laws and regulations (including chapters 137 and 140 of title 10). For purposes of such law and regulations, space transportation services shall be considered to be a commercial item.

(b) SAFETY STANDARDS.—Nothing in this section shall be construed to prohibit the Federal Government from requiring compliance with applicable safety standards.

§ 50133. Shuttle privatization

The Administrator shall prepare for an orderly transition from the Federal operation, or Federal management of contracted operation, of space transportation systems to the Federal purchase of commercial space transportation services for all nonemergency space transportation requirements for transportation to and from Earth orbit, including human, cargo, and mixed payloads. In those preparations, the Administrator shall take into account the need for short-term economies, as well as the goal of restoring the Administration's research focus and its mandate to promote the fullest possible commercial use of space. As part of those preparations, the Administrator shall plan for the potential privatization of the space shuttle program. Such plan shall keep safety and cost effectiveness as high priorities. Nothing in this section shall prohibit the Administration from studying, designing, developing, or funding upgrades or modifications essential to the safe and economical operation of the space shuttle fleet.

§ 50134. Use of excess intercontinental ballistic missiles

(a) IN GENERAL.—The Federal Government shall not—

(1) convert any missile described in subsection (c) to a space transportation vehicle configuration; or

(2) transfer ownership of any such missile to another person, except as provided in subsection (b).

(b) AUTHORIZED FEDERAL USES.—

(1) IN GENERAL.—A missile described in subsection (c) may be converted for use as a space transportation vehicle by the

Federal Government if, except as provided in paragraph (2) and at least 30 days before such conversion, the agency seeking to use the missile as a space transportation vehicle transmits to the Committee on Armed Services and the Committee on Science and Technology of the House of Representatives, and to the Committee on Armed Services and the Committee on Commerce, Science, and Transportation of the Senate, a certification that the use of such missile—

(A) would result in cost savings to the Federal Government when compared to the cost of acquiring space transportation services from United States commercial providers;

(B) meets all mission requirements of the agency, including performance, schedule, and risk requirements;

(C) is consistent with international obligations of the United States; and

(D) is approved by the Secretary of Defense or the designee of the Secretary of Defense.

(2) EXCEPTION TO REQUIREMENT THAT CERTIFICATION BE TRANSMITTED 30 DAYS BEFORE CONVERSION.—The requirement under paragraph (1) that the certification described in that paragraph must be transmitted at least 30 days before conversion of the missile shall not apply if the Secretary of Defense determines that compliance with that requirement would be inconsistent with meeting immediate national security requirements.

(c) MISSILES REFERRED TO.—The missiles referred to in this section are missiles owned by the United States that—

(1) were formerly used by the Department of Defense for national defense purposes as intercontinental ballistic missiles; and

(2) have been declared excess to United States national defense needs and are in compliance with international obligations of the United States.

CHAPTER 503—COMMERCIAL REUSABLE IN-SPACE TRANSPORTATION

Sec.

50301. Definitions.

50302. Loan guarantees for production of commercial reusable in-space transportation.

§ 50301. Definitions

In this chapter:

(1) COMMERCIAL PROVIDER.—The term “commercial provider” means any person or entity providing commercial reusable in-orbit space transportation services or systems, primary control of which is held by persons other than the Federal Government, a State or local government, or a foreign government.

(2) IN-SPACE TRANSPORTATION SERVICES.—The term “in-space transportation services” means operations and activities involved in the direct transportation or attempted transportation of a payload or object from one orbit to another by means of an in-space transportation vehicle.

(3) IN-SPACE TRANSPORTATION SYSTEM.—The term “in-space transportation system” means the space and ground elements,

including in-space transportation vehicles and support space systems, and ground administration and control facilities and associated equipment, necessary for the provision of in-space transportation services.

(4) IN-SPACE TRANSPORTATION VEHICLE.—The term “in-space transportation vehicle” means a vehicle designed—

(A) to be based and operated in space;

(B) to transport various payloads or objects from one orbit to another orbit; and

(C) to be reusable and refueled in space.

(5) SECRETARY.—The term “Secretary” means the Secretary of Defense.

(6) UNITED STATES COMMERCIAL PROVIDER.—The term “United States commercial provider” means any commercial provider organized under the laws of the United States that is more than 50 percent owned by United States nationals.

§ 50302. Loan guarantees for production of commercial reusable in-space transportation

(a) AUTHORITY TO MAKE LOAN GUARANTEES.—The Secretary may guarantee loans made to eligible United States commercial providers for purposes of producing commercial reusable in-space transportation services or systems.

(b) ELIGIBLE UNITED STATES COMMERCIAL PROVIDERS.—The Secretary shall prescribe requirements for the eligibility of United States commercial providers for loan guarantees under this section. Such requirements shall ensure that eligible providers are financially capable of undertaking a loan guaranteed under this section.

(c) LIMITATION ON LOANS GUARANTEED.—The Secretary may not guarantee a loan for a United States commercial provider under this section unless the Secretary determines that credit would not otherwise be reasonably available at the time of the guarantee for the commercial reusable in-space transportation service or system to be produced utilizing the proceeds of the loan.

(d) CREDIT SUBSIDY.—

(1) COLLECTION REQUIRED.—The Secretary shall collect from each United States commercial provider receiving a loan guarantee under this section an amount equal to the amount, as determined by the Secretary, to cover the cost, as defined in section 502(5) of the Federal Credit Reform Act of 1990 (2 U.S.C. 661a(5)), of the loan guarantee.

(2) PERIODIC DISBURSEMENTS.—In the case of a loan guarantee in which proceeds of the loan are disbursed over time, the Secretary shall collect the amount required under this subsection on a pro rata basis, as determined by the Secretary, at the time of each disbursement.

(e) OTHER TERMS AND CONDITIONS.—

(1) PROHIBITION ON SUBORDINATION.—A loan guaranteed under this section may not be subordinated to another debt contracted by the United States commercial provider concerned, or to any other claims against such provider.

(2) RESTRICTION ON INCOME.—A loan guaranteed under this section may not—

(A) provide income which is excluded from gross income for purposes of chapter 1 of the Internal Revenue Code of 1986 (26 U.S.C. 1 et seq.); or

(B) provide significant collateral or security, as determined by the Secretary, for other obligations the income from which is so excluded.

(3) TREATMENT OF GUARANTEE.—The guarantee of a loan under this section shall be conclusive evidence of the following:

(A) That the guarantee has been properly obtained.

(B) That the loan qualifies for the guarantee.

(C) That, but for fraud or material misrepresentation by the holder of the loan, the guarantee is valid, legal, and enforceable.

(4) OTHER TERMS AND CONDITIONS.—The Secretary may establish any other terms and conditions for a guarantee of a loan under this section as the Secretary considers appropriate to protect the financial interests of the United States.

(f) ENFORCEMENT OF RIGHTS.—

(1) IN GENERAL.—The Attorney General may take any action the Attorney General considers appropriate to enforce any right accruing to the United States under a loan guarantee under this section.

(2) FORBEARANCE.—The Attorney General may, with the approval of the parties concerned, forbear from enforcing any right of the United States under a loan guaranteed under this section for the benefit of a United States commercial provider if such forbearance will not result in any cost, as defined in section 502(5) of the Federal Credit Reform Act of 1990 (2 U.S.C. 661a(5)), to the United States.

(3) UTILIZATION OF PROPERTY.—Notwithstanding any other provision of law and subject to the terms of a loan guaranteed under this section, upon the default of a United States commercial provider under the loan, the Secretary may, at the election of the Secretary—

(A) assume control of the physical asset financed by the loan; and

(B) complete, recondition, reconstruct, renovate, repair, maintain, operate, or sell the physical asset.

(g) CREDIT INSTRUMENTS.—

(1) AUTHORITY TO ISSUE INSTRUMENTS.—Notwithstanding any other provision of law, the Secretary may, subject to such terms and conditions as the Secretary considers appropriate, issue credit instruments to United States commercial providers of in-space transportation services or systems, with the aggregate cost (as determined under the provisions of the Federal Credit Reform Act of 1990 (2 U.S.C. 661 et seq.)) of such instruments not to exceed \$1,500,000,000, but only to the extent that new budget authority to cover such costs is provided in subsequent appropriations Acts or authority is otherwise provided in subsequent appropriations Acts.

(2) CREDIT SUBSIDY.—The Secretary shall provide a credit subsidy for any credit instrument issued under this subsection in accordance with the provisions of the Federal Credit Reform Act of 1990 (2 U.S.C. 661 et seq.).

(3) CONSTRUCTION.—The eligibility of a United States commercial provider of in-space transportation services or systems for a credit instrument under this subsection is in addition to any eligibility of such provider for a loan guarantee under other provisions of this section.

CHAPTER 505—COMMERCIAL SPACE COMPETITIVENESS

Sec.	Definitions.
50501.	Launch voucher demonstration program.
50502.	Anchor tenancy and termination liability.
50503.	Use of Government facilities.
50504.	Test facilities.
50505.	Commercial Space Achievement Award.

§ 50501. Definitions

In this chapter:

(1) **AGENCY.**—The term “agency” means an executive agency as defined in section 105 of title 5.

(2) **ANCHOR TENANCY.**—The term “anchor tenancy” means an arrangement in which the United States Government agrees to procure sufficient quantities of a commercial space product or service needed to meet Government mission requirements so that a commercial venture is made viable.

(3) **COMMERCIAL.**—The term “commercial” means having—

(A) private capital at risk; and

(B) primary financial and management responsibility for the activity reside with the private sector.

(4) **COST EFFECTIVE.**—The term “cost effective” means costing no more than the available alternatives, determined by a comparison of all related direct and indirect costs including, in the case of Government costs, applicable Government labor and overhead costs as well as contractor charges, and taking into account the ability of each alternative to accommodate mission requirements as well as the related factors of risk, reliability, schedule, and technical performance.

(5) **LAUNCH.**—The term “launch” means to place, or attempt to place, a launch vehicle and its payload, if any, in a suborbital trajectory, in Earth orbit in outer space, or otherwise in outer space.

(6) **LAUNCH SERVICES.**—The term “launch services” means activities involved in the preparation of a launch vehicle and its payload for launch and the conduct of a launch.

(7) **LAUNCH SUPPORT FACILITIES.**—The term “launch support facilities” means facilities located at launch sites or launch ranges that are required to support launch activities, including launch vehicle assembly, launch vehicle operations and control, communications, flight safety functions, and payload operations, control, and processing.

(8) **LAUNCH VEHICLE.**—The term “launch vehicle” means any vehicle constructed for the purpose of operating in or placing a payload in outer space or in suborbital trajectories, and includes components of that vehicle.

(9) **PAYLOAD.**—The term “payload” means an object which a person undertakes to launch, and includes subcomponents of the launch vehicle specifically designed or adapted for that object.

(10) **PAYLOAD INTEGRATION SERVICES.**—The term “payload integration services” means activities involved in integrating multiple payloads into a single payload for launch or integrating a payload with a launch vehicle.

(11) **SPACE RECOVERY SUPPORT FACILITIES.**—The term “space recovery support facilities” means facilities required to support activities related to the recovery of payloads returned from

space to a space recovery site, including operations and control, communications, flight safety functions, and payload processing.

(12) SPACE TRANSPORTATION INFRASTRUCTURE.—The term “space transportation infrastructure” means facilities, associated equipment, and real property (including launch sites, launch support facilities, space recovery sites, and space recovery support facilities) required to perform launch or space recovery activities.

(13) STATE.—The term “State” means the several States, the District of Columbia, Puerto Rico, American Samoa, the United States Virgin Islands, Guam, the Northern Mariana Islands, and any other commonwealth, territory, or possession of the United States.

(14) UNITED STATES.—The term “United States” means the States, collectively.

§ 50502. Launch voucher demonstration program

(a) REQUIREMENT TO ESTABLISH PROGRAM.—The Administrator shall establish a demonstration program to award vouchers for the payment of commercial launch services and payload integration services for the purpose of launching payloads funded by the Administration.

(b) AWARD OF VOUCHERS.—The Administrator shall award vouchers under subsection (a) to appropriate individuals as a part of grants administered by the Administration for the launch of—

- (1) payloads to be placed in suborbital trajectories; and
- (2) small payloads to be placed in orbit.

(c) ASSISTANCE.—The Administrator may provide voucher award recipients with such assistance (including contract formulation and technical support during the proposal evaluation) as may be necessary to ensure the purchase of cost effective and reasonably reliable commercial launch services and payload integration services.

§ 50503. Anchor tenancy and termination liability

(a) ANCHOR TENANCY CONTRACTS.—Subject to appropriations, the Administrator or the Administrator of the National Oceanic and Atmospheric Administration may enter into multiyear anchor tenancy contracts for the purchase of a good or service if the appropriate Administrator determines that—

- (1) the good or service meets the mission requirements of the Administration or the National Oceanic and Atmospheric Administration, as appropriate;
- (2) the commercially procured good or service is cost effective;
- (3) the good or service is procured through a competitive process;
- (4) existing or potential customers for the good or service other than the United States Government have been specifically identified;
- (5) the long-term viability of the venture is not dependent upon a continued Government market or other nonreimbursable Government support; and
- (6) private capital is at risk in the venture.

(b) TERMINATION LIABILITY.—

- (1) IN GENERAL.—Contracts entered into under subsection (a) may provide for the payment of termination liability in

the event that the Government terminates such contracts for its convenience.

(2) **FIXED SCHEDULE OF PAYMENTS AND LIMITATION ON LIABILITY.**—Contracts that provide for the payment of termination liability, as described in paragraph (1), shall include a fixed schedule of such termination liability payments. Liability under such contracts shall not exceed the total payments which the Government would have made after the date of termination to purchase the good or service if the contract were not terminated.

(3) **USE OF FUNDS.**—Subject to appropriations, funds available for such termination liability payments may be used for purchase of the good or service upon successful delivery of the good or service pursuant to the contract. In such case, sufficient funds shall remain available to cover any remaining termination liability.

(c) **LIMITATIONS.**—

(1) **DURATION.**—Contracts entered into under this section shall not exceed 10 years in duration.

(2) **FIXED PRICE.**—Such contracts shall provide for delivery of the good or service on a firm, fixed price basis.

(3) **PERFORMANCE SPECIFICATIONS.**—To the extent practicable, reasonable performance specifications shall be used to define technical requirements in such contracts.

(4) **FAILURE TO PERFORM.**—In any such contract, the appropriate Administrator shall reserve the right to completely or partially terminate the contract without payment of such termination liability because of the contractor's actual or anticipated failure to perform its contractual obligations.

§ 50504. Use of Government facilities

(a) **AUTHORITY.**—

(1) **IN GENERAL.**—Federal agencies, including the Administration and the Department of Defense, may allow non-Federal entities to use their space-related facilities on a reimbursable basis if the Administrator, the Secretary of Defense, or the appropriate agency head determines that—

(A) the facilities will be used to support commercial space activities;

(B) such use can be supported by existing or planned Federal resources;

(C) such use is compatible with Federal activities;

(D) equivalent commercial services are not available on reasonable terms; and

(E) such use is consistent with public safety, national security, and international treaty obligations.

(2) **CONSULTATION.**—In carrying out paragraph (1)(E), each agency head shall consult with appropriate Federal officials.

(b) **REIMBURSEMENT PAYMENT.**—

(1) **AMOUNT.**—The reimbursement referred to in subsection (a) may be an amount equal to the direct costs (including salaries of United States civilian and contractor personnel) incurred by the United States as a result of the use of such facilities by the private sector. For the purposes of this paragraph, the term “direct costs” means the actual costs that can be unambiguously associated with such use, and would

not be borne by the United States Government in the absence of such use.

(2) CREDIT TO APPROPRIATION.—The amount of any payment received by the United States for use of facilities under this subsection shall be credited to the appropriation from which the cost of providing such facilities was paid.

§ 50505. Test facilities

(a) CHARGES.—The Administrator shall establish a policy of charging users of the Administration's test facilities for the costs associated with their tests at a level that is competitive with alternative test facilities. The Administrator shall not implement a policy of seeking full cost recovery for a facility until at least 30 days after transmitting a notice to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate.

(b) FUNDING ACCOUNT.—In planning and budgeting, the Administrator shall establish a funding account that shall be used for all test facilities. The account shall be sufficient to maintain the viability of test facilities during periods of low utilization.

§ 50506. Commercial Space Achievement Award

(a) ESTABLISHMENT.—There is established a Commercial Space Achievement Award. The award shall consist of a medal, which shall be of such design and materials and bear such inscriptions as determined by the Secretary of Commerce. A cash prize may also be awarded if funding for the prize is available under subsection (d).

(b) CRITERIA FOR AWARD.—The Secretary of Commerce shall periodically make awards under this section to individuals, corporations, corporate divisions, or corporate subsidiaries substantially engaged in commercial space activities that in the opinion of the Secretary of Commerce best meet the following criteria:

(1) NON-GOVERNMENTAL REVENUE.—For corporate entities, at least half of the revenues from the space-related activities of the corporation, division, or subsidiary is derived from sources other than the United States Government.

(2) SUBSTANTIAL CONTRIBUTION.—The activities and achievements of the individual, corporation, division, or subsidiary have substantially contributed to the United States gross national product and the stature of United States industry in international markets, with due consideration for both the economic magnitude and the technical quality of the activities and achievements.

(3) SUBSTANTIAL ADVANCEMENT OF TECHNOLOGY.—The individual, corporation, division, or subsidiary has substantially advanced space technology and space applications directly related to commercial space activities.

(c) LIMITATIONS.—No individual or corporate entity may receive an award under this section more than once every 5 years.

(d) FUNDING FOR AWARD.—The Secretary of Commerce may seek and accept gifts of money from public and private sources for the purpose of making cash prize awards under this section. Such money may be used only for that purpose, and only such money may be used for that purpose. The Secretary of Commerce shall make publicly available an itemized list of the sources of such funding.

CHAPTER 507—OFFICE OF SPACE COMMERCIALIZATION

Sec.

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§ 50701. Definition of Office

In this chapter, the term “Office” means the Office of Space Commercialization established in section 50702 of this title.

§ 50702. Establishment

(a) **IN GENERAL.**—There is established within the Department of Commerce an Office of Space Commercialization.

(b) **DIRECTOR.**—The Office shall be headed by a Director, who shall be a senior executive and shall be compensated at a level in the Senior Executive Service under section 5382 of title 5 as determined by the Secretary of Commerce.

(c) **FUNCTIONS OF OFFICE.**—The Office shall be the principal unit for the coordination of space-related issues, programs, and initiatives within the Department of Commerce.

(d) **DUTIES OF DIRECTOR.**—The primary responsibilities of the Director in carrying out the functions of the Office shall include—

(1) promoting commercial provider investment in space activities by collecting, analyzing, and disseminating information on space markets, and conducting workshops and seminars to increase awareness of commercial space opportunities;

(2) assisting United States commercial providers in the efforts of those providers to conduct business with the United States Government;

(3) acting as an industry advocate within the executive branch of the Federal Government to ensure that the Federal Government meets the space-related requirements of the Federal Government, to the fullest extent feasible, using commercially available space goods and services;

(4) ensuring that the United States Government does not compete with United States commercial providers in the provision of space hardware and services otherwise available from United States commercial providers;

(5) promoting the export of space-related goods and services;

(6) representing the Department of Commerce in the development of United States policies and in negotiations with foreign countries to ensure free and fair trade internationally in the area of space commerce; and

(7) seeking the removal of legal, policy, and institutional impediments to space commerce.

§ 50703. Annual report

The Secretary of Commerce shall submit an annual report on the activities of the Office, including planned programs and expenditures, to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science and Technology of the House of Representatives.

Subtitle VI—Earth Observations

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SUBCHAPTER I—GENERAL

§ 60101. Definitions

In this chapter:

(1) **COST OF FULFILLING USER REQUESTS.**—The term “cost of fulfilling user requests” means the incremental costs associated with providing product generation, reproduction, and distribution of unenhanced data in response to user requests and shall not include any acquisition, amortization, or depreciation of capital assets originally paid for by the United States Government or other costs not specifically attributable to fulfilling user requests.

(2) **DATA CONTINUITY.**—The term “data continuity” means the continued acquisition and availability of unenhanced data which are, from the point of view of the user—

(A) sufficiently consistent (in terms of acquisition geometry, coverage characteristics, and spectral characteristics) with previous Landsat data to allow comparisons for global and regional change detection and characterization; and

(B) compatible with such data and with methods used to receive and process such data.

(3) **DATA PREPROCESSING.**—The term “data preprocessing”—

(A) may include—

- (i) rectification of system and sensor distortions in land remote sensing data as it is received directly from the satellite in preparation for delivery to a user;
- (ii) registration of such data with respect to features of the Earth; and
- (iii) calibration of spectral response with respect to such data; but

(B) does not include conclusions, manipulations, or calculations derived from such data, or a combination of such data with other data.

(4) LAND REMOTE SENSING.—The term “land remote sensing” means the collection of data which can be processed into imagery of surface features of the Earth from an unclassified satellite or satellites, other than an operational United States Government weather satellite.

(5) LANDSAT PROGRAM MANAGEMENT.—The term “Landsat Program Management” means the integrated program management structure—

(A) established by, and responsible to, the Administrator and the Secretary of Defense pursuant to section 60111(a) of this title; and

(B) consisting of appropriate officers and employees of the Administration, the Department of Defense, and any other United States Government agencies the President designates as responsible for the Landsat program.

(6) LANDSAT SYSTEM.—The term “Landsat system” means Landsats 1, 2, 3, 4, 5, and 6, and any follow-on land remote sensing system operated and owned by the United States Government, along with any related ground equipment, systems, and facilities owned by the United States Government.

(7) LANDSAT 6 CONTRACTOR.—The term “Landsat 6 contractor” means the private sector entity which was awarded the contract for spacecraft construction, operations, and data marketing rights for the Landsat 6 spacecraft.

(8) LANDSAT 7.—The term “Landsat 7” means the follow-on satellite to Landsat 6.

(9) NATIONAL SATELLITE LAND REMOTE SENSING DATA ARCHIVE.—The term “National Satellite Land Remote Sensing Data Archive” means the archive established by the Secretary of the Interior pursuant to the archival responsibilities defined in section 60142 of this title.

(10) NONCOMMERCIAL PURPOSES.—The term “noncommercial purposes” means activities undertaken by individuals or entities on the condition, upon receipt of unenhanced data, that—

(A) such data shall not be used in connection with any bid for a commercial contract, development of a commercial product, or any other non-United States Government activity that is expected, or has the potential, to be profit-making;

(B) the results of such activities are disclosed in a timely and complete fashion in the open technical literature or other method of public release, except when such disclosure by the United States Government or its contractors would adversely affect the national security or foreign policy of the United States or violate a provision of law or regulation; and

(C) such data shall not be distributed in competition with unenhanced data provided by the Landsat 6 contractor.

(11) SECRETARY.—The term “Secretary” means the Secretary of Commerce.

(12) UNENHANCED DATA.—The term “unenhanced data” means land remote sensing signals or imagery products that are unprocessed or subject only to data preprocessing.

(13) UNITED STATES GOVERNMENT AND ITS AFFILIATED USERS.—The term “United States Government and its affiliated users” means—

(A) United States Government agencies;

(B) researchers involved with the United States Global Change Research Program and its international counterpart programs; and

(C) other researchers and international entities that have signed with the United States Government a cooperative agreement involving the use of Landsat data for non-commercial purposes.

SUBCHAPTER II—LANDSAT

§ 60111. Landsat Program Management

(a) ESTABLISHMENT.—The Administrator and the Secretary of Defense shall be responsible for management of the Landsat program. Such responsibility shall be carried out by establishing an integrated program management structure for the Landsat system.

(b) MANAGEMENT PLAN.—The Administrator, the Secretary of Defense, and any other United States Government official the President designates as responsible for part of the Landsat program shall establish, through a management plan, the roles, responsibilities, and funding expectations for the Landsat program of the appropriate United States Government agencies. The management plan shall—

(1) specify that the fundamental goal of the Landsat Program Management is the continuity of unenhanced Landsat data through the acquisition and operation of a Landsat 7 satellite as quickly as practicable which is, at a minimum, functionally equivalent to the Landsat 6 satellite, with the addition of a tracking and data relay satellite communications capability;

(2) include a baseline funding profile that—

(A) is mutually acceptable to the Administration and the Department of Defense for the period covering the development and operation of Landsat 7; and

(B) provides for total funding responsibility of the Administration and the Department of Defense, respectively, to be approximately equal to the funding responsibility of the other as spread across the development and operational life of Landsat 7;

(3) specify that any improvements over the Landsat 6 functional equivalent capability for Landsat 7 will be funded by a specific sponsoring agency or agencies, in a manner agreed to by the Landsat Program Management, if the required funding exceeds the baseline funding profile required by paragraph (2), and that additional improvements will be sought only if the improvements will not jeopardize data continuity; and

(4) provide for a technology demonstration program whose objective shall be the demonstration of advanced land remote sensing technologies that may potentially yield a system which is less expensive to build and operate, and more responsive to data users, than is the current Landsat system.

(c) RESPONSIBILITIES.—The Landsat Program Management shall be responsible for—

- (1) Landsat 7 procurement, launch, and operations;
- (2) ensuring that the operation of the Landsat system is responsive to the broad interests of the civilian, national security, commercial, and foreign users of the Landsat system;
- (3) ensuring that all unenhanced Landsat data remain unclassified and that, except as provided in subsections (a) and (b) of section 60146 of this title, no restrictions are placed on the availability of unenhanced data;
- (4) ensuring that land remote sensing data of high priority locations will be acquired by the Landsat 7 system as required to meet the needs of the United States Global Change Research Program, as established in the Global Change Research Act of 1990 (15 U.S.C. 2921 et seq.), and to meet the needs of national security users;
- (5) Landsat data responsibilities pursuant to this chapter;
- (6) oversight of Landsat contracts entered into under sections 102 and 103 of the Land Remote Sensing Policy Act of 1992 (Public Law 102–555, 106 Stat. 4168);
- (7) coordination of a technology demonstration program pursuant to section 60133 of this title; and
- (8) ensuring that copies of data acquired by the Landsat system are provided to the National Satellite Land Remote Sensing Data Archive.

(d) AUTHORITY TO CONTRACT.—The Landsat Program Management may, subject to appropriations and only under the existing contract authority of the United States Government agencies that compose the Landsat Program Management, enter into contracts with the private sector for services such as satellite operations and data preprocessing.

(e) LANDSAT ADVISORY PROCESS.—

(1) ADVICE AND COMMENTS.—The Landsat Program Management shall seek impartial advice and comments regarding the status, effectiveness, and operation of the Landsat system, using existing advisory committees and other appropriate mechanisms. Such advice shall be sought from individuals who represent—

(A) a broad range of perspectives on basic and applied science and operational needs with respect to land remote sensing data;

(B) the full spectrum of users of Landsat data, including representatives from United States Government agencies, State and local government agencies, academic institutions, nonprofit organizations, value-added companies, the agricultural, mineral extraction, and other user industries, and the public; and

(C) a broad diversity of age groups, sexes, and races.

(2) REPORTS.—The Landsat Program Management shall prepare and submit biennially a report to Congress which—

(A) reports the public comments received pursuant to paragraph (1); and

(B) includes—

- (i) a response to the public comments received pursuant to paragraph (1);
- (ii) information on the volume of use, by category, of data from the Landsat system; and
- (iii) any recommendations for policy or programmatic changes to improve the utility and operation of the Landsat system.

§ 60112. Transfer of Landsat 6 program responsibilities

The responsibilities of the Secretary with respect to Landsat 6 shall be transferred to the Landsat Program Management, as agreed to between the Secretary and the Landsat Program Management, pursuant to section 60111 of this title.

§ 60113. Data policy for Landsat 7

(a) LANDSAT 7 DATA POLICY.—The Landsat Program Management, in consultation with other appropriate United States Government agencies, shall develop a data policy for Landsat 7 which should—

- (1) ensure that unenhanced data are available to all users at the cost of fulfilling user requests;
- (2) ensure timely and dependable delivery of unenhanced data to the full spectrum of civilian, national security, commercial, and foreign users and the National Satellite Land Remote Sensing Data Archive;
- (3) ensure that the United States retains ownership of all unenhanced data generated by Landsat 7;
- (4) support the development of the commercial market for remote sensing data;
- (5) ensure that the provision of commercial value-added services based on remote sensing data remains exclusively the function of the private sector; and
- (6) to the extent possible, ensure that the data distribution system for Landsat 7 is compatible with the Earth Observing System Data and Information System.

(b) ADDITIONAL DATA POLICY CONSIDERATIONS.—In addition, the data policy for Landsat 7 may provide for—

- (1) United States private sector entities to operate ground receiving stations in the United States for Landsat 7 data;
- (2) other means for direct access by private sector entities to unenhanced data from Landsat 7; and
- (3) the United States Government to charge a per image fee, license fee, or other such fee to entities operating ground receiving stations or distributing Landsat 7 data.

SUBCHAPTER III—LICENSING OF PRIVATE REMOTE SENSING SPACE SYSTEMS

§ 60121. General licensing authority

(a) LICENSING AUTHORITY OF SECRETARY.—

- (1) IN GENERAL.—In consultation with other appropriate United States Government agencies, the Secretary is authorized to license private sector parties to operate private remote sensing space systems for such period as the Secretary may specify and in accordance with the provisions of this subchapter.

(2) LIMITATION WITH RESPECT TO SYSTEM USED FOR OTHER PURPOSES.—In the case of a private space system that is used for remote sensing and other purposes, the authority of the Secretary under this subchapter shall be limited only to the remote sensing operations of such space system.

(b) COMPLIANCE WITH LAW, REGULATIONS, INTERNATIONAL OBLIGATIONS, AND NATIONAL SECURITY.—

(1) IN GENERAL.—No license shall be granted by the Secretary unless the Secretary determines in writing that the applicant will comply with the requirements of this chapter, any regulations issued pursuant to this chapter, and any applicable international obligations and national security concerns of the United States.

(2) LIST OF REQUIREMENTS FOR COMPLETE APPLICATION.—The Secretary shall publish in the Federal Register a complete and specific list of all information required to comprise a complete application for a license under this subchapter. An application shall be considered complete when the applicant has provided all information required by the list most recently published in the Federal Register before the date the application was first submitted. Unless the Secretary has, within 30 days after receipt of an application, notified the applicant of information necessary to complete an application, the Secretary may not deny the application on the basis of the absence of any such information.

(c) DEADLINE FOR ACTION ON APPLICATION.—The Secretary shall review any application and make a determination thereon within 120 days of the receipt of such application. If final action has not occurred within such time, the Secretary shall inform the applicant of any pending issues and of actions required to resolve them.

(d) IMPROPER BASIS FOR DENIAL.—The Secretary shall not deny such license in order to protect any existing licensee from competition.

(e) REQUIREMENT TO PROVIDE UNENHANCED DATA.—

(1) DESIGNATION OF DATA.—The Secretary, in consultation with other appropriate United States Government agencies and pursuant to paragraph (2), shall designate in a license issued pursuant to this subchapter any unenhanced data required to be provided by the licensee under section 60122(b)(3) of this title.

(2) PRELIMINARY DETERMINATION.—The Secretary shall make a designation under paragraph (1) after determining that—

(A) such data are generated by a system for which all or a substantial part of the development, fabrication, launch, or operations costs have been or will be directly funded by the United States Government; or

(B) it is in the interest of the United States to require such data to be provided by the licensee consistent with section 60122(b)(3) of this title, after considering the impact on the licensee and the importance of promoting widespread access to remote sensing data from United States and foreign systems.

(3) CONSISTENCY WITH CONTRACT OR OTHER ARRANGEMENT.—A designation made by the Secretary under paragraph (1) shall not be inconsistent with any contract or other arrangement

entered into between a United States Government agency and the licensee.

§ 60122. Conditions for operation

(a) LICENSE REQUIRED FOR OPERATION.—No person that is subject to the jurisdiction or control of the United States may, directly or through any subsidiary or affiliate, operate any private remote sensing space system without a license pursuant to section 60121 of this title.

(b) LICENSING REQUIREMENTS.—Any license issued pursuant to this subchapter shall specify that the licensee shall comply with all of the requirements of this chapter and shall—

(1) operate the system in such manner as to preserve the national security of the United States and to observe the international obligations of the United States in accordance with section 60146 of this title;

(2) make available to the government of any country (including the United States) unenhanced data collected by the system concerning the territory under the jurisdiction of such government as soon as such data are available and on reasonable terms and conditions;

(3) make unenhanced data designated by the Secretary in the license pursuant to section 60121(e) of this title available in accordance with section 60141 of this title;

(4) upon termination of operations under the license, make disposition of any satellites in space in a manner satisfactory to the President;

(5) furnish the Secretary with complete orbit and data collection characteristics of the system, and inform the Secretary immediately of any deviation; and

(6) notify the Secretary of any significant or substantial agreement the licensee intends to enter with a foreign nation, entity, or consortium involving foreign nations or entities.

(c) ADDITIONAL LICENSING REQUIREMENTS FOR LANDSAT 6 CONTRACTOR.—In addition to the requirements of subsection (b), any license issued pursuant to this subchapter to the Landsat 6 contractor shall specify that the Landsat 6 contractor shall—

(1) notify the Secretary of any value added activities (as defined by the Secretary by regulation) that will be conducted by the Landsat 6 contractor or by a subsidiary or affiliate; and

(2) if such activities are to be conducted, provide the Secretary with a plan for compliance with section 60141 of this title.

§ 60123. Administrative authority of Secretary

(a) FUNCTIONS.—In order to carry out the responsibilities specified in this subchapter, the Secretary may—

(1) grant, condition, or transfer licenses under this chapter;

(2) seek an order of injunction or similar judicial determination from a district court of the United States with personal jurisdiction over the licensee to terminate, modify, or suspend licenses under this subchapter and to terminate licensed operations on an immediate basis, if the Secretary determines that the licensee has substantially failed to comply with any provisions of this chapter, with any terms, conditions, or restrictions of such license, or with any international obligations or national security concerns of the United States;

(3) provide penalties for noncompliance with the requirements of licenses or regulations issued under this subchapter, including civil penalties not to exceed \$10,000 (each day of operation in violation of such licenses or regulations constituting a separate violation);

(4) compromise, modify, or remit any such civil penalty;

(5) issue subpoenas for any materials, documents, or records, or for the attendance and testimony of witnesses for the purpose of conducting a hearing under this section;

(6) seize any object, record, or report pursuant to a warrant from a magistrate based on a showing of probable cause to believe that such object, record, or report was used, is being used, or is likely to be used in violation of this chapter or the requirements of a license or regulation issued thereunder; and

(7) make investigations and inquiries and administer to or take from any person an oath, affirmation, or affidavit concerning any matter relating to the enforcement of this chapter.

(b) REVIEW OF AGENCY ACTION.—Any applicant or licensee that makes a timely request for review of an adverse action pursuant to paragraph (1), (3), (5), or (6) of subsection (a) shall be entitled to adjudication by the Secretary on the record after an opportunity for any agency hearing with respect to such adverse action. Any final action by the Secretary under this subsection shall be subject to judicial review under chapter 7 of title 5.

§ 60124. Regulatory authority of Secretary

The Secretary may issue regulations to carry out this subchapter. Such regulations shall be promulgated only after public notice and comment in accordance with the provisions of section 553 of title 5.

§ 60125. Agency activities

(a) LICENSE APPLICATION AND ISSUANCE.—A private sector party may apply for a license to operate a private remote sensing space system which utilizes, on a space-available basis, a civilian United States Government satellite or vehicle as a platform for such system. The Secretary, pursuant to this subchapter, may license such system if it meets all conditions of this subchapter and—

(1) the system operator agrees to reimburse the Government in a timely manner for all related costs incurred with respect to such utilization, including a reasonable and proportionate share of fixed, platform, data transmission, and launch costs; and

(2) such utilization would not interfere with or otherwise compromise intended civilian Government missions, as determined by the agency responsible for such civilian platform.

(b) ASSISTANCE.—The Secretary may offer assistance to private sector parties in finding appropriate opportunities for such utilization.

(c) AGREEMENTS.—To the extent provided in advance by appropriation Acts, any United States Government agency may enter into agreements for such utilization if such agreements are consistent with such agency's mission and statutory authority, and if such remote sensing space system is licensed by the Secretary before commencing operation.

(d) **APPLICABILITY.**—This section does not apply to activities carried out under subchapter IV.

(e) **EFFECT ON FCC AUTHORITY.**—Nothing in this subchapter shall affect the authority of the Federal Communications Commission pursuant to the Communications Act of 1934 (47 U.S.C. 151 et seq.).

**SUBCHAPTER IV—RESEARCH, DEVELOPMENT, AND
DEMONSTRATION**

§ 60131. Continued Federal research and development

(a) **ROLES OF ADMINISTRATION AND DEPARTMENT OF DEFENSE.**—

(1) **IN GENERAL.**—The Administrator and the Secretary of Defense are directed to continue and to enhance programs of remote sensing research and development.

(2) **ADMINISTRATION ACTIVITIES AUTHORIZED AND ENCOURAGED.**—The Administrator is authorized and encouraged to—

(A) conduct experimental space remote sensing programs (including applications demonstration programs and basic research at universities);

(B) develop remote sensing technologies and techniques, including those needed for monitoring the Earth and its environment; and

(C) conduct such research and development in cooperation with other United States Government agencies and with public and private research entities (including private industry, universities, non-profit organizations, State and local governments, foreign governments, and international organizations) and to enter into arrangements (including joint ventures) which will foster such cooperation.

(b) **ROLES OF DEPARTMENT OF AGRICULTURE AND DEPARTMENT OF THE INTERIOR.**—

(1) **IN GENERAL.**—In order to enhance the ability of the United States to manage and utilize its renewable and nonrenewable resources, the Secretary of Agriculture and the Secretary of the Interior are authorized and encouraged to conduct programs of research and development in the applications of remote sensing using funds appropriated for such purposes.

(2) **ACTIVITIES THAT MAY BE INCLUDED.**—Such programs may include basic research at universities, demonstrations of applications, and cooperative activities involving other Government agencies, private sector parties, and foreign and international organizations.

(c) **ROLE OF OTHER FEDERAL AGENCIES.**—Other United States Government agencies are authorized and encouraged to conduct research and development on the use of remote sensing in the fulfillment of their authorized missions, using funds appropriated for such purposes.

§ 60132. Availability of federally gathered unenhanced data

(a) **IN GENERAL.**—All unenhanced land remote sensing data gathered and owned by the United States Government, including unenhanced data gathered under the technology demonstration program carried out pursuant to section 60133 of this title, shall be made available to users in a timely fashion.

(b) **PROTECTION FOR COMMERCIAL DATA DISTRIBUTOR.**—The President shall seek to ensure that unenhanced data gathered under

the technology demonstration program carried out pursuant to section 60133 of this title shall, to the extent practicable, be made available on terms that would not adversely affect the commercial market for unenhanced data gathered by the Landsat 6 spacecraft.

§ 60133. Technology demonstration program

(a) ESTABLISHMENT.—As a fundamental component of a national land remote sensing strategy, the President shall establish, through appropriate United States Government agencies, a technology demonstration program. The goals of the program shall be to—

(1) seek to launch advanced land remote sensing system components within 5 years after October 28, 1992;

(2) demonstrate within such 5-year period advanced sensor capabilities suitable for use in the anticipated land remote sensing program; and

(3) demonstrate within such 5-year period an advanced land remote sensing system design that could be less expensive to procure and operate than the Landsat system projected to be in operation through the year 2000, and that therefore holds greater potential for private sector investment and control.

(b) EXECUTION OF PROGRAM.—In executing the technology demonstration program, the President shall seek to apply technologies associated with United States National Technical Means of intelligence gathering, to the extent that such technologies are appropriate for the technology demonstration and can be declassified for such purposes without causing adverse harm to United States national security interests.

(c) BROAD APPLICATION.—To the greatest extent practicable, the technology demonstration program established under subsection (a) shall be designed to be responsive to the broad civilian, national security, commercial, and foreign policy needs of the United States.

(d) PRIVATE SECTOR FUNDING.—The technology demonstration program under this section may be carried out in part with private sector funding.

(e) LANDSAT PROGRAM MANAGEMENT COORDINATION.—The Landsat Program Management shall have a coordinating role in the technology demonstration program carried out under this section.

§ 60134. Preference for private sector land remote sensing system

(a) IN GENERAL.—If a successor land remote sensing system to Landsat 7 can be funded and managed by the private sector while still achieving the goals stated in subsection (b) without jeopardizing the domestic, national security, and foreign policy interests of the United States, preference should be given to the development of such a system by the private sector without competition from the United States Government.

(b) GOALS.—The goals referred to in subsection (a) are—

(1) to encourage the development, launch, and operation of a land remote sensing system that adequately serves the civilian, national security, commercial, and foreign policy interests of the United States;

(2) to encourage the development, launch, and operation of a land remote sensing system that maintains data continuity with the Landsat system; and

(3) to incorporate system enhancements, including any such enhancements developed under the technology demonstration program under section 60133 of this title, which may potentially yield a system that is less expensive to build and operate, and more responsive to data users, than is the Landsat system otherwise projected to be in operation in the future.

SUBCHAPTER V—GENERAL PROVISIONS

§ 60141. Nondiscriminatory data availability

(a) IN GENERAL.—Except as provided in subsection (b), any unenhanced data generated by the Landsat system or any other land remote sensing system funded and owned by the United States Government shall be made available to all users without preference, bias, or any other special arrangement (except on the basis of national security concerns pursuant to section 60146 of this title) regarding delivery, format, pricing, or technical considerations which would favor one customer or class of customers over another.

(b) EXCEPTIONS.—Unenhanced data generated by the Landsat system or any other land remote sensing system funded and owned by the United States Government may be made available to the United States Government and its affiliated users at reduced prices, in accordance with this chapter, on the condition that such unenhanced data are used solely for noncommercial purposes.

§ 60142. Archiving of data

(a) PUBLIC INTEREST.—It is in the public interest for the United States Government to—

(1) maintain an archive of land remote sensing data for historical, scientific, and technical purposes, including long-term global environmental monitoring;

(2) control the content and scope of the archive; and

(3) ensure the quality, integrity, and continuity of the archive.

(b) ARCHIVING PRACTICES.—The Secretary of the Interior, in consultation with the Landsat Program Management, shall provide for long-term storage, maintenance, and upgrading of a basic, global, land remote sensing data set (hereafter in this section referred to as the “basic data set”) and shall follow reasonable archival practices to ensure proper storage and preservation of the basic data set and timely access for parties requesting data.

(c) DETERMINATION OF CONTENT OF BASIC DATA SET.—In determining the initial content of, or in upgrading, the basic data set, the Secretary of the Interior shall—

(1) use as a baseline the data archived on October 28, 1992;

(2) take into account future technical and scientific developments and needs, paying particular attention to the anticipated data requirements of global environmental change research;

(3) consult with and seek the advice of users and producers of remote sensing data and data products;

(4) consider the need for data which may be duplicative in terms of geographical coverage but which differ in terms of season, spectral bands, resolution, or other relevant factors;

(5) include, as the Secretary of the Interior considers appropriate, unenhanced data generated either by the Landsat system, pursuant to subchapter II, or by licensees under subchapter III;

(6) include, as the Secretary of the Interior considers appropriate, data collected by foreign ground stations or by foreign remote sensing space systems; and

(7) ensure that the content of the archive is developed in accordance with section 60146 of this title.

(d) PUBLIC DOMAIN.—After the expiration of any exclusive right to sell, or after relinquishment of such right, the data provided to the National Satellite Land Remote Sensing Data Archive shall be in the public domain and shall be made available to requesting parties by the Secretary of the Interior at the cost of fulfilling user requests.

§ 60143. Nonreproduction

Unenhanced data distributed by any licensee under subchapter III may be sold on the condition that such data will not be reproduced or disseminated by the purchaser for commercial purposes.

§ 60144. Reimbursement for assistance

The Administrator, the Secretary of Defense, and the heads of other United States Government agencies may provide assistance to land remote sensing system operators under the provisions of this chapter. Substantial assistance shall be reimbursed by the operator, except as otherwise provided by law.

§ 60145. Acquisition of equipment

The Landsat Program Management may, by means of a competitive process, allow a licensee under subchapter III or any other private party to buy, lease, or otherwise acquire the use of equipment from the Landsat system, when such equipment is no longer needed for the operation of such system or for the sale of data from such system. Officials of other United States Government civilian agencies are authorized and encouraged to cooperate with the Secretary in carrying out this section.

§ 60146. Radio frequency allocation

(a) APPLICATION TO FEDERAL COMMUNICATIONS COMMISSION.—To the extent required by the Communications Act of 1934 (47 U.S.C. 151 et seq.), an application shall be filed with the Federal Communications Commission for any radio facilities involved with commercial remote sensing space systems licensed under subchapter III.

(b) DEADLINE FOR FCC ACTION.—It is the intent of Congress that the Federal Communications Commission complete the radio licensing process under the Communications Act of 1934 (47 U.S.C. 151 et seq.), upon the application of any private sector party or consortium operator of any commercial land remote sensing space system subject to this chapter, within 120 days of the receipt of an application for such licensing. If final action has not occurred within 120 days of the receipt of such an application, the Federal Communications Commission shall inform the applicant of any pending issues and of actions required to resolve them.

(c) DEVELOPMENT AND CONSTRUCTION OF UNITED STATES SYSTEMS.—Authority shall not be required from the Federal Communications Commission for the development and construction of any United States land remote sensing space system (or component

thereof), other than radio transmitting facilities or components, while any licensing determination is being made.

(d) **CONSISTENCY WITH INTERNATIONAL OBLIGATIONS AND PUBLIC INTEREST.**—Frequency allocations made pursuant to this section by the Federal Communications Commission shall be consistent with international obligations and with the public interest.

§ 60147. Consultation

(a) **CONSULTATION WITH SECRETARY OF DEFENSE.**—The Secretary and the Landsat Program Management shall consult with the Secretary of Defense on all matters under this chapter affecting national security. The Secretary of Defense shall be responsible for determining those conditions, consistent with this chapter, necessary to meet national security concerns of the United States and for notifying the Secretary and the Landsat Program Management promptly of such conditions.

(b) **CONSULTATION WITH SECRETARY OF STATE.**—

(1) **IN GENERAL.**—The Secretary and the Landsat Program Management shall consult with the Secretary of State on all matters under this chapter affecting international obligations. The Secretary of State shall be responsible for determining those conditions, consistent with this chapter, necessary to meet international obligations and policies of the United States and for notifying promptly the Secretary and the Landsat Program Management of such conditions.

(2) **INTERNATIONAL AID.**—Appropriate United States Government agencies are authorized and encouraged to provide remote sensing data, technology, and training to developing nations as a component of programs of international aid.

(3) **REPORTING DISCRIMINATORY DISTRIBUTION.**—The Secretary of State shall promptly report to the Secretary and Landsat Program Management any instances outside the United States of discriminatory distribution of Landsat data.

(c) **STATUS REPORT.**—The Landsat Program Management shall, as often as necessary, provide to Congress complete and updated information about the status of ongoing operations of the Landsat system, including timely notification of decisions made with respect to the Landsat system in order to meet national security concerns and international obligations and policies of the United States Government.

(d) **REIMBURSEMENTS.**—If, as a result of technical modifications imposed on a licensee under subchapter III on the basis of national security concerns, the Secretary, in consultation with the Secretary of Defense or with other Federal agencies, determines that additional costs will be incurred by the licensee, or that past development costs (including the cost of capital) will not be recovered by the licensee, the Secretary may require the agency or agencies requesting such technical modifications to reimburse the licensee for such additional or development costs, but not for anticipated profits. Reimbursements may cover costs associated with required changes in system performance, but not costs ordinarily associated with doing business abroad.

§ 60148. Enforcement

(a) **IN GENERAL.**—In order to ensure that unenhanced data from the Landsat system received solely for noncommercial purposes are not used for any commercial purpose, the Secretary (in

collaboration with private sector entities responsible for the marketing and distribution of unenhanced data generated by the Landsat system) shall develop and implement a system for enforcing this prohibition, in the event that unenhanced data from the Landsat system are made available for noncommercial purposes at a different price than such data are made available for other purposes.

(b) **AUTHORITY OF SECRETARY.**—Subject to subsection (d), the Secretary may impose any of the enforcement mechanisms described in subsection (c) against a person that—

(1) receives unenhanced data from the Landsat system under this chapter solely for noncommercial purposes (and at a different price than the price at which such data are made available for other purposes); and

(2) uses such data for other than noncommercial purposes.

(c) **ENFORCEMENT MECHANISMS.**—Enforcement mechanisms referred to in subsection (b) may include civil penalties of not more than \$10,000 (per day per violation), denial of further unenhanced data purchasing privileges, and any other penalties or restrictions the Secretary considers necessary to ensure, to the greatest extent practicable, that unenhanced data provided for noncommercial purposes are not used to unfairly compete in the commercial market against private sector entities not eligible for data at the cost of fulfilling user requests.

(d) **PROCEDURES AND REGULATIONS.**—The Secretary shall issue any regulations necessary to carry out this section and shall establish standards and procedures governing the imposition of enforcement mechanisms under subsection (b). The standards and procedures shall include a procedure for potentially aggrieved parties to file formal protests with the Secretary alleging instances where such unenhanced data have been, or are being, used for commercial purposes in violation of the terms of receipt of such data. The Secretary shall promptly act to investigate any such protest, and shall report annually to Congress on instances of such violations.

SUBCHAPTER VI—PROHIBITION OF COMMERCIALIZATION OF WEATHER SATELLITES

§ 60161. Prohibition

Neither the President nor any other official of the Government shall make any effort to lease, sell, or transfer to the private sector, or commercialize, any portion of the weather satellite systems operated by the Department of Commerce or any successor agency.

§ 60162. Future considerations

Regardless of any change in circumstances subsequent to October 28, 1992, even if such change makes it appear to be in the national interest to commercialize weather satellites, neither the President nor any official shall take any action prohibited by section 60161 of this title unless this subchapter has first been repealed.

CHAPTER 603—REMOTE SENSING

Sec.
60301. Definitions.
60302. General responsibilities.

- 60303. Pilot projects to encourage public sector applications.
- 60304. Program evaluation.
- 60305. Data availability.
- 60306. Education.

§ 60301. Definitions

In this chapter:

(1) **GEOSPATIAL INFORMATION.**—The term “geospatial information” means knowledge of the nature and distribution of physical and cultural features on the landscape based on analysis of data from airborne or spaceborne platforms or other types and sources of data.

(2) **HIGH RESOLUTION.**—The term “high resolution” means resolution better than five meters.

(3) **INSTITUTION OF HIGHER EDUCATION.**—The term “institution of higher education” has the meaning given the term in section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a)).

§ 60302. General responsibilities

The Administrator shall—

(1) develop a sustained relationship with the United States commercial remote sensing industry and, consistent with applicable policies and law, to the maximum practicable, rely on their services; and

(2) in conjunction with United States industry and universities, research, develop, and demonstrate prototype Earth science applications to enhance Federal, State, local, and tribal governments’ use of government and commercial remote sensing data, technologies, and other sources of geospatial information for improved decision support to address their needs.

§ 60303. Pilot projects to encourage public sector applications

(a) **IN GENERAL.**—The Administrator shall establish a program of grants for competitively awarded pilot projects to explore the integrated use of sources of remote sensing and other geospatial information to address State, local, regional, and tribal agency needs.

(b) **PREFERRED PROJECTS.**—In awarding grants under this section, the Administrator shall give preference to projects that—

(1) make use of commercial data sets, including high resolution commercial satellite imagery and derived satellite data products, existing public data sets where commercial data sets are not available or applicable, or the fusion of such data sets;

(2) integrate multiple sources of geospatial information, such as geographic information system data, satellite-provided positioning data, and remotely sensed data, in innovative ways;

(3) include funds or in-kind contributions from non-Federal sources;

(4) involve the participation of commercial entities that process raw or lightly processed data, often merging that data with other geospatial information, to create data products that have significant value added to the original data; and

(5) taken together demonstrate as diverse a set of public sector applications as possible.

(c) OPPORTUNITIES.—In carrying out this section, the Administrator shall seek opportunities to assist—

(1) in the development of commercial applications potentially available from the remote sensing industry; and

(2) State, local, regional, and tribal agencies in applying remote sensing and other geospatial information technologies for growth management.

(d) DURATION.—Assistance for a pilot project under subsection (a) shall be provided for a period not to exceed 3 years.

(e) REPORT.—Each recipient of a grant under subsection (a) shall transmit a report to the Administrator on the results of the pilot project within 180 days of the completion of that project.

(f) WORKSHOP.—Each recipient of a grant under subsection (a) shall, not later than 180 days after the completion of the pilot project, conduct at least one workshop for potential users to disseminate the lessons learned from the pilot project as widely as feasible.

(g) REGULATIONS.—The Administrator shall issue regulations establishing application, selection, and implementation procedures for pilot projects, and guidelines for reports and workshops required by this section.

§ 60304. Program evaluation

(a) ADVISORY COMMITTEE.—The Administrator shall establish an advisory committee, consisting of individuals with appropriate expertise in State, local, regional, and tribal agencies, the university research community, and the remote sensing and other geospatial information industries, to monitor the program established under section 60303 of this title. The advisory committee shall consult with the Federal Geographic Data Committee and other appropriate industry representatives and organizations. Notwithstanding section 14 of the Federal Advisory Committee Act (5 App. U.S.C.), the advisory committee established under this subsection shall remain in effect until the termination of the program under section 60303 of this title.

(b) EFFECTIVENESS EVALUATION.—Not later than December 31, 2009, the Administrator shall transmit to Congress an evaluation of the effectiveness of the program established under section 60303 of this title in exploring and promoting the integrated use of sources of remote sensing and other geospatial information to address State, local, regional, and tribal agency needs. Such evaluation shall have been conducted by an independent entity.

§ 60305. Data availability

The Administrator shall ensure that the results of each of the pilot projects completed under section 60303 of this title shall be retrievable through an electronic, internet-accessible database.

§ 60306. Education

The Administrator shall establish an educational outreach program to increase awareness at institutions of higher education and State, local, regional, and tribal agencies of the potential applications of remote sensing and other geospatial information and awareness of the need for geospatial workforce development.

CHAPTER 605—EARTH SCIENCE

Sec.	
60501.	Goal.
60502.	Transitioning experimental research into operational services.
60503.	Reauthorization of Glory Mission.
60504.	Tornadoes and other severe storms.
60505.	Coordination with the National Oceanic and Atmospheric Administration.
60506.	Sharing of climate related data.

§ 60501. Goal

The goal for the Administration's Earth Science program shall be to pursue a program of Earth observations, research, and applications activities to better understand the Earth, how it supports life, and how human activities affect its ability to do so in the future. In pursuit of this goal, the Administration's Earth Science program shall ensure that securing practical benefits for society will be an important measure of its success in addition to securing new knowledge about the Earth system and climate change. In further pursuit of this goal, the Administration shall, together with the National Oceanic and Atmospheric Administration and other relevant agencies, provide United States leadership in developing and carrying out a cooperative international Earth observations-based research program.

§ 60502. Transitioning experimental research into operational services

(a) INTERAGENCY PROCESS.—The Director of the Office of Science and Technology Policy, in consultation with the Administrator, the Administrator of the National Oceanic and Atmospheric Administration, and other relevant stakeholders, shall develop a process to transition, when appropriate, Administration Earth science and space weather missions or sensors into operational status. The process shall include coordination of annual agency budget requests as required to execute the transitions.

(b) RESPONSIBLE AGENCY OFFICIAL.—The Administrator and the Administrator of the National Oceanic and Atmospheric Administration shall each designate an agency official who shall have the responsibility for and authority to lead the Administration's and the National Oceanic and Atmospheric Administration's transition activities and interagency coordination.

(c) PLAN.—For each mission or sensor that is determined to be appropriate for transition under subsection (a), the Administration and the National Oceanic and Atmospheric Administration shall transmit to Congress a joint plan for conducting the transition. The plan shall include the strategy, milestones, and budget required to execute the transition. The transition plan shall be transmitted to Congress no later than 60 days after the successful completion of the mission or sensor critical design review.

§ 60503. Reauthorization of Glory Mission

Congress reauthorizes the Administration to continue with development of the Glory Mission, which will examine how aerosols and solar energy affect the Earth's climate.

§ 60504. Tornadoes and other severe storms

The Administrator shall ensure that the Administration gives high priority to those parts of its existing cooperative activities with the National Oceanic and Atmospheric Administration that

are related to the study of tornadoes and other severe storms, tornado-force winds, and other factors determined to influence the development of tornadoes and other severe storms, with the goal of improving the Nation's ability to predict tornados and other severe storms. Further, the Administrator shall examine whether there are additional cooperative activities with the National Oceanic and Atmospheric Administration that should be undertaken in the area of tornado and severe storm research.

§ 60505. Coordination with the National Oceanic and Atmospheric Administration

(a) JOINT WORKING GROUP.—The Administrator and the Administrator of the National Oceanic and Atmospheric Administration shall appoint a Joint Working Group, which shall review and monitor missions of the two agencies to ensure maximum coordination in the design, operation, and transition of missions where appropriate. The Joint Working Group shall also prepare the plans required by subsection (c).

(b) COORDINATION REPORT.—Not later than February 15 of each year, the Administrator and the Administrator of the National Oceanic and Atmospheric Administration shall jointly transmit a report to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate on how the Earth science programs of the Administration and the National Oceanic and Atmospheric Administration will be coordinated during the fiscal year following the fiscal year in which the report is transmitted.

(c) COORDINATION OF TRANSITION PLANNING AND REPORTING.—The Administrator, in conjunction with the Administrator of the National Oceanic and Atmospheric Administration and in consultation with other relevant agencies, shall evaluate relevant Administration science missions for their potential operational capabilities and shall prepare transition plans for the existing and future Earth observing systems found to have potential operational capabilities.

(d) LIMITATION.—The Administrator shall not transfer any Administration Earth science mission or Earth observing system to the National Oceanic and Atmospheric Administration until the plan required under subsection (c) has been approved by the Administrator and the Administrator of the National Oceanic and Atmospheric Administration and until financial resources have been identified to support the transition or transfer in the President's budget request for the National Oceanic and Atmospheric Administration.

§ 60506. Sharing of climate related data

The Administrator shall work to ensure that the Administration's policies on the sharing of climate related data respond to the recommendations of the Government Accountability Office's report on climate change research and data-sharing policies and to the recommendations on the processing, distribution, and archiving of data by the National Academies Earth Science Decadal Survey, "Earth Science and Applications from Space", and other relevant National Academies reports, to enhance and facilitate their availability and widest possible use to ensure public access to accurate and current data on global warming.

Subtitle VII—Access to Space

CHAPTER 701—USE OF SPACE SHUTTLE OR ALTERNATIVES

- Sec.
70101. Recovery of fair value of placing Department of Defense payloads in orbit with space shuttle.
70102. Space shuttle use policy.
70103. Commercial payloads on space shuttle.

§ 70101. Recovery of fair value of placing Department of Defense payloads in orbit with space shuttle

Notwithstanding any other provision of law, or any interagency agreement, the Administrator shall charge such prices as are necessary to recover the fair value of placing Department of Defense payloads into orbit by means of the space shuttle.

§ 70102. Space shuttle use policy

(a) USE POLICY.—

(1) IN GENERAL.—

(A) POLICY.—It shall be the policy of the United States to use the space shuttle—

- (i) for purposes that require a human presence;
- (ii) for purposes that require the unique capabilities of the space shuttle; or
- (iii) when other compelling circumstances exist.

(B) DEFINITION OF COMPELLING CIRCUMSTANCES.—In this paragraph, the term “compelling circumstances” includes, but is not limited to, occasions when the Administrator determines, in consultation with the Secretary of Defense and the Secretary of State, that important national security or foreign policy interests would be served by a shuttle launch.

(2) USING AVAILABLE CARGO SPACE FOR SECONDARY PAYLOADS.—The policy stated in paragraph (1) shall not preclude the use of available cargo space, on a space shuttle mission otherwise consistent with the policy described in paragraph (1), for the purpose of carrying secondary payloads (as defined by the Administrator) that do not require a human presence if such payloads are consistent with the requirements of research, development, demonstration, scientific, commercial, and educational programs authorized by the Administrator.

(b) ANNUAL REPORT.—At least annually, the Administrator shall submit to Congress a report certifying that the payloads scheduled to be launched on the space shuttle for the next 4 years are consistent with the policy set forth in subsection (a)(1). For each payload scheduled to be launched from the space shuttle that does not require a human presence, the Administrator shall, in the certified report to Congress, state the specific circumstances that justified the use of the space shuttle. If, during the period between scheduled reports to Congress, any additions are made to the list of certified payloads intended to be launched from the shuttle, the Administrator shall inform Congress of the additions and the reasons therefor within 45 days of the change.

(c) ADMINISTRATION PAYLOADS.—The report described in subsection (b) shall also include those Administration payloads

designed solely to fly on the space shuttle which have begun the phase C/D of its development cycle.

§ 70103. Commercial payloads on space shuttle

(a) DEFINITIONS.—In this section:

(1) LAUNCH VEHICLE.—The term “launch vehicle” means any vehicle constructed for the purpose of operating in, or placing a payload in, outer space.

(2) PAYLOAD.—The term “payload” means an object which a person undertakes to place in outer space by means of a launch vehicle, and includes subcomponents of the launch vehicle specifically designed or adapted for that object.

(b) IN GENERAL.—Commercial payloads may not be accepted for launch as primary payloads on the space shuttle unless the Administrator determines that—

(1) the payload requires the unique capabilities of the space shuttle; or

(2) launching of the payload on the space shuttle is important for either national security or foreign policy purposes.

**CHAPTER 703—SHUTTLE PRICING POLICY FOR
COMMERCIAL AND FOREIGN USERS**

Sec.

70301. Congressional findings and declarations.

70302. Purpose, policy, and goals.

70303. Definition of additive cost.

70304. Duties of Administrator.

§ 70301. Congressional findings and declarations

Congress finds and declares that—

(1) the Space Transportation System is a vital element of the United States space program, contributing to the United States leadership in space research, technology, and development;

(2) the Space Transportation System is the primary space launch system for both United States national security and civil government missions;

(3) the Space Transportation System contributes to the expansion of United States private sector investment and involvement in space and therefore should serve commercial users;

(4) the availability of the Space Transportation System to foreign users for peaceful purposes is an important means of promoting international cooperative activities in the national interest and in maintaining access to space for activities which enhance the security and welfare of humankind;

(5) the United States is committed to maintaining world leadership in space transportation;

(6) making the Space Transportation System fully operational and cost effective in providing routine access to space will maximize the national economic benefits of the system; and

(7) national goals and the objectives for the Space Transportation System can be furthered by a stable and fair pricing policy for the Space Transportation System.

§ 70302. Purpose, policy, and goals

The purpose of this chapter is to set, for commercial and foreign users, the reimbursement pricing policy for the Space Transportation System that is consistent with the findings included in section 70301 of this title, encourages the full and effective use of space, and is designed to achieve the following goals:

- (1) The preservation of the role of the United States as a leader in space research, technology, and development.
- (2) The efficient and cost effective use of the Space Transportation System.
- (3) The achievement of greatly increased commercial space activity.
- (4) The enhancement of the international competitive position of the United States.

§ 70303. Definition of additive cost

In this chapter, the term “additive cost” means the average direct and indirect costs to the Administration of providing additional flights of the Space Transportation System beyond the costs associated with those flights necessary to meet the space transportation needs of the United States Government.

§ 70304. Duties of Administrator

(a) ESTABLISHMENT AND IMPLEMENTATION OF REIMBURSEMENT RECOVERY SYSTEM.—The Administrator shall establish and implement a pricing system to recover reimbursement in accordance with the pricing policy under section 70302 of this title from each commercial or foreign user of the Space Transportation System, which, except as provided in subsections (c), (d), and (e), shall include a base price of not less than \$74,000,000 for each flight of the Space Transportation System in 1982 dollars.

(b) REPORTS TO CONGRESS.—Each year the Administrator shall submit to the President of the Senate, the Speaker of the House of Representatives, the Committee on Commerce, Science, and Transportation of the Senate, and the Committee on Science and Technology of the House of Representatives a report, transmitted contemporaneously with the annual budget request of the President, which shall inform Congress how the policy goals contained in section 70302 of this title are being furthered by the shuttle price for foreign and commercial users.

(c) REDUCTION OF BASE PRICE.—

(1) AUTHORITY TO REDUCE.—If at any time the Administrator finds that the policy goals contained in section 70302 of this title are not being achieved, the Administrator shall have authority to reduce the base price established in subsection (a) after 45 days following receipt by the President of the Senate, the Speaker of the House of Representatives, the Committee on Commerce, Science, and Transportation of the Senate, and the Committee on Science and Technology of the House of Representatives of a notice by the Administrator containing a description of the proposed reduction together with a full and complete statement of the facts and circumstances which necessitate such proposed reduction.

(2) MINIMUM PRICE.—In no case shall the minimum price established under paragraph (1) be less than additive cost.

(d) LOW OR NO-COST FLIGHTS.—The Administrator may set a price lower than the price determined under subsection (a) or (c),

or provide no-cost flights, for any commercial or foreign user of the Space Transportation System that is involved in research, development, or demonstration programs with the Administration.

(e) CUSTOMER INCENTIVES.—Notwithstanding the provisions of subsection (a), the Administrator shall have the authority to offer reasonable customer incentives consistent with the policy goals in section 70302 of this title.

CHAPTER 705—EXPLORATION INITIATIVES

Sec.	
70501.	Space shuttle follow-on.
70502.	Exploration plan and programs.
70503.	Ground-based analog capabilities.
70504.	Stepping stone approach to exploration.
70505.	Lunar outpost.
70506.	Exploration technology research.
70507.	Technology development.
70508.	Robotic or human servicing of spacecraft.

§ 70501. Space shuttle follow-on

(a) POLICY STATEMENT.—It is the policy of the United States to possess the capability for human access to space on a continuous basis.

(b) ANNUAL REPORT.—The Administrator shall transmit an annual report to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate describing the progress being made toward developing the Crew Exploration Vehicle and the Crew Launch Vehicle and the estimated time before they will demonstrate crewed, orbital spaceflight.

§ 70502. Exploration plan and programs

The Administrator shall—

(1) construct an architecture and implementation plan for the Administration's human exploration program that is not critically dependent on the achievement of milestones by fixed dates;

(2) implement an exploration technology development program to enable lunar human and robotic operations consistent with section 20302(b) of this title, including surface power to use on the Moon and other locations;

(3) conduct an in-situ resource utilization technology program to develop the capability to use space resources to increase independence from Earth, and sustain exploration beyond low-Earth orbit; and

(4) pursue aggressively automated rendezvous and docking capabilities that can support the International Space Station and other mission requirements.

§ 70503. Ground-based analog capabilities

(a) IN GENERAL.—The Administrator may establish a ground-based analog capability in remote United States locations in order to assist in the development of lunar operations, life support, and in-situ resource utilization experience and capabilities.

(b) ENVIRONMENTAL CHARACTERISTICS.—The Administrator shall select locations for the activities described in subsection (a) that—

(1) are regularly accessible;

(2) have significant temperature extremes and range; and

(3) have access to energy and natural resources (including geothermal, permafrost, volcanic, or other potential resources).

(c) INVOLVEMENT OF LOCAL POPULATIONS AND PRIVATE SECTOR PARTNERS.—In carrying out this section, the Administrator shall involve local populations, academia, and industrial partners as much as possible to ensure that ground-based benefits and applications are encouraged and developed.

§ 70504. Stepping stone approach to exploration

In order to maximize the cost-effectiveness of the long-term exploration and utilization activities of the United States, the Administrator shall take all necessary steps, including engaging international partners, to ensure that activities in its lunar exploration program shall be designed and implemented in a manner that gives strong consideration to how those activities might also help meet the requirements of future exploration and utilization activities beyond the Moon. The timetable of the lunar phase of the long-term international exploration initiative shall be determined by the availability of funding. However, once an exploration-related project enters its development phase, the Administrator shall seek, to the maximum extent practicable, to complete that project without undue delays.

§ 70505. Lunar outpost

(a) ESTABLISHMENT.—As the Administration works toward the establishment of a lunar outpost, the Administration shall make no plans that would require a lunar outpost to be occupied to maintain its viability. Any such outpost shall be operable as a human-tended facility capable of remote or autonomous operation for extended periods.

(b) DESIGNATION.—The United States portion of the first human-tended outpost established on the surface of the Moon shall be designated the “Neil A. Armstrong Lunar Outpost”.

§ 70506. Exploration technology research

The Administrator shall carry out a program of long-term exploration-related technology research and development, including such things as in-space propulsion, power systems, life support, and advanced avionics, that is not tied to specific flight projects. The program shall have the funding goal of ensuring that the technology research and development can be completed in a timely manner in order to support the safe, successful, and sustainable exploration of the solar system. In addition, in order to ensure that the broadest range of innovative concepts and technologies are captured, the long-term technology program shall have the goal of having a significant portion of its funding available for external grants and contracts with universities, research institutions, and industry.

§ 70507. Technology development

The Administrator shall establish an intra-Directorate long-term technology development program for space and Earth science within the Science Mission Directorate for the development of new technology. The program shall be independent of the flight projects under development. The Administration shall have a goal of funding the intra-Directorate technology development program at a level of 5 percent of the total Science Mission Directorate annual budget.

The program shall be structured to include competitively awarded grants and contracts.

§ 70508. Robotic or human servicing of spacecraft

The Administrator shall take all necessary steps to ensure that provision is made in the design and construction of all future observatory-class scientific spacecraft intended to be deployed in Earth orbit or at a Lagrangian point in space for robotic or human servicing and repair to the extent practicable and appropriate.

CHAPTER 707—HUMAN SPACE FLIGHT INDEPENDENT INVESTIGATION COMMISSION

Sec.	
70701.	Definitions.
70702.	Establishment of Commission.
70703.	Tasks of Commission.
70704.	Composition of Commission.
70705.	Powers of Commission.
70706.	Public meetings, information, and hearings.
70707.	Staff of Commission.
70708.	Compensation and travel expenses.
70709.	Security clearances for Commission members and staff.
70710.	Reporting requirements and termination.

§ 70701. Definitions

In this chapter:

- (1) COMMISSION.—The term “Commission” means a Commission established under this chapter.
- (2) INCIDENT.—The term “incident” means either an accident or a deliberate act.

§ 70702. Establishment of Commission

(a) ESTABLISHMENT.—The President shall establish an independent, nonpartisan Commission within the executive branch to investigate any incident that results in the loss of—

- (1) a space shuttle;
 - (2) the International Space Station or its operational viability;
 - (3) any other United States space vehicle carrying humans that is owned by the Federal Government or that is being used pursuant to a contract with the Federal Government;
- or
- (4) a crew member or passenger of any space vehicle described in this subsection.

(b) DEADLINE FOR ESTABLISHMENT.—The President shall establish a Commission within 7 days after an incident specified in subsection (a).

§ 70703. Tasks of Commission

A Commission established pursuant to this chapter shall, to the extent possible, undertake the following tasks:

- (1) INVESTIGATION.—Investigate the incident.
- (2) CAUSE.—Determine the cause of the incident.
- (3) CONTRIBUTING FACTORS.—Identify all contributing factors to the cause of the incident.
- (4) RECOMMENDATIONS.—Make recommendations for corrective actions.
- (5) ADDITIONAL FINDINGS OR RECOMMENDATIONS.—Provide any additional findings or recommendations deemed by the

Commission to be important, whether or not they are related to the specific incident under investigation.

(6) REPORT.—Prepare a report to Congress, the President, and the public.

§ 70704. Composition of Commission

(a) NUMBER OF COMMISSIONERS.—A Commission established pursuant to this chapter shall consist of 15 members.

(b) SELECTION.—The members of a Commission shall be chosen in the following manner:

(1) APPOINTMENT BY PRESIDENT.—The President shall appoint the members, and shall designate the Chairman and Vice Chairman of the Commission from among its members.

(2) LISTS PROVIDED BY LEADERS OF CONGRESS.—The majority leader of the Senate, the minority leader of the Senate, the Speaker of the House of Representatives, and the minority leader of the House of Representatives shall each provide to the President a list of candidates for membership on the Commission. The President may select one of the candidates from each of the 4 lists for membership on the Commission.

(3) PROHIBITION REGARDING FEDERAL OFFICERS AND EMPLOYEES AND MEMBERS OF CONGRESS.—No officer or employee of the Federal Government or Member of Congress shall serve as a member of the Commission.

(4) PROHIBITION REGARDING CONTRACTORS.—No member of the Commission shall have, or have pending, a contractual relationship with the Administration.

(5) PROHIBITION REGARDING CONFLICT OF INTEREST.—The President shall not appoint any individual as a member of a Commission under this section who has a current or former relationship with the Administrator that the President determines would constitute a conflict of interest.

(6) EXPERIENCE.—To the extent practicable, the President shall ensure that the members of the Commission include some individuals with experience relative to human carrying spacecraft, as well as some individuals with investigative experience and some individuals with legal experience.

(7) DIVERSITY.—To the extent practicable, the President shall seek diversity in the membership of the Commission.

(c) DEADLINE FOR APPOINTMENT.—All members of a Commission established under this chapter shall be appointed no later than 30 days after the incident.

(d) INITIAL MEETING.—A Commission shall meet and begin operations as soon as practicable.

(e) SUBSEQUENT MEETINGS.—After its initial meeting, a Commission shall meet upon the call of the Chairman or a majority of its members.

(f) QUORUM.—Eight members of a Commission shall constitute a quorum.

(g) VACANCIES.—Any vacancy in a Commission shall not affect its powers, but shall be filled in the same manner in which the original appointment was made.

§ 70705. Powers of Commission

(a) HEARINGS AND EVIDENCE.—A Commission or, on the authority of the Commission, any subcommittee or member thereof, may, for the purpose of carrying out this chapter—

(1) hold such hearings and sit and act at such times and places, take such testimony, receive such evidence, administer such oaths; and

(2) require, by subpoena or otherwise, the attendance and testimony of such witnesses and the production of such books, records, correspondence, memoranda, papers, and documents, as the Commission or such designated subcommittee or member may determine advisable.

(b) CONTRACTING.—A Commission may, to such extent and in such amounts as are provided in appropriation Acts, enter into contracts to enable the Commission to discharge its duties under this chapter.

(c) INFORMATION FROM FEDERAL AGENCIES.—

(1) IN GENERAL.—A Commission may secure directly from any executive department, bureau, agency, board, commission, office, independent establishment, or instrumentality of the Government, information, suggestions, estimates, and statistics for the purposes of this chapter. Each department, bureau, agency, board, commission, office, independent establishment, or instrumentality shall, to the extent authorized by law, furnish such information, suggestions, estimates, and statistics directly to the Commission, upon request made by the Chairman, the chairman of any subcommittee created by a majority of the Commission, or any member designated by a majority of the Commission.

(2) RECEIPT, HANDLING, STORAGE, AND DISSEMINATION.—Information shall only be received, handled, stored, and disseminated by members of the Commission and its staff consistent with all applicable statutes, regulations, and Executive orders.

(d) ASSISTANCE FROM FEDERAL AGENCIES.—

(1) GENERAL SERVICES ADMINISTRATION.—The Administrator of General Services shall provide to a Commission on a reimbursable basis administrative support and other services for the performance of the Commission's tasks.

(2) OTHER DEPARTMENTS AND AGENCIES.—In addition to the assistance prescribed in paragraph (1), departments and agencies of the United States may provide to the Commission such services, funds, facilities, staff, and other support services as they may determine advisable and as may be authorized by law.

(3) ADMINISTRATION ENGINEERING AND SAFETY CENTER.—The Administration Engineering and Safety Center shall provide data and technical support as requested by the Commission.

§ 70706. Public meetings, information, and hearings

(a) PUBLIC MEETINGS AND RELEASE OF PUBLIC VERSIONS OF REPORTS.—A Commission shall—

(1) hold public hearings and meetings to the extent appropriate; and

(2) release public versions of the reports required under this chapter.

(b) PUBLIC HEARINGS.—Any public hearings of a Commission shall be conducted in a manner consistent with the protection of information provided to or developed for or by the Commission as required by any applicable statute, regulation, or Executive order.

§ 70707. Staff of Commission

(a) APPOINTMENT AND COMPENSATION.—The Chairman, in consultation with the Vice Chairman, in accordance with rules agreed upon by a Commission, may appoint and fix the compensation of a staff director and such other personnel as may be necessary to enable the Commission to carry out its functions.

(b) DETAILEES.—Any Federal Government employee, except for an employee of the Administration, may be detailed to a Commission without reimbursement from the Commission, and such detailee shall retain the rights, status, and privileges of his or her regular employment without interruption.

(c) CONSULTANT SERVICES.—A Commission may procure the services of experts and consultants in accordance with section 3109 of title 5, but at rates not to exceed the daily equivalent of the annual rate of basic pay in effect for positions at level IV of the Executive Schedule under section 5315 of title 5. An expert or consultant whose services are procured under this subsection shall disclose any contract or association the expert or consultant has with the Administration or any Administration contractor.

§ 70708. Compensation and travel expenses

(a) COMPENSATION.—Each member of a Commission may be compensated at a rate not to exceed the daily equivalent of the annual rate of basic pay in effect for positions at level IV of the Executive Schedule under section 5315 of title 5 for each day during which that member is engaged in the actual performance of the duties of the Commission.

(b) TRAVEL EXPENSES.—While away from their homes or regular places of business in the performance of services for the Commission, members of a Commission shall be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as persons employed intermittently in the Government service are allowed expenses under section 5703 of title 5.

§ 70709. Security clearances for Commission members and staff

The appropriate Federal agencies or departments shall cooperate with a Commission in expeditiously providing to the Commission members and staff appropriate security clearances to the extent possible pursuant to existing procedures and requirements. No person shall be provided with access to classified information under this chapter without the appropriate security clearances.

§ 70710. Reporting requirements and termination

(a) **INTERIM REPORTS.**—A Commission may submit to the President and Congress interim reports containing such findings, conclusions, and recommendations for corrective actions as have been agreed to by a majority of Commission members.

(b) **FINAL REPORT.**—A Commission shall submit to the President and Congress, and make concurrently available to the public, a final report containing such findings, conclusions, and recommendations for corrective actions as have been agreed to by a majority of Commission members. Such report shall include any minority views or opinions not reflected in the majority report.

(c) **TERMINATION.**—

(1) **IN GENERAL.**—A Commission, and all the authorities of this chapter with respect to that Commission, shall terminate 60 days after the date on which the final report is submitted under subsection (b).

(2) **ADMINISTRATIVE ACTIVITIES BEFORE TERMINATION.**—A Commission may use the 60-day period referred to in paragraph (1) for the purpose of concluding its activities, including providing testimony to committees of Congress concerning its reports and disseminating the final report.

CHAPTER 709—INTERNATIONAL SPACE STATION

Sec.

- 70901. Peaceful uses of space station.
- 70902. Allocation of International Space Station research budget.
- 70903. International Space Station research.
- 70904. International Space Station completion.
- 70905. National laboratory designation.
- 70906. International Space Station National Laboratory Advisory Committee.
- 70907. Maintaining use through at least 2020.

§ 70901. Peaceful uses of space station

No civil space station authorized under section 103(a)(1) of the National Aeronautics and Space Administration Authorization Act, Fiscal Year 1991 (Public Law 101-611, 104 Stat. 3190) may be used to carry or place in orbit any nuclear weapon or any other weapon of mass destruction, to install any such weapon on any celestial body, or to station any such weapon in space in any other manner. This civil space station may be used only for peaceful purposes.

§ 70902. Allocation of International Space Station research budget

The Administrator shall allocate at least 15 percent of the funds budgeted for International Space Station research to ground-based, free-flyer, and International Space Station life and microgravity science research that is not directly related to supporting the human exploration program, consistent with section 40904 of this title.

§ 70903. International Space Station research

The Administrator shall—

(1) carry out a program of microgravity research consistent with section 40904 of this title; and

(2) consider the need for a life sciences centrifuge and any associated holding facilities.

§ 70904. International Space Station completion

(a) **POLICY.**—It is the policy of the United States to achieve diverse and growing utilization of, and benefits from, the International Space Station.

(b) **ELEMENTS, CAPABILITIES, AND CONFIGURATION CRITERIA.**—The Administrator shall ensure that the International Space Station will—

(1) be assembled and operated in a manner that fulfills international partner agreements, as long as the Administrator determines that the shuttle can safely enable the United States to do so;

(2) be used for a diverse range of microgravity research, including fundamental, applied, and commercial research, consistent with section 40904 of this title;

(3) have an ability to support a crew size of at least 6 persons, unless the Administrator transmits to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than 60 days after December 30, 2005, a report explaining why such a requirement should not be met, the impact of not meeting the requirement on the International Space Station research agenda and operations and international partner agreements, and what additional funding or other steps would be required to have an ability to support a crew size of at least 6 persons;

(4) support Crew Exploration Vehicle docking and automated docking of cargo vehicles or modules launched by either heavy-lift or commercially-developed launch vehicles;

(5) support any diagnostic human research, on-orbit characterization of molecular crystal growth, cellular research, and other research that the Administration believes is necessary to conduct, but for which the Administration lacks the capacity to return the materials that need to be analyzed to Earth; and

(6) be operated at an appropriate risk level.

(c) **CONTINGENCIES.**—

(1) **POLICY.**—The Administrator shall ensure that the International Space Station can have available, if needed, sufficient logistics and on-orbit capabilities to support any potential period during which the space shuttle or its follow-on crew and cargo systems are unavailable, and can have available, if needed, sufficient surge delivery capability or prepositioning of spares and other supplies needed to accommodate any such hiatus.

(2) **PLAN.**—Before making any change in the International Space Station assembly sequence in effect on December 30, 2005, the Administrator shall transmit to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a plan to carry out the policy described in paragraph (1).

§ 70905. National laboratory designation

(a) **DEFINITION OF UNITED STATES SEGMENT OF THE INTERNATIONAL SPACE STATION.**—In this section the term “United States segment of the International Space Station” means those elements of the International Space Station manufactured—

- (1) by the United States; or
 - (2) for the United States by other nations in exchange for funds or launch services.
- (b) DESIGNATION.—To further the policy described in section 70501(a) of this title, the United States segment of the International Space Station is hereby designated a national laboratory.
- (c) MANAGEMENT.—
- (1) PARTNERSHIPS.—The Administrator shall seek to increase the utilization of the International Space Station by other Federal entities and the private sector through partnerships, cost-sharing agreements, and other arrangements that would supplement Administration funding of the International Space Station.
 - (2) CONTRACTING.—The Administrator may enter into a contract with a nongovernmental entity to operate the International Space Station national laboratory, subject to all applicable Federal laws and regulations.

§ 70906. International Space Station National Laboratory Advisory Committee

- (a) ESTABLISHMENT.—Not later than one year after October 15, 2008, the Administrator shall establish under the Federal Advisory Committee Act a committee to be known as the “International Space Station National Laboratory Advisory Committee” (hereafter in this section referred to as the “Committee”).
- (b) MEMBERSHIP.—
- (1) COMPOSITION.—The Committee shall be composed of individuals representing organizations that have formal agreements with the Administration to utilize the United States portion of the International Space Station, including allocations within partner elements.
 - (2) CHAIR.—The Administrator shall appoint a chair from among the members of the Committee, who shall serve for a 2-year term.
- (c) DUTIES OF THE COMMITTEE.—
- (1) IN GENERAL.—The Committee shall monitor, assess, and make recommendations regarding effective utilization of the International Space Station as a national laboratory and platform for research.
 - (2) ANNUAL REPORT.—The Committee shall submit to the Administrator, on an annual basis or more frequently as considered necessary by a majority of the members of the Committee, a report containing the assessments and recommendations required by paragraph (1).
- (d) DURATION.—The Committee shall exist for the life of the International Space Station.

§ 70907. Maintaining use through at least 2020

The Administrator shall take all necessary steps to ensure that the International Space Station remains a viable and productive facility capable of potential United States utilization through at least 2020 and shall take no steps that would preclude its continued operation and utilization by the United States after 2015.

CHAPTER 711—NEAR-EARTH OBJECTS

Sec.

71101. Reaffirmation of policy.

71102. Requests for information.

71103. Developing policy and recommending responsible Federal agency.

71104. Planetary radar.

§ 71101. Reaffirmation of policy

Congress reaffirms the policy set forth in section 20102(g) of this title (relating to surveying near-Earth asteroids and comets).

§ 71102. Requests for information

The Administrator shall issue requests for information on—

(1) a low-cost space mission with the purpose of rendezvousing with, attaching a tracking device, and characterizing the Apophis asteroid; and

(2) a medium-sized space mission with the purpose of detecting near-Earth objects equal to or greater than 140 meters in diameter.

§ 71103. Developing policy and recommending responsible Federal agency

Within 2 years after October 15, 2008, the Director of the Office of Science and Technology Policy shall—

(1) develop a policy for notifying Federal agencies and relevant emergency response institutions of an impending near-Earth object threat, if near-term public safety is at risk; and

(2) recommend a Federal agency or agencies to be responsible for—

(A) protecting the United States from a near-Earth object that is expected to collide with Earth; and

(B) implementing a deflection campaign, in consultation with international bodies, should one be necessary.

§ 71104. Planetary radar

The Administrator shall maintain a planetary radar that is comparable to the capability provided through the Deep Space Network Goldstone facility of the Administration.

CHAPTER 713—COOPERATION FOR SAFETY AMONG SPACEFARING NATIONS

Sec.

71301. Common docking system standard to enable rescue.

71302. Information sharing to avoid physical or radio-frequency interference.

§ 71301. Common docking system standard to enable rescue

In order to maximize the ability to rescue astronauts whose space vehicles have become disabled, the Administrator shall enter into discussions with the appropriate representatives of spacefaring nations who have or plan to have crew transportation systems capable of orbital flight or flight beyond low Earth orbit for the purpose of agreeing on a common docking system standard.

§ 71302. Information sharing to avoid physical or radio-frequency interference

The Administrator shall, in consultation with other agencies of the Federal Government as the Administrator considers appropriate, initiate discussions with the appropriate representatives of spacefaring nations to determine an appropriate framework under which information intended to promote safe access into outer space, operations in outer space, and return from outer space to Earth free from physical or radio-frequency interference can be shared among the nations.

SEC. 4. CONFORMING AMENDMENTS TO OTHER LAWS.

(a) TITLE 5.—Section 9811(a)(1)(E) of title 5, United States Code, is amended by striking “section 203(c)(2)(A) of the National Aeronautics and Space Act of 1958 (42 U.S.C. 2473(c)(2)(A))” and substituting “section 20113(b)(1) of title 51”.

(b) TITLE 31.—Section 1304(a)(3)(D) of title 31, United States Code, is amended by striking “section 203 of the National Aeronautics and Space Act of 1958 (42 U.S.C. 2473)” and substituting “section 20113 of title 51”.

(c) TITLE 35.—Section 210(a)(7) of title 35, United States Code, is amended by striking “section 305 of the National Aeronautics and Space Act of 1958 (42 U.S.C. 2457)” and substituting “section 20135 of title 51”.

(d) TRANSFER OF CHAPTERS 701 AND 703 OF TITLE 49, UNITED STATES CODE.—

(1) TITLE 49, UNITED STATES CODE.—Title 49, United States Code, is amended as follows:

(A) In the analysis for title 49, United States Code, the item related to subtitle IX is amended to read as follows:

“IX. [TRANSFERRED]”.

(B) The heading and analysis for subtitle IX of title 49, United States Code, are amended to read as follows:

“Subtitle IX—[Transferred]”

“Chapter

“701. [Transferred]

“703. [Transferred]”.

Sec.

(2) RENUMBERING AND TRANSFER OF CHAPTERS.—Chapters 701 and 703 of title 49, United States Code, are renumbered as chapters 509 and 511, respectively, of title 51, United States Code, and transferred so as to appear after chapter 507 of title 51, United States Code, as enacted by section 3 of this Act.

(3) RENUMBERING OF SECTIONS IN CHAPTER 509 OF TITLE 51, UNITED STATES CODE.—In chapter 509 of title 51, United States Code, as renumbered by paragraph (2), and in the chapter analysis, the sections are renumbered as follows:

- (A) Section 70101 is renumbered 50901.
- (B) Section 70102 is renumbered 50902.
- (C) Section 70103 is renumbered 50903.
- (D) Section 70104 is renumbered 50904.
- (E) Section 70105 is renumbered 50905.
- (F) Section 70105a is renumbered 50906.

- (G) Section 70106 is renumbered 50907.
 - (H) Section 70107 is renumbered 50908.
 - (I) Section 70108 is renumbered 50909.
 - (J) Section 70109 is renumbered 50910.
 - (K) Section 70109a is renumbered 50911.
 - (L) Section 70110 is renumbered 50912.
 - (M) Section 70111 is renumbered 50913.
 - (N) Section 70112 is renumbered 50914.
 - (O) Section 70113 is renumbered 50915.
 - (P) Section 70114 is renumbered 50916.
 - (Q) Section 70115 is renumbered 50917.
 - (R) Section 70116 is renumbered 50918.
 - (S) Section 70117 is renumbered 50919.
 - (T) Section 70118 is renumbered 50920.
 - (U) Section 70119 is renumbered 50921.
 - (V) Section 70120 is renumbered 50922.
 - (W) Section 70121 is renumbered 50923.
- (4) RENUMBERING OF SECTIONS IN CHAPTER 511 OF TITLE 51, UNITED STATES CODE.—In chapter 511 of title 51, United States Code, as renumbered by paragraph (2), and in the chapter analysis, the sections are renumbered as follows:
- (A) Section 70301 is renumbered 51101.
 - (B) Section 70302 is renumbered 51102.
 - (C) Section 70303 is renumbered 51103.
 - (D) Section 70304 is renumbered 51104.
 - (E) Section 70305 is renumbered 51105.
- (5) CROSS REFERENCES IN CHAPTER 509 OF TITLE 51, UNITED STATES CODE.—
- (A) Section 50902(11) of title 51, United States Code, as renumbered by paragraph (3), is amended—
 - (i) by striking “section 70104(c)” and substituting “section 50904(c)”; and
 - (ii) by striking “section 70105a” and substituting “section 50906”.
 - (B) Section 50902(19) of title 51, United States Code, as renumbered by paragraph (3), is amended by striking “section 70120(c)(2)” and substituting “section 50922(c)(2)”.
 - (C) Section 50904(a)(2) of title 51, United States Code, as renumbered by paragraph (3), is amended by striking “section 70102(1)(A) or (B)” and substituting “section 50902(1)(A) or (B)”.
 - (D) Section 50904(a)(3) of title 51, United States Code, as renumbered by paragraph (3), is amended by striking “section 70102(1)(C)” and substituting “section 50902(1)(C)”.
 - (E) Section 50904(a)(4) of title 51, United States Code, as renumbered by paragraph (3), is amended by striking “section 70102(1)(C)” and substituting “section 50902(1)(C)”.
 - (F) Section 50905(b)(5)(A) of title 51, United States Code, as renumbered by paragraph (3), is amended by striking “section 70112(a)(2) and (c)” and substituting “section 50914(a)(2) and (c)”.
 - (G) Section 50906(c) of title 51, United States Code, as renumbered by paragraph (3), is amended by striking “section 70105(b)(2)(C)” and substituting “section 50905(b)(2)(C)”.

(H) Section 50906(i) of title 51, United States Code, as renumbered by paragraph (3), is amended by striking “sections 70106, 70107, 70108, 70109, 70110, 70112, 70115, 70116, 70117, and 70121” and substituting “sections 50907, 50908, 50909, 50910, 50912, 50914, 50917, 50918, 50919, and 50923”.

(I) Section 50907(a) of title 51, United States Code, as renumbered by paragraph (3), is amended by striking “sections 70104(c), 70105, and 70105a” and substituting “sections 50904(c), 50905, and 50906”.

(J) Section 50908(b)(2) of title 51, United States Code, as renumbered by paragraph (3), is amended by striking “section 70105(c)” and substituting “section 50905(c)”.

(K) Section 50908(e) of title 51, United States Code, as renumbered by paragraph (3), is amended by striking “section 70110” and substituting “section 50912”.

(L) Section 50909(b) of title 51, United States Code, as renumbered by paragraph (3), is amended by striking “section 70110” and substituting “section 50912”.

(M) Section 50912(a)(1) of title 51, United States Code, as renumbered by paragraph (3), is amended by striking “section 70105(a) or 70105a” and substituting “section 50905(a) or 50906”.

(N) Section 50912(a)(2) of title 51, United States Code, as renumbered by paragraph (3), is amended by striking “section 70104(c)” and substituting “section 50904(c)”.

(O) Section 50912(a)(3)(A) of title 51, United States Code, as renumbered by paragraph (3), is amended by striking “section 70107(b) or (c)” and substituting “section 50908(b) or (c)”.

(P) Section 50912(a)(3)(B) of title 51, United States Code, as renumbered by paragraph (3), is amended by striking “section 70108(a)” and substituting “section 50909(a)”.

(Q) Section 50915(a)(1)(A) of title 51, United States Code, as renumbered by paragraph (3), is amended by striking “section 70112(a)(1)(A)” and substituting “section 50914(a)(1)(A)”.

(R) Section 50915(a)(2) of title 51, United States Code, as renumbered by paragraph (3), is amended—

(i) by striking “section 70112(a)(1)(A)” and substituting “section 50914(a)(1)(A)”; and

(ii) by striking “section 70112(a)(1)” and substituting “section 50914(a)(1)”.

(S) Section 50916 of title 51, United States Code, as renumbered by paragraph (3), is amended by striking “section 70106(b)” and substituting “section 50907(b)”.

(T) Section 50919(b)(2) of title 51, United States Code, as renumbered by paragraph (3), is amended by striking “the Land Remote Sensing Policy Act of 1992 (15 U.S.C. 5601 et seq.)” and substituting “chapter 601 of this title”.

(U) Section 50922(c)(2)(B) of title 51, United States Code, as renumbered by paragraph (3), is amended by striking “section 70102” and substituting “section 50902”.

(6) CROSS REFERENCES IN CHAPTER 511 OF TITLE 51, UNITED STATES CODE.—

(A) Section 51101(1) of title 51, United States Code, as renumbered by paragraph (4), is amended by striking

“section 502 of the National Aeronautics and Space Administration Authorization Act, Fiscal Year 1993 (15 U.S.C. 5802)” and substituting “section 50501 of this title”.

(B) Section 51104(d)(1) of title 51, United States Code, as renumbered by paragraph (4), is amended by striking “section 303 of this title” and substituting “section 303 of title 49”.

(7) ANALYSIS FOR TITLE 51, UNITED STATES CODE.—The analysis for title 51, United States Code, as enacted by section 3 of this Act, is amended by adding, after the item for chapter 507, the following items:

“509. Commercial Space Launch Activities50901
 “511. Space Transportation Infrastructure Matching Grants51101”.

(8) DEEMED REFERENCES TO TITLE 49, UNITED STATES CODE.—In title 49, United States Code, references to “this title” are deemed to refer also to chapters 509 and 511 of title 51, United States Code.

(e) NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AUTHORIZATION ACT OF 2005.—Section 304 of the National Aeronautics and Space Administration Authorization Act of 2005 (42 U.S.C. 16654) is amended as follows:

(1) Subsection (a)(1) is redesignated as subsection (a) and amended to read as follows:

“(a) ASSESSMENT OF CERTAIN MISSIONS.—Not later than 60 days after the date of enactment of this Act, the Administrator shall carry out an assessment under section 30504 of title 51, United States Code, for at least the following missions: FAST, TIMED, Cluster, Wind, Geotail, Polar, TRACE, Ulysses, and Voyager.”.

(2) Subsection (b) is amended by striking “subsection (a)(1)” and substituting “subsection (a)”.

SEC. 5. TRANSITIONAL AND SAVINGS PROVISIONS.

(a) DEFINITIONS.—In this section:

(1) SOURCE PROVISION.—The term “source provision” means a provision of law that is replaced by a title 51 provision.

(2) TITLE 51 PROVISION.—The term “title 51 provision” means a provision of title 51, United States Code, that is enacted by section 3.

(b) CUTOFF DATE.—The title 51 provisions replace certain provisions of law enacted on or before July 1, 2009. If a law enacted after that date amends or repeals a source provision, that law is deemed to amend or repeal, as the case may be, the corresponding title 51 provision. If a law enacted after that date is otherwise inconsistent with a title 51 provision or a provision of this Act, that law supersedes the title 51 provision or provision of this Act to the extent of the inconsistency.

(c) ORIGINAL DATE OF ENACTMENT UNCHANGED.—For purposes of determining whether one provision of law supersedes another based on enactment later in time, a title 51 provision is deemed to have been enacted on the date of enactment of the corresponding source provision.

(d) REFERENCES TO TITLE 51 PROVISIONS.—A reference to a title 51 provision is deemed to refer to the corresponding source provision.

(e) REFERENCES TO SOURCE PROVISIONS.—A reference to a source provision, including a reference in a regulation, order, or other law, is deemed to refer to the corresponding title 51 provision.

(f) REGULATIONS, ORDERS, AND OTHER ADMINISTRATIVE ACTIONS.—A regulation, order, or other administrative action in effect under a source provision continues in effect under the corresponding title 51 provision.

(g) ACTIONS TAKEN AND OFFENSES COMMITTED.—An action taken or an offense committed under a source provision is deemed to have been taken or committed under the corresponding title 51 provision.

SEC. 6. REPEALS.

The following provisions of law are repealed, except with respect to rights and duties that matured, penalties that were incurred, or proceedings that were begun before the date of enactment of this Act:

Schedule of Laws Repealed

Act	Section	United States Code
National Aeronautics and Space Act of 1958 (Public Law 85-568)	102	42 U.S.C. 2451.
	103	42 U.S.C. 2452.
	201	42 U.S.C. 2471 (prior).
	202	42 U.S.C. 2472.
	203	42 U.S.C. 2473.
	204	42 U.S.C. 2474.
	205	42 U.S.C. 2475.
	206	42 U.S.C. 2476.
	207	42 U.S.C. 2476a.
	208	42 U.S.C. 2476b.
	302	42 U.S.C. 2453.
	303	42 U.S.C. 2454.
	304(a)	42 U.S.C. 2455(a).
	304(e)	42 U.S.C. 2456.
	304(f)	42 U.S.C. 2456a.
	305	42 U.S.C. 2457.
	306	42 U.S.C. 2458.
	307	42 U.S.C. 2458a.
	308	42 U.S.C. 2458b.
	309	42 U.S.C. 2458c.
	310	42 U.S.C. 2459.
	311	42 U.S.C. 2459b.
	312	42 U.S.C. 2459c.
	313	42 U.S.C. 2459f.
	314	42 U.S.C. 2459f-1.
	315	42 U.S.C. 2459j.
	316	42 U.S.C. 2459k.
	317	42 U.S.C. 2459l.
	401	42 U.S.C. 2481.
	402	42 U.S.C. 2482.
	403	42 U.S.C. 2483.
	404	42 U.S.C. 2484.
	Act of June 15, 1959 (Public Law 86-45)	4
National Aeronautics and Space Administration Authorization Act, 1968 (Public Law 90-67)	6	42 U.S.C. 2477.
Joint Resolution of September 29, 1969 (Public Law 91-76) ..	1, 2	42 U.S.C. 2461.
National Aeronautics and Space Administration Authorization Act, 1978 (Public Law 95-76) ..	6	42 U.S.C. 2463.

Schedule of Laws Repealed—Continued

Act	Section	United States Code
National Aeronautics and Space Administration Authorization Act, 1983 (Public Law 97-324)	106(a)	42 U.S.C. 2464.
National Aeronautics and Space Administration Authorization Act of 1986 (Public Law 99-170)	201	42 U.S.C. 2466.
	202	42 U.S.C. 2466a.
	203	42 U.S.C. 2466b.
	204	42 U.S.C. 2466c.
National Space Grant College and Fellowship Act (Title II of Public Law 100-147)	203	42 U.S.C. 2486a.
	204	42 U.S.C. 2486b.
	205	42 U.S.C. 2486c.
	206	42 U.S.C. 2486d.
	207	42 U.S.C. 2486e.
	208	42 U.S.C. 2486f.
	209	42 U.S.C. 2486g.
	210	42 U.S.C. 2486h.
	211	42 U.S.C. 2486i.
	213	42 U.S.C. 2486k.
	214	42 U.S.C. 2486l.
Department of Housing and Urban Development—Independent Agencies Appropriations Act, 1989 (Public Law 100-404)	(par. under heading “Science, Space, and Technology Education Trust Fund”, at 102 Stat. 1028).	42 U.S.C. 2467.
Departments of Veterans Affairs and Housing and Urban Development, and Independent Agencies Appropriations Act, 1990 (Public Law 101-144)	(pars. under heading “Small and Disadvantaged Business”, at 103 Stat. 863).	42 U.S.C. 2473b.
National Aeronautics and Space Administration Authorization Act, Fiscal Year 1991 (Public Law 101-611)	112	42 U.S.C. 2465a.
	115(b)	15 U.S.C. 1535.
	123	(not previously classified).
	203	42 U.S.C. 2465c.
	206	42 U.S.C. 2465f.
Departments of Veterans Affairs and Housing and Urban Development, and Independent Agencies Appropriations Act, 1992 (Public Law 102-139)	(1st par. under heading “Administrative Provisions”, at 105 Stat. 771).	42 U.S.C. 2459d.
National Aeronautics and Space Administration Authorization Act, Fiscal Year 1992 (Public Law 102-195)	19	42 U.S.C. 2459e.
	20	42 U.S.C. 2467a.
	21(a)	42 U.S.C. 2473c(a).
	21(c)	42 U.S.C. 2473c(c).
	21(d)	42 U.S.C. 2473c(d).

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Schedule of Laws Repealed—Continued

Act	Section	United States Code
	21(e)	42 U.S.C. 2473c(e).
	21(f)	42 U.S.C. 2473c(f).
	21(g)	42 U.S.C. 2473c(g).
	21(h)	42 U.S.C. 2473c(h).
Land Remote Sensing Policy Act of 1992 (Public Law 102-555)	3	15 U.S.C. 5602.
	101	15 U.S.C. 5611.
	102	15 U.S.C. 5612.
	103	15 U.S.C. 5613.
	104	15 U.S.C. 5614.
	105	15 U.S.C. 5615.
	201	15 U.S.C. 5621.
	202	15 U.S.C. 5622.
	203	15 U.S.C. 5623.
	204	15 U.S.C. 5624.
	205	15 U.S.C. 5625.
	301	15 U.S.C. 5631.
	302	15 U.S.C. 5632.
	303	15 U.S.C. 5633.
	401	15 U.S.C. 5641.
	501	15 U.S.C. 5651.
	502	15 U.S.C. 5652.
	503	15 U.S.C. 5653.
	504	15 U.S.C. 5654.
	505	15 U.S.C. 5655.
	506	15 U.S.C. 5656.
	507	15 U.S.C. 5657.
	508	15 U.S.C. 5658.
	601	15 U.S.C. 5671.
	602	15 U.S.C. 5672.
National Aeronautics and Space Administration Authorization Act, Fiscal Year 1993 (Public Law 102-588)	304	42 U.S.C. 2467b.
	502	15 U.S.C. 5802.
	504	15 U.S.C. 5803.
	506	15 U.S.C. 5805.
	507	15 U.S.C. 5806.
	508	15 U.S.C. 5807.
	510	15 U.S.C. 5808.
	602	42 U.S.C. 2487a.
	603	42 U.S.C. 2487b.
	604	42 U.S.C. 2487c.
	606	42 U.S.C. 2487e.
	607	42 U.S.C. 2487f.
	608	42 U.S.C. 2487g.
Commercial Space Act of 1998 (Public Law 105-303)	2	42 U.S.C. 14701.
	101	42 U.S.C. 14711.
	104(b)	42 U.S.C. 14712(b).
	105	42 U.S.C. 14713.
	106	42 U.S.C. 14714.
	107	42 U.S.C. 14715, 15 U.S.C. 5621, 5622.
	201	42 U.S.C. 14731.
	202	42 U.S.C. 14732.
	204	42 U.S.C. 14733.
	205	42 U.S.C. 14734.
	206	42 U.S.C. 14735.
Technology Administration Act of 1998 (Public Law 105-309)	8	15 U.S.C. 1511e.
National Aeronautics and Space Administration Authorization Act of 2000 (Public Law 106-391)	126	42 U.S.C. 2475a.
	301	42 U.S.C. 2459g.

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Act	Section	United States Code
	304	42 U.S.C. 2459h.
	305	42 U.S.C. 2475b.
	325	42 U.S.C. 2473d.
Commercial Reusable In-Space Transportation Act of 2002 (Title IX of Public Law 107-248)	903	42 U.S.C. 14752.
	904	42 U.S.C. 14753.
Departments of Veterans Affairs and Housing and Urban Development, and Independent Agencies Appropriations Act, 2003 (Division K of Public Law 108-7)	(last par. under heading "Administrative Provisions", at 117 Stat. 520).	42 U.S.C. 2459i.
National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109-155)	101(a)	42 U.S.C. 16611(a).
	101(b)	42 U.S.C. 16611(b).
	101(h)(1)	42 U.S.C. 16611(h)(1).
	101(i)	42 U.S.C. 16611(i).
	103	42 U.S.C. 16613.
	105	42 U.S.C. 16614.
	107	42 U.S.C. 16615.
	110	42 U.S.C. 16618.
	202	42 U.S.C. 16631.
	203	42 U.S.C. 16632.
	204	42 U.S.C. 16633.
	205	42 U.S.C. 16634.
	301	42 U.S.C. 16651.
	304(a) (matter before par. (1))	42 U.S.C. 16654(a) (matter before par. (1)).
	304(a)(2)	42 U.S.C. 16654(a)(2).
	305(2)	42 U.S.C. 16655(2).
	305(3)	42 U.S.C. 16655(3).
	306	42 U.S.C. 16656.
	311	42 U.S.C. 16671.
	312	42 U.S.C. 16672.
	313	42 U.S.C. 16673.
	314	42 U.S.C. 16674.
	315	42 U.S.C. 16675.
	316	42 U.S.C. 16676.
	401	42 U.S.C. 16701.
	411	42 U.S.C. 16711.
	421	42 U.S.C. 16721.
	422	42 U.S.C. 16722.
	423	42 U.S.C. 16723.
	424	42 U.S.C. 16724.
	425	42 U.S.C. 16725.
	426	42 U.S.C. 16726.
	427	42 U.S.C. 16727.
	431	42 U.S.C. 16741.
	441	42 U.S.C. 16751.
	501(a)	42 U.S.C. 16761(a).
	501(b)	42 U.S.C. 16761(b).
	503	42 U.S.C. 16763.
	504	42 U.S.C. 16764.
	505	42 U.S.C. 16765.
	506(1)	42 U.S.C. 16766(1).
	506(2)	42 U.S.C. 16766(2).
	507(a)	42 U.S.C. 16767(a).
	507(b)	42 U.S.C. 16767(b).
	507(d)	42 U.S.C. 16767(d).
	601	42 U.S.C. 16781.
	612	42 U.S.C. 16791.
613	42 U.S.C. 16792.	
615	42 U.S.C. 16794.	
616	42 U.S.C. 16795.	

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Act	Section	United States Code
	618	42 U.S.C. 16797.
	619(b)	42 U.S.C. 16798(b).
	621	42 U.S.C. 16811.
	707	42 U.S.C. 16821.
	708	42 U.S.C. 16822.
	709	42 U.S.C. 16823.
	821	42 U.S.C. 16841.
	822	42 U.S.C. 16842.
	823	42 U.S.C. 16843.
	824	42 U.S.C. 16844.
	825	42 U.S.C. 16845.
	826	42 U.S.C. 16846.
	827	42 U.S.C. 16847.
	828	42 U.S.C. 16848.
	829	42 U.S.C. 16849.
	830	42 U.S.C. 16850.
America COMPETES Act (Public Law 110–69)	2001(a)	42 U.S.C. 16611a(a).
	2001(b)	42 U.S.C. 16611a(b).
	2001(c)	42 U.S.C. 16611a(c).
	2001(e)	42 U.S.C. 16611a(e).
	2002(b)	42 U.S.C. 16712(b).
	2003	42 U.S.C. 16658.
Science Appropriations Act, 2008 (Public Law 110–161, div. B, title III)	(7th par. under heading “Administrative Provisions”, at 121 Stat. 1919).	42 U.S.C. 16611b.
National Aeronautics and Space Administration Authorization Act of 2008 (Public Law 110–422)	201	42 U.S.C. 17711.
	204(b)	42 U.S.C. 17712(b).
	204(c)	42 U.S.C. 17712(c).
	204(d)	42 U.S.C. 17712(d).
	206(a)	42 U.S.C. 17713(a).
	208	42 U.S.C. 17714.
	302	42 U.S.C. 17721.
	303	42 U.S.C. 17722.
	304(b)	42 U.S.C. 17723(b).
	304(c)	42 U.S.C. 17723(c).
	307	42 U.S.C. 17724.
	403	42 U.S.C. 17731.
	404(a)	42 U.S.C. 17732(a).
	404(b)	42 U.S.C. 17732(b).
	405(b)	42 U.S.C. 17733(b).
	407	42 U.S.C. 17734.
	501	42 U.S.C. 17741.
	502	42 U.S.C. 17742.
	601(a)	42 U.S.C. 17751(a).
	602	42 U.S.C. 17752.
	704(b)	42 U.S.C. 17781(b).
	704(c)	42 U.S.C. 17781(c).
	801(a)	42 U.S.C. 17791(a).
	803	42 U.S.C. 17793.
	804	42 U.S.C. 17794.
	805	42 U.S.C. 17795.
	902	42 U.S.C. 17801.
	1002(a)	42 U.S.C. 17811(a).
	1003(a)	42 U.S.C. 17812(a).
	1102(b)	42 U.S.C. 17821(b).
	1103	42 U.S.C. 17822.
	1104	42 U.S.C. 17823.
	1107	42 U.S.C. 17824.
	1109(c)	42 U.S.C. 17825(c).
	1112	42 U.S.C. 17827.
	1116	42 U.S.C. 17828.
	1117	42 U.S.C. 17829.

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Act	Section	United States Code
Science Appropriations Act, 2009 (Public Law 111–8, div. B, title III	(3d proviso in par. under heading “Cross Agency Support”, at 123 Stat. 589).	42 U.S.C. 16611b note.

Speaker of the House of Representatives.

*Vice President of the United States and
President of the Senate.*