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103D CONGRESS
2D SESSION

H. R. 4489

To authorize appropriations to the National Aeronautics and Space Administration for human space flight, science, aeronautics, and technology, mission support, and Inspector General, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

MAY 25, 1994

Mr. BROWN of California introduced the following bill; which was referred to the Committee on Science, Space, and Technology

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A BILL

To authorize appropriations to the National Aeronautics and Space Administration for human space flight, science, aeronautics, and technology, mission support, and Inspector General, and for other purposes.

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

SECTION 1. SHORT TITLE.

This Act may be cited as the ''National Aeronautics and Space Administration Authorization Act, Fiscal Years 1995 and 1996''.

SEC. 2. FINDINGS.

The Congress finds that—

(1) the National Aeronautics and Space Administration will require a stable budget, adjusted for inflation, in order to carry out the initiatives now planned in human space flight and science, aeronautics, and technology;

(2) cooperation in space should continue to be a major element of the post-cold war foreign policy agenda through a broad range of scientific and engineering programs that have the potential to stabilize the scientific and industrial base of the former Soviet Union and encourage the transition toward political reform and a market-based economy;

(3) the National Aeronautics and Space Administration should aggressively pursue actions and reforms directed at reducing institutional costs, including management restructuring, facility consolidation, procurement reform, personnel base downsizing, and convergence with other defense and private sector systems; and

(4) in formulating a national space transportation policy, the National Aeronautics and Space Administration should take the lead role in developing advanced space transportation technologies including reusable space vehicles, single-stage-to-orbit vehicles, and manned space systems.

SEC. 3. DEFINITIONS.

For purposes of this Act—

(1) the term ''Administrator'' means the Administrator of the National Aeronautics and Space Administration; and

(2) the term ''institution of higher education'' has the meaning given such term in section 1201(a) of the Higher Education Act of 1965 (20 U.S.C. 1141(a)).

TITLE I—AUTHORIZATION OF APPROPRIATIONS

Subtitle A—Authorizations

SEC. 101. HUMAN SPACE FLIGHT.

(a) AUTHORIZATIONS.—There are authorized to be appropriated to the National Aeronautics and Space Administration for Human Space Flight the following amounts:

(1) For the Space Station, $1,889,600,000 for fiscal year 1995, and $1,833,600,000 for fiscal year 1996.

(2) For Russian Cooperation, $150,100,000 for fiscal year 1995, and $129,200,000 for fiscal year 1996.

(3) For the Space Shuttle, $3,309,000,000 for fiscal year 1995, and $3,205,700,000 for fiscal year 1996.

(4) For Payload and Utilization Operations, $346,200,000 for fiscal year 1995, and $316,100,000 for fiscal year 1996.

(b) CONSTRUCTION OF FACILITIES.—(1) Of the funds authorized to be appropriated under subsection (a)(1) for fiscal year 1995, $20,200,000 are authorized for construction of a Neutral Buoyancy Laboratory, Johnson Space Center.

(2) Of the funds authorized to be appropriated under subsection (a)(3) for fiscal year 1995, $4,800,000 are authorized for modernization of the Firex System, Pads A and B, Kennedy Space Center.

(3) Of the funds authorized to be appropriated under subsection (a)(3) for fiscal year 1995, $7,500,000 are authorized for replacement of the Components Refurbishment Laboratory, Kennedy Space Center.

SEC. 102. SCIENCE, AERONAUTICS, AND TECHNOLOGY.

(a) AUTHORIZATIONS.—There are authorized to be appropriated to the National Aeronautics and Space Administration for Science, Aeronautics, and Technology the following amounts:

(1) For Space Science—

(A) $1,736,000,000 for fiscal year 1995, of which—

(i) $1,081,700,000 are authorized for Physics and Astronomy; and

(ii) $654,300,000 are authorized for Planetary Exploration, including $129,700,000 for the Discovery program and $4,000,000 for Venus data analysis; and

(B) $1,763,000,000 for fiscal year 1996, of which—

(i) $1,173,100,000 are authorized for Physics and Astronomy, including $20,000,000 for the Stratospheric Observatory for Infrared Astronomy and $50,000,000 for the Solar-Terrestrial Probes; and

(ii) $589,900,000 are authorized for Planetary Exploration, including $122,400,000 for the Discovery program, $10,000,000 for the Pluto Fast Flyby, and $4,000,000 for Venus data analysis.

(2) For Life and Microgravity Sciences and Applications, $442,500,000 for fiscal year 1995, and $523,300,000 for fiscal year 1996.

(3) For Mission to Planet Earth, $1,224,100,000 for fiscal year 1995, of which

$726,000,000 are authorized for the Earth Observing System (EOS), including the EOS Data and Information System, and $1,276,100,000 for fiscal year 1996, of which $847,500,000 are authorized for the Earth Observing System (EOS), including the EOS Data and Information System.

(4) For Advanced Concepts and Technology—

(A) $623,000,000 for fiscal year 1995, of which $40,000,000 are authorized for the Single-Stage-to-Orbit (SSTO) technology development program, $13,600,000 are authorized for University Space Engineering Research Centers, and $12,500,000 are authorized for the Small Spacecraft Technology Initiative; and

(B) $747,300,000 for fiscal year 1996, of which $116,000,000 are authorized for the Single-Stage-to-Orbit (SSTO) technology development program.

(5) For Aeronautical Research and Technology, $898,500,000 for fiscal year 1995, and $941,900,000 for fiscal year 1996, of which—

(A) $342,800,000 for fiscal year 1995, and $343,700,000 for fiscal year 1996, are authorized for Research and Technology Base activities, including $10,000,000 for each such fiscal

year for the Rotorcraft Technology Center Program;

(B) $221,300,000 for fiscal year 1995 are authorized for High Speed Research, including $12,000,000 for Environmental Impact Assessments, and $245,500,000 for fiscal year 1996 are authorized for High Speed Research, including $12,500,000 for Environmental Impact Assessments;

(C) $125,800,000 for fiscal year 1995 are authorized for Advanced Subsonic Technology, including $24,000,000 for Terminal Area Productivity and $13,000,000 for Short Haul Aircraft, and $158,500,000 for fiscal year 1996 are authorized for Advanced Subsonic Technology, including $25,000,000 for Terminal Area Productivity and $20,000,000 for Short Haul Aircraft; and

(D) $186,600,000 for fiscal year 1995, and $186,200,000 for fiscal year 1996 are authorized for Other Systems Technology Programs, including $40,000,000 for each such fiscal year for the Hypersonic Research Program.

(6) For Launch Services, $331,100,000 for fiscal year 1995, and $279,000,000 for fiscal year 1996.

(7) For Mission Communication Services, $481,200,000 for fiscal year 1995, and $486,600,000 for fiscal year 1996.

(8) For Academic Programs, $97,200,000 for fiscal year 1995, and $101,700,000 for fiscal year 1996.

(9) For Russian Scientific Cooperation, $50,000,000 for fiscal year 1995, and $50,000,000 for fiscal year 1996.

(b) CONSTRUCTION OF FACILITIES.—(1) Of the funds authorized to be appropriated under subsection (a)(3) for fiscal year 1995, $17,000,000 are authorized for construction of the Earth Systems Science Building, Goddard Space Flight Center.

(2) Of the funds authorized to be appropriated under subsection (a)(5), $22,000,000 for fiscal year 1995 and $8,000,000 for fiscal year 1996 are authorized for modernization of the Unitary Plan Wind Tunnel Complex, Ames Research Center.

SEC. 103. MISSION SUPPORT.

There are authorized to be appropriated to the National Aeronautics and Space Administration for Mission Support the following amounts:

(1) For Safety, Reliability, and Quality Assurance, $38,700,000 for fiscal year 1995, and $38,800,000 for fiscal year 1996.

(2) For Space Communication Services, $248,900,000 for fiscal year 1995, and $320,300,000 for fiscal year 1996.

(3) For Construction of Facilities, including land acquisition—

(A) $135,000,000 for fiscal year 1995, of which—

(i) $8,000,000 are authorized to perform seismic upgrade of the Research, Development, and Test Building, Dryden Flight Research Center;

(ii) $5,000,000 are authorized to restore the Exterior/Interior Systems, Buildings 3, 13, and 14, Goddard Space Flight Center;

(iii) $4,300,000 are authorized to modernize the Condenser Water Systems, Southern Sector, Jet Propulsion Laboratory;

(iv) $4,300,000 are authorized to rehabilitate the Utility Tunnel Structure and Systems, Johnson Space Center;

(v) $1,500,000 are authorized to modernize the Payloads Hazardous Servicing Facility HVAC System, Kennedy Space Center;

(vi) $4,900,000 are authorized to modernize the Metrology and Calibration Facility, Marshall Space Flight Center;

(vii) $30,000,000 are authorized to repair facilities at various locations, not in excess of $1,000,000 per project;

(viii) $30,000,000 are authorized to rehabilitate and modify facilities at various locations, not in excess of $1,000,000 per project;

(ix) $2,000,000 are authorized for minor construction of new facilities and additions to existing facilities at various locations, not in excess of $750,000 per project;

(x) $10,000,000 are authorized for facility planning and design; and

(xi) $35,000,000 are authorized for environmental compliance and restoration; and

(B) $170,900,000 for fiscal year 1996.

(4) For Research and Program Management, including personnel and related costs, travel, and research operations support, $2,192,300,000 for fiscal year 1995, and $2,200,000,000 for fiscal year 1996.

SEC. 104. INSPECTOR GENERAL.

There are authorized to be appropriated to the National Aeronautics and Space Administration for Inspector General, $16,000,000 for fiscal year 1995, and $16,500,000 for fiscal year 1996.

SEC. 105. TOTAL AUTHORIZATION.

Notwithstanding any other provision of this title, the total amount authorized to be appropriated under this Act shall not exceed $14,150,400,000 for fiscal year 1995, and $14,400,000,000 for fiscal year 1996.

Subtitle B—Limitations and Special Authority

SEC. 111. USE OF FUNDS FOR CONSTRUCTION.

(a) AUTHORIZED USES.—Funds appropriated under sections 101(a), 102(a), and 103 (1) and (2), and funds appropriated for research operations support under section 103(4), may be used for the construction of new fa-

cilities and additions to, repair of, rehabilitation of, or modification of existing facilities at any location in support of the purposes for which such funds are authorized.

(b) LIMITATION.—None of the funds used pursuant to subsection (a) may be expended for a project, the estimated cost of which to the National Aeronautics and Space Administration, including collateral equipment, exceeds $500,000, until 30 days have passed after the Administrator has notified the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate of the nature, location, and estimated cost to the National Aeronautics and Space Administration of such project.

(c) TITLE TO FACILITIES.—If funds are used pursuant to subsection (a) for grants to institutions of higher education, or to nonprofit organizations whose primary purpose is the conduct of scientific research, for purchase or construction of additional research facilities, title to such facilities shall be vested in the United States unless the Administrator determines that the national program of aeronautical and space activities will best be served by vesting title in the grantee institution or organization. Each such grant shall be made under such conditions as the Administrator shall determine to be required to ensure

that the United States will receive therefrom benefits adequate to justify the making of that grant.

SEC. 112. AVAILABILITY OF APPROPRIATED AMOUNTS.

To the extent provided in appropriations Acts, appropriations authorized under subtitle A may remain available without fiscal year limitation.

SEC. 113. REPROGRAMMING FOR CONSTRUCTION OF FACILITIES.

Appropriations authorized under any paragraph of section 101(b), 102(b), or 103(3)—

(1) may be varied upward by 10 percent in the discretion of the Administrator; or

(2) may be varied upward by 25 percent, to meet unusual cost variations, after the expiration of 30 days following a report on the circumstances of such action by the Administrator to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate.

The aggregate amount authorized to be appropriated under sections 101(b), 102(b) and 103(3) shall not be increased as a result of actions authorized under paragraphs (1) and (2) of this section.

SEC. 114. CONSIDERATION BY COMMITTEES.

Notwithstanding any other provision of this Act—

(1) no amount appropriated to the National Aeronautics and Space Administration may be used for any program for which the President's annual budget request included a request for funding, but for which the Congress denied or did not provide funding;

(2) no amount appropriated to the National Aeronautics and Space Administration may be used for any program in excess of the amount actually authorized for the particular program by subtitle A; and

(3) no amount appropriated to the National Aeronautics and Space Administration may be used for any program which has not been presented to the Congress in the President's annual budget request or the supporting and ancilliary documents thereto,

unless a period of 30 days has passed after the receipt by the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate of notice given by the Administrator containing a full and complete statement of the action proposed to be taken and the facts and circumstances relied upon in support of such proposed action. The National Aeronautics and Space Administra-

tion shall keep the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate fully and currently informed with respect to all activities and responsibilities within the jurisdiction of those committees. Except as otherwise provided by law, any Federal department, agency, or independent establishment shall furnish any information requested by either committee relating to any such activity or responsibility.

SEC. 115. LIMITATION ON OBLIGATION OF UNAUTHORIZED APPROPRIATIONS.

(a) REPORTS TO CONGRESS.—Not later than 30 days after the later of the date of enactment of an Act making appropriations to the National Aeronautics and Space Administration for fiscal year 1995 and the date of enactment of this Act, and not later than 30 days after the date of enactment of an Act making such appropriations for fiscal year 1996, the Administrator shall submit a report to Congress and to the Comptroller General which specifies—

(1) the portion of such appropriations which are for programs, projects, or activities not authorized under subtitle A of this title, or which are in excess of amounts authorized for the relevant program, project, or activity under this Act; and

(2) the portion of such appropriations which are authorized under this Act.

(b) FEDERAL REGISTER NOTICE.—The Administrator shall, coincident with the submission of the report required by subsection (a), publish in the Federal Register a notice of all programs, projects, or activities for which funds are appropriated but which were not authorized under this Act, and solicit public comment thereon regarding the impact of such programs, projects, or activities on the conduct and effectiveness of the national aeronautics and space program.

(c) LIMITATION.—Notwithstanding any other provision of this Act, no funds may be obligated for any programs, projects, or activities of the National Aeronautics and Space Administration for fiscal years 1995 and 1996 not authorized under this Act until 30 days have passed after the close of the public comment period contained in the notice required in subsection (b).

SEC. 116. USE OF FUNDS FOR SCIENTIFIC CONSULTATIONS OR EXTRAORDINARY EXPENSES.

Funds appropriated under section 102 may be used, but not to exceed $35,000 per fiscal year, for scientific consultations or extraordinary expenses upon the authority of the Administrator.

SEC. 117. TERMINATION LIABILITY.

(a) AUTHORITY.—The Administrator may enter into contracts for the Space Station program that are for periods in excess of the period for which funds are available for obligation, and may provide for payment for contingent liability which may accrue in excess of available appropriations in the event the Federal Government for its convenience terminates such contracts.

(b) TERMINATION.—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 termination of such contract shall be paid—

(1) first from appropriations originally available for performance of the contract; and

(2) then from other unobligated appropriations authorized for Human Space Flight under this Act, or any subsequent Act, that the Chief Financial Officer of the National Aeronautics and Space Administration determines are available for such purposes.

SEC. 118. VOLUNTARY SEPARATION INCENTIVES.

The Administrator shall, to the maximum extent practicable, make voluntary separation incentive payments pursuant to the Federal Workforce Restructuring Act of 1994 (Public Law 103–226) to employees of the National Aeronautics and Space Administration from funds appro-

priated for fiscal year 1995 and available for such payments.

TITLE II—MISCELLANEOUS PROVISIONS

SEC. 201. TRANSMISSION OF BUDGET ESTIMATES.

The Administrator shall, at the time of submission of the President's annual budget request for every fiscal year, transmit to the Congress—

(1) a five-year budget detailing the estimated development costs for each individual program under the jurisdiction of the National Aeronautics and Space Administration for which development costs are expected to exceed $200,000,000; and

(2) an estimate of the life-cycle costs associated with each such program.

SEC. 202. COMMERCIAL SPACE LAUNCH ACT AMENDMENTS.

(a) AMENDMENTS.—The Commercial Space Launch Act (49 U.S.C. App. 2601 et seq.) is amended—

(1) in section 4—

(A) by inserting ''from Earth'' after ''if any,'' in paragraph (2);

(B) by redesignating paragraphs (9) through (12) as paragraphs (11) through (14), respectively; and

(C) by inserting after paragraph (8) the following new paragraphs:

''(9) 'reenter' and 'reentry' mean to return purposefully, or attempt to return, a reentry vehicle and payload, if any, from Earth orbit or outer space to Earth;

''(10) 'reentry vehicle' means any vehicle designed to return from Earth orbit or outer space to Earth substantially intact;'';

(2) in section 6(a), by inserting '', or reenter a reentry vehicle,'' after ''operate a launch site'' each place it appears;

(3) in section 6(a)(2) and (3), by striking ''section 4(11)'' each place it appears and inserting in lieu thereof ''section 4(14)'';

(4) in section 6(a)(3)(A), by inserting ''or reentry'' after ''such launch or operation'';

(5) in section 6(a)(3), by inserting '', or reentry of a reentry vehicle,'' after ''operation of a launch site'' each place it appears;

(6) in section 6(b)(1)—

(A) by striking ''launch license'' and inserting in lieu thereof ''license'';

(B) by inserting ''or reenter'' after ''shall not launch'';

(C) by inserting ''or reentry'' after ''relate to the launch''; and

(D) by inserting ''or reentered'' after ''to be launched'';

(7) in section 6(b)(2)—

(A) by inserting ''or reentry'' after ''prevent the launch'';

(B) by striking ''holder of a launch license'' and inserting in lieu thereof ''licensee''; and

(C) by inserting ''or reentry'' after ''determines that the launch'';

(8) in section 6(c)(1), by inserting ''or reentry of a reentry vehicle'' after ''operation of a launch site'';

(9) in section 7, by striking ''both'' and inserting in lieu thereof ''for reentering one or more reentry vehicles'';

(10) in sections 8(a), 9(b), 11(a), 11(b), 12(a)(2)(B), and 12(b), by inserting '', or reentry of a reentry vehicle,'' after ''operation of a launch site'' each place it appears;

(11) in section 8(b), by inserting ''and the reentry of reentry vehicles,'' after ''operation of launch sites,'';

(12) in section 11(a), by inserting ''or reentry'' after ''launch or operation'';

(13) in section 12(a)(1), by inserting ''or reentry'' after ''prevent the launch'';

(14) in section 12(b), by inserting ''or reentry'' after ''prevent the launch'';

(15) in section 14(a)(1)—

(A) by inserting ''or reentry site'' after ''observers at any launch site''; and

(B) by inserting ''or reentry vehicle'' after ''assembly of a launch vehicle'';

(16) in section 15(b)(4)(A)—

(A) by inserting ''and reentries'' after ''ensure that the launches'';

(B) by inserting ''or reentry date commitment'' after ''launch date commitment'';

(C) by inserting ''or reentry'' after ''obtained for a launch'';

(D) by inserting '', reentry sites,'' after ''United States launch sites'';

(E) by inserting ''or reentry site'' after ''access to a launch site'';

(F) by inserting '', or services related to a reentry,'' after ''amount for launch services''; and

(G) by inserting ''or reentry'' after ''the scheduled launch'';

(17) in section 15(b)(4)(B), by inserting ''or reentry'' after ''prompt launching'';

(18) in section 15(c), by inserting ''or reentry'' after ''launch site'';

(19) in section 16(a)(1) (A) and (B), by inserting ''or reentry'' after ''any particular launch'' each place it appears;

(20) in section 16(a)(1) (C) and (D), by inserting ''or a reentry'' after ''launch services'' each place it appears;

(21) in section 16(a)(2), by inserting ''or reentry'' after ''launch services'';

(22) in section 16(b)(1) and (4) (A) and (B), by inserting ''or reentry'' after ''particular launch'' each place it appears;

(23) in section 17(b)(2)(A)—

(A) by inserting ''reentry site,'' after ''launch site,''; and

(B) by inserting ''or reentry vehicle'' after ''site of a launch vehicle'';

(24) in section 21(a), by inserting ''and reentry'' after ''approval of space launch'';

(25) in section 21(b)—

(A) by inserting ‘‘, reentry vehicle,’’ after ‘‘A launch vehicle’’; and

(B) by inserting ‘‘or reentry’’ after ‘‘the launching’’;

(26) in section 21(c)(1)—

(A) by striking ‘‘or’’ in subparagraph (B);

(B) by redesignating subparagraph (C) as subparagraph (D); and

(C) by inserting after subparagraph (B) the following new subparagraph:

‘‘(C) reentry of a reentry vehicle, or’’;

(27) in section 21(c)(2), by inserting ‘‘reentry,’’ after ‘‘launch,’’;

(28) in section 22(a)—

(A) by striking ‘‘ending after the date of enactment of this Act and before October 1, 1989’’; and

(B) by inserting ‘‘and reentries’’ after ‘‘further commercial launches’’; and

(29) in section 24, by inserting ‘‘There are authorized to be appropriated to the Secretary $4,859,800 to carry out this Act for fiscal year 1995.’’ after ‘‘$4,900,000 to carry out this Act.’’.

(b) ADDITIONAL AMENDMENTS.—(1) Section 9 of the Commercial Space Launch Act (49 U.S.C. App. 2608) is amended—

(A) by inserting ''(1)'' before ''Any person may'' in subsection (a);

(B) by adding at the end of subsection (a) the following new paragraph:

''(2) The Secretary may, by regulation, establish criteria for accepting an application for a license under this Act.''; and

(C) in subsection (b), by striking ''receipt of such application'' both places it appears and inserting in lieu thereof ''acceptance of such application in accordance with subsection (a)(2)''.

(2) The amendment made by paragraph (1)(C) shall take effect upon the effective date of final regulations issued pursuant to section 9(a)(2) of the Commercial Space Launch Act, as added by paragraph (1)(B) of this subsection.

(c) REPORT TO CONGRESS.—The Secretary of Transportation shall submit to Congress an annual report to accompany the President's budget request that reviews the performance of the regulatory activities and the effectiveness of the Office of Commercial Space Transportation.

SEC. 203. OFFICE OF SPACE COMMERCE AUTHORIZATION.

There are authorized to be appropriated to the Secretary of Commerce for the activities of the Office of Space Commerce, $323,000 for fiscal year 1995.

SEC. 204. USE OF DOMESTIC PRODUCTS.

(a) GENERAL RULE.—Except as provided in subsection (b), the Administrator shall ensure that procurements are conducted in compliance with sections 2 through 4 of the Act of March 3, 1933 (41 U.S.C. 10a through 10c, popularly known as the ''Buy American Act'').

(b) LIMITATIONS.—This section shall apply only to procurements made for which—

(1) amounts are authorized by this Act to be made available; and

(2) solicitations for bids are issued after the date of enactment of this Act.

(c) INAPPLICABILITY IN CASE OF VIOLATION OF INTERNATIONAL AGREEMENT.—This section shall not apply to the extent that the United States Trade Representative determines that a procurement described in subsection (b) would be in violation of the General Agreement on Tariffs and Trade or an international agreement to which the United States is a party.

(d) PURCHASE OF AMERICAN MADE EQUIPMENT AND PRODUCTS.—

(1) SENSE OF CONGRESS.—It is the sense of Congress that any recipient of a grant under this Act, or under any amendment made by this Act, should purchase, when available and cost-effective, American made equipment and products when expending grant monies.

(2) NOTICE TO RECIPIENTS OF ASSISTANCE.—In allocating grants under this Act, or under any amendment made by this Act, the Secretary shall provide to each recipient a notice describing the statement made in paragraph (1) by the Congress.

SEC. 205. REQUIREMENT FOR INDEPENDENT COST ANALYSIS.

The Chief Financial Officer for the National Aeronautics and Space Administration shall be responsible for conducting independent cost analyses of all new projects estimated to cost more than $5,000,000 and shall report the results annually to Congress at the time of the submission of the President's budget request. In developing cost accounting and reporting standards for carrying out this section, the Chief Financial Officer shall, to the extent practicable and consistent with other laws, solicit the advice of expertise outside of the National Aeronautics and Space Administration.

SEC. 206. GLOBAL CHANGE DATA AND INFORMATION SYSTEM.

Title I of the Global Change Research Act of 1990 (15 U.S.C. 2931 et seq.) is amended by adding at the end the following new section:

"SEC. 109. GLOBAL CHANGE DATA AND INFORMATION SYSTEM.

''(a) The National Aeronautics and Space Administration, in coordination with other agencies that belong to the Committee established under section 102, shall establish the requirements and architecture for, design, and develop a Global Change Data and Information System that shall serve as the system to process, archive, and distribute data generated by the Global Change Research Program.

''(b) The National Aeronautics and Space Administration shall design the Global Change Data and Information System—

''(1) so that other Federal agencies may connect data centers operated by such agencies to such System; and

''(2) so as to minimize, to the extent practicable, the cost of connecting such data centers.

''(c) Each agency involved in the Global Change Research Program shall retain the responsibility to establish and operate Global Change Data and Information System

data centers to process, archive, and distribute data generated by such agency's programs. Agencies may agree to assume the responsibility for processing, archiving, or distributing data generated by other agencies.''.

SEC. 207. ACCESS TO CLASSIFIED DATA FOR GLOBAL CHANGE RESEARCH.

The Committee on Environment and Natural Resources shall develop and submit to the Congress within one year after the date of enactment of this Act a plan for providing access to data from classified archives and systems for global change research. The plan shall—

(1) determine whether the Global Change Data and Information System or other means should be used to provide access to such data for the scientific community; and

(2) identify what agencies should be responsible for particular parts of such data and any data centers needed to process, archive, and distribute such data.

SEC. 208. NATIONAL AERONAUTICS AND SPACE ACT OF 1958 AMENDMENTS.

(a) REPORTS TO THE CONGRESS.—Section 206(a) of the National Aeronautics and Space Act of 1958 (42 U.S.C. 2476(a)) is amended—

(1) by striking ''January'' and inserting in lieu thereof ''May''; and

(2) by striking ''calendar'' and inserting in lieu thereof ''fiscal''.

(b) DISCLOSURE OF TECHNICAL DATA.—Section 303 of the National Aeronautics and Space Act of 1958 (42 U.S.C. 2454) is amended—

(1) in subsection (a)(C), by inserting ''or (c)'' after ''subsection (b)''; and

(2) by adding at the end the following new subsection:

''(c)(1) The Administration may delay for a period not to exceed 5 years the unrestricted public disclosure of technical data in the possession of, or under the control of, the Administration that has been generated in the performance of experimental, developmental, or research activities or programs funded jointly by the Administration and the private sector.

''(2) The Administrator shall issue regulations to carry out this subsection. Paragraph (1) shall not take effect until such regulations are issued.

''(3) Regulations issued pursuant to paragraph (2) shall include—

''(A) guidelines for a determination of whether data is technical data within the meaning of this subsection;

''(B) a requirement that a determination described in subparagraph (A) that particular data is technical data shall be reported to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate;

''(C) provisions to ensure that technical data is available for dissemination within the United States to United States persons and entities in furtherance of the objective of maintaining leadership or competitiveness in civil and governmental aeronautical and space activities by the United States industrial base; and

''(D) a specification of the period or periods for which the delay in unrestricted public disclosure of technical data is to apply to various categories of such data, and the restrictions on disclosure of such data during such period or periods, including a requirement that the maximum 5-year protection under this subsection shall not be provided unless at least 50 percent of the funding for the activities or programs is provided by the private sector.

''(4) Along with the initial publication of proposed regulations under paragraph (2), the Administrator shall include a list of those experimental, developmental, or research activities or programs conducted by, or funded in whole or in part by, the Administration that may result in products or processes of significant value in maintaining leadership or competitiveness in civil and governmental aeronautical and space activities by the United States industrial base. Such list shall be updated biannually.

''(5) For purposes of this subsection, the term 'technical data' means any recorded information, including computer software, that is or may be directly applicable to the design, engineering, development, production, manufacture, or operation of products or processes that may have significant value in maintaining leadership or competitiveness in civil and governmental aeronautical and space activities by the United States industrial base.''.

SEC. 209. COMPARATIVE ANALYSIS OF UNITED STATES AND FOREIGN EXPENDABLE SPACE LAUNCH SYSTEMS.

The National Aeronautics and Space Administration shall conduct a comprehensive study of the differences between existing United States and foreign expendable space launch vehicles. This study shall determine specific differences in the design, manufacture, processing, and over-

all management and infrastructure of current United States and foreign expendable space launch vehicles. The study shall also determine the approximate effect of these differences on the relative cost, reliability, and operational efficiency of such space launch systems. This study shall be conducted in consultation with the Department of Defense and, as appropriate, other Federal agencies, United States industries, and institutions of higher education. The results of this study shall be submitted to the Congress no later than October 1, 1995.

SEC. 210. UNIVERSITY INNOVATIVE RESEARCH PROGRAM STUDY.

(a) FINDINGS.—The Congress finds that—

(1) institutions of higher education offer a significant resource for the conduct of innovative scientific and technological research to advance the National Aeronautics and Space Administration's mission;

(2) the National Aeronautics and Space Administration should act to broaden the foundation of its research base by increasing the direct involvement of research laboratories of institutions of higher education in the development of technology for space science;

(3) the National Aeronautics and Space Administration should commit to strengthening research programs in technology of institutions of higher education beyond contracting with institutions of higher education for services in support of specific programs; and

(4) the National Aeronautics and Space Administration should develop mechanisms to foster innovative technological research at institutions of higher education that do not participate in the University Space Engineering Research Centers.

(b) STUDY.—The Administrator shall undertake a study of the feasibility and potential implementation of a University Innovative Research Program which—

(1) promotes technological innovation in the United States by using the Nation's institutions of higher education to help meet the National Aeronautics and Space Administration's research and development needs, by stimulating technology transfer between institutions of higher education and industry, and by encouraging participation by minority and disadvantaged persons in technological innovation;

(2) is modeled on the Small Business Innovation Research Program;

(3) avoids duplication of existing National Aeronautics and Space Administration programs with the institutions of higher education; and

(4) derives funding from the Space Research and Technology program.

(c) COMPLETION.—The study required by subsection (b) shall be completed and its results submitted to the Congress within one year after the date of enactment of this Act.

(d) ADVICE.—In carrying out the study required by subsection (b), the Administrator shall seek the advice of the National Aeronautics and Space Administration Advisory Council, the National Research Council's Aeronautics and Space Engineering Board and Space Studies Board, and other organizations as appropriate.

SEC. 211. GEOGRAPHICAL DISTRIBUTION.

The National Aeronautics and Space Administration shall give consideration to geographical distribution of its research and development funds whenever feasible.

SEC. 212. ADDITIONAL NATIONAL AERONAUTICS AND SPACE ADMINISTRATION FACILITIES.

(a) SELECTION IN DEPRESSED COMMUNITIES.—When consistent with the goals of the National Aeronautics and Space Administration and cost-effective, the Administrator shall select sites in depressed communities

for new programs or functions of the National Aeronautics and Space Administration, unless those new programs or functions are so closely related to programs or functions carried out at an existing facility as to require being carried out at that existing facility.

(b) DEFINITIONS.—For purposes of 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.

SEC. 213. RECIPROCITY.

(a) GENERAL RULE.—Except as provided in subsection (b), no contract or subcontract may be made with funds authorized under this Act to a company organized under the laws of a foreign country unless the Administrator finds that such country affords comparable opportunities to companies organized under the laws of the United States.

(b) EXCEPTION.—(1) The Administrator may waive the rule stated under subsection (a) if the products or services required are not reasonably available from—

(A) companies organized under the laws of the United States; or

(B) companies organized under the laws of a foreign country which the Administrator finds af-

fords comparable opportunities to companies organized under the laws of the United States.

Any such waiver shall be reported to the Congress.

(2) Subsection (a) shall not apply to the extent that to do so would violate the General Agreement on Tariffs and Trade or any other international agreement to which the United States is a party.

SEC. 214. STUDY ON TDRSS AND COMMERCIAL SATELLITE SYSTEM CONVERGENCE.

(a) REQUIREMENT.—The Administrator shall conduct a study on the convergence of the National Aeronautics and Space Administration Tracking and Data Relay Satellite System (TDRSS) with commercial communications satellite systems. The study shall assess whether a converged system, from which the National Aeronautics and Space Administration would buy tracking and data relay services, could—

(1) satisfy the National Aeronautics and Space Administration's tracking and data relay requirements;

(2) reduce the National Aeronautics and Space Administration's expenses in satisfying tracking and data relay requirements through maintenance and operations of the TDRSS;

(3) be financed, developed, and operated by the private sector;

(4) serve commercial communication needs;

(5) be established to satisfy the National Aeronautics and Space Administration's requirements in time to obviate the need to procure TDRSS spacecraft beyond the tenth flight; and

(6) encourage the growth of the commercial satellite communications market.

(b) CONSULTATION.—In conducting the study, the Administrator shall consult with commercial satellite operators, including the International Telecommunications Satellite Organization, other international satellite operators, and United States satellite operators, as appropriate, and shall also consult with the Department of Defense concerning its requirements for tracking and data relay services.

(c) REPORT.—The Administrator shall report on the study's findings and recommendations on feasibility of convergence to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate by February 15, 1995.

SEC. 215. STUDY ON CONVERGENCE OF GEOSAT AND EOS ALTIMETRY PROGRAMS.

(a) REQUIREMENT.—The Administrator shall conduct a study on the convergence of the National Aeronautics and Space Administration Earth Observing System (EOS) Altimetry mission with the Navy Geosat Follow-On program. The study shall assess whether a converged system, which may involve minor modifications to the Geosat Follow-On satellite, could—

(1) satisfy the needs of the Earth Observing System program for altimetry data;

(2) reduce the National Aeronautics and Space Administration's expenses in satisfying such needs;

(3) be available in time to serve as the follow-on to the Topex/Poseidon mission; and

(4) continue to meet the Navy's requirements for altimetry data at no additional cost to the Navy.

(b) CONSULTATION.—In conducting the study, the Administrator shall consult with the Navy and the scientific community, as appropriate.

(c) REPORT.—The Administrator shall report on the study's findings and recommendations on the feasibility of convergence to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate by February 15, 1995.

TITLE III—REVISIONS TO LAND REMOTE SENSING POLICY ACT OF 1992

SEC. 301. AMENDMENTS.

The Land Remote Sensing Policy Act of 1992 (15 U.S.C. 5601 et seq.) is amended—

(1) by amending section 2(9) to read as follows:

''(9) Because Landsat data are particularly important for global environmental change research, the program should be managed by an integrated team consisting of the National Aeronautics and Space Administration and the National Oceanic and Atmospheric Administration and coordinated by the Office of Science and Technology Policy.'';

(2) in sections 3(6)(A), 101 (a) and (b), 103(b), and 504, by striking ''Secretary of Defense'' and inserting in lieu thereof ''Secretary'';

(3) in section 3(6)(B), by striking ''Department of Defense'' and inserting in lieu thereof ''Department of Commerce'';

(4) in section 101(b)(1), by striking '', with the addition of a tracking and data relay satellite communications capability'';

(5) in section 101(b)(2), by striking all after ''baseline funding profile'' and inserting in lieu

thereof ''for the development and operational life of Landsat 7 that is mutually acceptable to the agencies constituting the Landsat Program Management;'';

(6) in section 101(b), by inserting after paragraph (4) the following:

''The Director of the Office of Science and Technology Policy shall, no later than October 1, 1994, transmit the management plan to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate.'';

(7) in sections 101(c)(3), 202(b)(1), 501(a), and 502(c)(7), by striking ''section 506'' and inserting in lieu thereof ''section 507'';

(8) in section 102(b)(1), by striking ''by the expected end of the design life of Landsat 6'' and inserting in lieu thereof ''by the predicted end of life of Landsat 5, or as soon as practicable thereafter'';

(9) in section 103(a), by striking ''section 105'' and inserting in lieu thereof ''section 104'';

(10) by striking section 104 and redesignating section 105 as section 104;

(11) in section 201(c)—

(A) by striking ''120 days'' and inserting in lieu thereof ''90 days''; and

(B) by amending the second sentence thereof to read as follows: ''If the Secretary determines that the license requested by the applicant should not be issued, the Secretary shall inform the applicant within such 90-day period of the reasons for such determination and the specific actions required of the applicant to obtain a license.'';

(12) in section 202(b)(6), by inserting '', other than for the sale of data generated by the system in accordance with the license, that'' after ''of any agreement'';

(13) in section 204, by striking ''may'' and inserting in lieu thereof ''shall'';

(14) by inserting at the end of title II the following new section:

''SEC. 206. NOTIFICATION.

''(a) LIMITATIONS ON LICENSEE.—Within 30 days after any determination by the Secretary to require a licensee to limit collection or distribution of data from a system licensed pursuant to this title, the Secretary shall report to the Congress the reasons for such determination,

the limitations imposed on the licensee, and the period during which such limitations apply.

''(b) TERMINATION, MODIFICATION, OR SUSPENSION.—Within 30 days after any action by the Secretary to seek an order of injunction or other judicial determination pursuant to section 203(a)(2), the Secretary shall notify the Congress of such action and provide the reasons for such action.'';

(15) in section 302—

(A) by striking ''(a) GENERAL RULE.—''; and

(B) by striking subsection (b); and

(16) in section 507, by striking subsection (a) and subsection (b)(1) and inserting in lieu thereof the following:

''(a) RESPONSIBILITY OF SECRETARY OF DEFENSE.—The Secretary shall consult with the Secretary of Defense on all matters under this Act affecting national security. Within 30 days after receiving a request from the Secretary, the Secretary of Defense shall recommend any conditions for a license issued under title II, consistent with this Act, that the Secretary of Defense determines are needed to protect the national security of the United States. If no such recommendations have been received by the Secretary within such 30-day period, the

Secretary may deem activities proposed in the license application to be consistent with the protection of the national security of the United States.

''(b) RESPONSIBILITY OF SECRETARY OF STATE.—(1) The Secretary shall consult with the Secretary of State on all matters under this Act affecting international obligations of the United States. Within 30 days after receiving a request from the Secretary, the Secretary of State shall recommend any conditions for a license issued under title II, consistent with this Act, that the Secretary of State determines are needed to meet existing international obligations of the United States. If no such recommendations have been received by the Secretary within such 30-day period, the Secretary may deem activities proposed in the license application to be consistent with existing international obligations of the United States.''.

TITLE IV—AERONAUTICAL RESEARCH AND TECHNOLOGY

SEC. 401. FINDINGS.

The Congress finds that—

(1) the United States aeronautics industry has provided a major contribution to the competitiveness of the United States, and has accounted for over $80,000,000,000 in annual sales and over $20,000,000,000 in positive balance of trade;

(2) the international market share of the United States aeronautics industry has steadily eroded due to competition from foreign consortia that receive substantial direct subsidies from their governments;

(3) the United States aeronautics industry has been severely impacted by the reductions in defense spending, leading to reduced levels of research and development investment by industry;

(4) the foreign policy of the United States has included maintaining United States competitiveness and technology leadership in areas of strategic interest, such as aeronautics, but United States aeronautics has not been addressed in United States foreign policy with the same emphasis as United States international space endeavors;

(5) no effective means have been developed by which the National Aeronautics and Space Administration can accurately measure the contribution of its research toward achieving United States competitiveness and maintaining technological leadership; and

(6) maintaining experimental state-of-the-art facilities has been a key investment to retaining United States competitiveness and technological

leadership, and these facilities have been heavily utilized by United States industry in their research and development programs.

SEC. 402. AERONAUTICS POLICY OF THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.

It is the policy of the United States that—

(1) improving the competitive capability of the United States aeronautics industry shall be a fundamental goal of the aeronautical research and development programs of the National Aeronautics and Space Administration;

(2) the investment in aeronautics technology by the National Aeronautics and Space Administration shall be closely coordinated with United States industry;

(3) the establishment of industry-led, precompetitive consortia shall be encouraged to better prioritize and coordinate the industry requirements for advanced technologies and facilities;

(4) revitalizing national aeronautical facilities shall be a major element of Federal investment in aeronautical research and development; and

(5) industry and government cost-sharing for facilities construction and use shall be investigated

to achieve aeronautics research and technology goals within a constrained Federal budget.

SEC. 403. AMENDMENTS TO THE NATIONAL AERONAUTICS AND SPACE ACT OF 1958.

(a) TECHNICAL CORRECTION AMENDMENT.—(1) Section 214 of the National Aeronautics and Space Administration Authorization Act, Fiscal Year 1989 is amended by striking ''(c)'' both places it appears and inserting in lieu thereof ''(d)''.

(2) The amendment made by paragraph (1) shall be effective as of the date of enactment of the Act referred to in paragraph (1).

(b) OBJECTIVES.—Section 102(d) of the National Aeronautics and Space Act of 1958 (42 U.S.C. 2451(d)) is amended—

(1) by striking ''and'' at the end of paragraph (8);

(2) by striking the period at the end of paragraph (9) and inserting in lieu thereof a semicolon; and

(3) by adding at the end the following new paragraphs:

''(10) The economic growth, competitiveness, and productivity of the Nation through close coordination with industry in the conduct of innovative

aeronautics technology validation and technology transfer programs; and

''(11) The improvement of the safety, capacity, and efficiency of the United States air transportation system through close coordination among the agencies of the Federal Government.''.

SEC. 404. AERONAUTICAL BASIC RESEARCH INVESTMENT PLAN.

(a) PLAN.—The Administrator shall develop an aeronautical basic research investment plan which—

(1) describes the aeronautical basic research underway within the United States, including a review of the status of United States basic research in critical aeronautics disciplines including—

(A) aerodynamics;

(B) propulsion;

(C) materials and structures;

(D) controls, guidance, and human factors; and

(E) flight systems;

(2) establishes goals and objectives for United States aeronautical basic research to advance the critical disciplines required by United States industry for such research;

(3) identifies the priorities for aeronautical basic research required by industry to advance United States long-term competitiveness;

(4) describes the anticipated impact of aeronautical basic research on United States long-term competitiveness; and

(5) encourages the transfer of Government-developed technologies to the private sector to promote economic strength and competitiveness.

The Administrator shall annually update the plan, including a report on progress in achieving the goals and objectives identified pursuant to paragraph (2).

(b) INDEPENDENT EVALUATION.—The Administrator shall submit the plan developed under subsection (a), and all subsequent annual updates thereto, along with appropriate programmatic technical, schedule, and financial information, to the National Research Council of the National Academy of Sciences for an independent evaluation of such plan.

(c) TRANSMITTAL TO CONGRESS.—The Administrator shall, along with the first annual budget request of the President occurring more than 1 year after the date of enactment of this Act, transmit to the Congress the plan developed under subsection (a) and the results of the independent review conducted pursuant to subsection (b).

Subsequent annual updates to the plan and independent reviews thereof shall be transmitted to the Congress along with subsequent annual budget requests of the President.

SEC. 405. ROLE OF PROCUREMENT IN TECHNOLOGY INVESTMENT.

The Administrator, in carrying out aeronautical research and technology procurement, shall—

(1) promote the advancement of state-of-the-art research and technologies;

(2) assess and procure, where appropriate, commercially available technologies;

(3) where appropriate, use performance specifications in procuring technologies; and

(4) reduce the paperwork requirements associated with procurement.

SEC. 406. AERONAUTICAL TEST FACILITIES INITIATIVE.

(a) STRATEGY.—The President shall establish a strategy to coordinate with domestic aeronautical companies to establish the requirements of such companies and the Federal Government for aeronautical test facilities. The strategy shall—

(1) define the capabilities of aeronautical test facilities required by domestic aeronautical companies and the Federal Government over the next 30 years;

(2) assess the impact to United States competitiveness over the next 30 years resulting from the use of a combination of domestic and foreign aeronautical test facilities by domestic companies; and

(3) identify a funding method for procuring new aeronautical test facilities which includes cost sharing and risk sharing with domestic aeronautical companies, and which uses innovative financing schemes for the construction and operation of such new facilities.

(b) TRANSMITTAL TO CONGRESS.—The strategy established under subsection (a), along with anticipated budget requirements over the next 10 years associated with implementing the strategy, shall be transmitted to the Congress no later than 6 months after the date of enactment of this Act.

SEC. 407. JOINT AERONAUTICAL RESEARCH AND DEVELOPMENT PROGRAM.

(a) ESTABLISHMENT.—The Administrator and the heads of other appropriate Federal agencies shall jointly establish a program for the purpose of conducting research on aeronautical technologies that enhance United States competitiveness. Such program shall include—

(1) research on next-generation wind tunnel and advanced wind tunnel instrumentation technology;

(2) research on advanced engine materials, engine concepts, and testing of propulsion systems or components of the high-speed civil transport research program;

(3) advanced general aviation research;

(4) advanced rotorcraft research; and

(5) advanced hypersonic aeronautical research.

(b) CONTRACTS AND GRANTS.—Contracts and grants entered into under the program established under subsection (a) shall be administered using procedures developed jointly by the Administrator and the heads of the other Federal agencies involved in the program. These procedures should include an integrated acquisition policy for contract and grant requirements and for technical data rights that are not an impediment to joint programs among the National Aeronautics and Space Administration, the other Federal agencies involved in the program, and industry.

(c) ELEMENTS OF PROGRAM.—The program established under subsection (a) shall include—

(1) selected programs that jointly enhance public and private aeronautical technology development;

(2) an opportunity for private contractors to be involved in such technology research and development; and

(3) the transfer of Government-developed technologies to the private sector to promote economic strength and competitiveness.

SEC. 408. HYPERSONIC RESEARCH INITIATIVE.

The Administrator shall conduct a study, through an organization not a part of the National Aeronautics and Space Administration, of strategies that would optimize the Hypersonic System Technology Program by integrating with the rocket-based hypersonic fight test experiments the necessary development program which would achieve a single-stage hypersonic research vehicle capable of Mach 15 or greater, in the shortest possible time frame. The objective of a program developed under the strategies identified through such study would be the development of a single stage to orbit air breathing aircraft. The Administrator shall report the results of the study to Congress no later than 6 months after the date of enactment of this Act.

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