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110TH CONGRESS
1ST SESSION

H. R. 4837

To authorize the Space Shuttle to be flown from 2010 through 2015, and to authorize appropriations for the National Aeronautics and Space Administration for this purpose.

IN THE HOUSE OF REPRESENTATIVES

DECEMBER 19, 2007

Mr. WELDON of Florida (for himself and Mr. FEENEY) introduced the following bill; which was referred to the Committee on Science and Technology

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A BILL

To authorize the Space Shuttle to be flown from 2010 through 2015, and to authorize appropriations for the National Aeronautics and Space Administration for this purpose.

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 ''Spacefaring Priorities for America's Continued Exploration Act'' or the ''SPACE Act''.

SEC. 2. FINDINGS.

Congress finds the following:

(1) RUSSIA IS NOT A RELIABLE PARTNER.—(A) Unless Space Shuttle operations are extended beyond 2010, the United States will be heavily reliant on Russia to supply crew and possibly cargo transport services to the International Space Station during the gap period of 2010 through 2015. There will be no other way to fly our astronauts into space during this period.

(B) The United States should not increase its reliance on Russia to transport American astronauts into space, given the increasingly divergent views and posturing from Russia. Russia opposes the United States plan to base an antimissile radar system in the Czech Republic and interceptor missiles in Poland to deal with the threat posed by the Iranian nuclear weapons and missile programs. Russia also suspended its participation in the Conventional Forces in Europe (CFE) treaty, one of the most significant arms control agreements of the Cold War years. Additionally, Russia continues to arm some of America's most hostile adversaries, Iran and Venezuela. Despite United States objections, Russia sold billions of dollars worth of weapons to the regime of Hugo Chavez in 2006. Such meddling is a possible violation of the Monroe Doctrine and a throwback to

the Cold War era. Even more troublesome is the Russian history of weapons trading with Iran. Russia has supplied advanced conventional arms technology, missile technology, and nuclear technologies to this very anti-American regime.

(2) RUSSIA HAS ABUSED PAST NASA COOPERATION AGREEMENTS.—(A) In the late 1990s, Russia fell short in fulfilling its commitment to the International Space Station.

(B) The National Aeronautics and Space Administration (in this Act referred to as ''NASA'') was forced to transfer hundreds of millions of dollars to enable the Russians to complete the critical Space Station service module Zvezda, without which the International Space Station could not operate.

(C) Russia delayed completion of the Zvezda service module for several years. Under the International Space Station agreement, the Russian government had committed to fund as well as build the Zvezda service module. Subsequent transfers from the United States, in order to complete the module, reflect serious Russian mismanagement in the field of space.

(D) In 2000, while Russia was failing to meet its commitment to the International Space Station,

Russia was diverting financial and human resources away from fulfilling its International Space Station commitments in order to keep the Russian's Mir Space Station aloft.

(E) Russia's past shortcomings in fulfilling commitments to its international space partners should serve as a warning to the United States as we consider increased reliance on Russian space services in the future. It is not prudent for the United States to depend on Russia for access to space given our past experience with this relationship.

(3) AMERICAN SPACE SCIENCE SHOULD NOT BE DEPENDENT ON RUSSIAN SUPPORT.—(A) The United States has already invested billions of dollars in the International Space Station program since its inception.

(B) There is much research of great value being conducted in space, and on the International Space Station, that may yield tremendous gains. Research being conducted on the International Space Station may help scientists back on Earth develop medicines to treat diseases and help us better understand the Earth's climate. Many scientists believe that the microgravity environment of space will enable the

development of new drugs, vaccines, and other therapies. Equipment on the International Space Station will monitor stratospheric gases, and investigate ozone chemistry.

(4) THE UNITED STATES MUST HAVE ASSURED ACCESS TO SPACE.—(A) To ensure that the United States realizes the dividends from the considerable investment we have made in the International Space Station, we need to ensure continued access to space for our astronauts. However, NASA's plan for transport of crew to and from the International Space Station fails to provide necessary redundancies to provide assured access to space.

(B) NASA anticipates that the Russian Soyuz spacecraft will be the only vehicle for astronaut crew rotation to the International Space Station after 2010. From 2011 until the planned operation of Orion in 2015, NASA likely has no other option for transporting American astronauts to space other than on Russian vehicles.

(C) NASA has conceded that without the Space Shuttle, it will be unable to transport the Alpha Magnetic Spectrometer (AMS) to the International Space Station. Scientists involved in the development of the AMS acknowledge that it will enhance sci-

entific discoveries. While the AMS has cost over $1,500,000,000 to develop and build, NASA has stated that the remaining Space Shuttle manifest does not allow for transport of the AMS and that it will not be an option to retrofit another launch vehicle in order to fly it into space. Only by extending Space Shuttle operations beyond 2010 will NASA be able to transport the AMS to the International Space Station. As long as the AMS meets all required standards to verify its validity and justify its transport on the Space Shuttle, NASA should fulfill its obligation to the Department of Energy and our international partners.

(D) In addition, the Japanese Centrifuge Accommodation Module, which can only fly to the International Space Station on the Space Shuttle, will also be unable to reach the Space Station absent extending Space Shuttle operations.

(5) A BETTER APPROACH.—(A) Due to NASA's lack of a backup plan for reliance on the Russians for transport of American astronauts to space, the United States needs a better approach. The best approach is the Space Shuttle, a proven, domestic source of space transport for assured access to

space, including the International Space Station, for crew and cargo transport.

(B) With 2 Shuttle missions per year during the human spaceflight program flight gap between Shuttle and Orion, currently scheduled from 2010 through 2015, we can replace our need to rely on the Russians for crew rotation for the International Space Station.

(C) Savings from replacing Russian transport services to the International Space Station with the Space Shuttle would pay for a portion of the costs for flying 2 Space Shuttle missions per year.

(D) Only by closing the gap between 2010 and 2015, or until the Orion is operational, will our Nation be able to keep our Nation's highly skilled and critically important spaceworkers and engineers gainfully employed, and mitigate the loss of critical skills.

(E) By extending Space Shuttle operations, NASA may realize considerable savings by no longer having to pay retention bonuses to critical space workers. But retention bonuses would not be the only added costs associated with the end of Space Shuttle operations when critical skilled workers leave NASA or its contractors. Recruitment incentives for

new workers and contract cost increases could also be incurred by NASA since the majority of the Kennedy Space Center's workforce are contractors.

(F) The success of the Constellation program will depend on having the most skilled and experienced workforce possible. The workforce gap, as currently envisioned by NASA, will jeopardize this. NASA has acknowledged that thousands of critical space workers will lose their jobs in the transition from the Space Shuttle to the Constellation program. Continued operation of the Space Shuttle, but on a reduced flight requirement, while also integrating these workers into the Orion program, is the best way to retain many of these critical workers and skill sets.

(G) An August 2007 study by the Government Accountability Office, ''NASA Progress Made on Strategic Human Capital Management, but Future Program Challenges Remain,'' stated that ''the agency as a whole faces challenges in recruiting and retaining highly experienced senior-level engineers in certain specialties. NASA's principal workforce challenge will be faced in the transition to the next generation of human space flight systems.''.

(H) This Act authorizes for NASA additional funding under section 4 to fully restore the appropriation shortfalls in fiscal years 2007 and 2008 compared to the funds that were authorized for NASA. An additional $1,000,000,000 is authorized in section 4(b) to reimburse NASA for the costs incurred by NASA from the Space Shuttle return-to-flight efforts following the Space Shuttle Columbia disaster.

SEC. 3. PROHIBITION ON USE OF RUSSIAN SPACE SERVICES.

NASA shall not rely solely on the Russian government for astronaut transport or cargo resupply services. This prohibition does not apply to the current Soyuz emergency escape services for astronauts on the International Space Station.

SEC. 4. ADDITIONAL FUNDING FOR NASA.

(a) ADDITIONAL AUTHORIZATION FOR FISCAL YEAR 2007 SHORTFALL.—There are authorized to be appropriated to NASA $1,648,000,000, 41.6 percent of which shall be for Exploration Systems, and 28.7 percent of which shall be available for Space Operations.

(b) COLUMBIA RETURN-TO-FLIGHT.—There are authorized to be appropriated to NASA $1,000,000,000 for emergency funding to reimburse for Columbia return-to-

flight costs, of which the Exploration Systems and Space Operations Accounts shall receive funding at the rate proportional to the amounts used to pay the costs associated with the Space Shuttle return-to-flight efforts.

(c) ADDITIONAL AUTHORIZATION FOR FISCAL YEAR 2008 SHORTFALL.—There are authorized to be appropriated to NASA $1,064,000,000, 41.7 percent of which shall be for Exploration Systems.

(d) PRESERVATION OF FUNDING FOR PROGRAMS.—NASA shall not take any funding from its Exploration Systems account or the Constellation program in order to fund the continued operation of the Space Shuttle program as required in this Act.

SEC. 5. EXTENDING SPACE SHUTTLE OPERATIONS.

(a) USE OF SPACE SHUTTLE FOR ACCESS TO SPACE.—NASA shall fly at least 2 Space Shuttle missions per year for crew transport, instead of Russian crew and cargo services, for the period of 2010 through 2015, or until Orion is operational. There are authorized to be appropriated to NASA such sums as may be necessary, in addition to amounts otherwise authorized, to carry out this subsection, including for the production of more external tanks as may be needed.

(b) INSUFFICIENT FUNDING.—Except as provided under subsection (c), the requirements of this Act shall

have effect only to the extent that sufficient funding is appropriated, as authorized under subsection (a). Sufficient funding is defined as funds required to fully or partially comply with the requirements of this Act.

(c) REPORT TO CONGRESS.—NASA shall report to Congress not later than 90 days after the date of enactment of this Act on the specific costs and actions needed to extend the operation of the Space Shuttle in accordance with this Act.

(d) OPERATIONAL EFFICIENCIES.—As soon as possible, but no later than March 31, 2011, NASA shall investigate areas of reduced operations and enhanced cost savings and implement those that do not impinge the safe operation of the Space Shuttle program, including the following:

(1) The possible retirement of one Space Shuttle orbiter, leaving 2 to remain operational, in a manner that ensures the safe operation of the Space Shuttle program.

(2) Significantly reducing changes to the design of the Space Shuttle orbiters, in a manner that ensures the safe operation of the Space Shuttle program. This shall include changes to the Space Shuttle software systems.

(3) Significantly reducing Space Shuttle orbiter configuration operations and payload configuration operations, in a manner that ensures the safe operation of the Space Shuttle program.

(4) Maximizing the use of shared personnel between the continued operation of the Space Shuttle and Constellation and other NASA programs.

(e) FACILITIES.—If conflicts arise in NASA's efforts to allocate facilities, personnel, and other resources in order to fly the Space Shuttle as well as continue the development of Constellation, then NASA shall identify in a report to Congress in advance such conflicts, along with recommendations as to how they can be mitigated.

SEC. 6. SHUTTLE RECERTIFICATION.

Not later than 6 months after the date of enactment of this Act, NASA shall define achievable and attainable requirements for operation of the Space Shuttle program beyond 2010, as recommended by the Columbia Accident Investigation Board. NASA shall transmit these requirements to Congress in the form of a report. NASA shall then immediately begin the process of satisfying these requirements and shall satisfy all requirements no later than March 31, 2010.

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