

development program, use the personnel, capabilities, assets, and infrastructure of the Space Shuttle program in developing the Crew Exploration Vehicle, Crew Launch Vehicle, and a heavy-lift launch vehicle.

“(b) PLAN.—Not later than 180 days after the date of enactment of this Act [Dec. 30, 2005], the Administrator shall transmit to the Committee on Science [now Committee on Science, Space, and Technology] of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a plan describing how NASA [National Aeronautics and Space Administration] will proceed with its human space flight programs, which, at a minimum, shall describe—

“(1) how NASA will deploy personnel from, and use the facilities of, the Space Shuttle program to ensure that the Space Shuttle operates as safely as possible through its final flight and to ensure that personnel and facilities from the Space Shuttle program are used in NASA’s exploration programs in accordance with subsection (a);

“(2) the planned number of flights the Space Shuttle will make before its retirement;

“(3) the means, other than the Space Shuttle and the Crew Exploration Vehicle, including commercial vehicles, that may be used to ferry crew and cargo to and from the ISS [International Space Station];

“(4) the intended purpose of lunar missions and the architecture for those missions; and

“(5) the extent to which the Crew Exploration Vehicle will allow for the escape of the crew in an emergency.

“(c) PERSONNEL.—The Administrator shall consult with other appropriate Federal agencies and with NASA contractors and employees to develop a transition plan for any Federal and contractor personnel engaged in the Space Shuttle program who can no longer be retained because of the retirement of the Space Shuttle. The plan shall include actions to assist Federal and contractor personnel in taking advantage of training, retraining, job placement and relocation programs, and any other actions that NASA will take to assist the employees. The plan shall also describe how the Administrator will ensure that NASA and its contractors will have an appropriate complement of employees to allow for the safest possible use of the Space Shuttle through its final flight. The Administrator shall transmit the plan to the Committee on Science [now Committee on Science, Space, and Technology] of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than March 31, 2006.”

**§ 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 research and technology development program to enable human and robotic operations consistent with section 20302(b) of this title;

(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.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3430; Pub. L. 115–10, title IV, §415, Mar. 21, 2017, 131 Stat. 34.)

HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
70502 .....	42 U.S.C. 16763.	Pub. L. 109–155, title V, §503, Dec. 30, 2005, 119 Stat. 2929.

**Editorial Notes**

AMENDMENTS

2017—Par. (2). Pub. L. 115–10 amended par. (2) generally. Prior to amendment, par. (2) read as follows: “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;”.

**§ 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.

(Pub. L. 111–314, §3, Dec. 18, 2010, 124 Stat. 3430.)

HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
70503 .....	42 U.S.C. 16764.	Pub. L. 109–155, title V, §504, Dec. 30, 2005, 119 Stat. 2929.

**§ 70504. Stepping stone approach to exploration**

(a) IN GENERAL.—The Administration—

(1) may conduct missions to intermediate destinations in sustainable steps in accordance with section 20302(b) of this title, and on a timetable determined by the availability of funding, in order to achieve the objective of human exploration of Mars specified in section 202(b)(5) of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18312(b)(5)); and

(2) shall incorporate any such missions into the human exploration roadmap under section 432 of the National Aeronautics and Space Administration Transition Authorization Act of 2017.

(b) COST-EFFECTIVENESS.—In order to maximize the cost-effectiveness of the long-term space exploration and utilization activities of the United States, the Administrator shall take