eliminating the use of blood irradiation devices in the United States that rely on cesium chloride by December 31, 2027.

"(b) IMPLEMENTATION.—To meet the goal specified by subsection (a), the Administrator shall carry out the covered programs in a manner that—

 $``(1)\ \bar{i}s\ \bar{voluntary}\ for\ owners\ of\ blood\ irradiation\ devices;$

"(2) allows for the United States, subject to the review of the Administrator, to pay up to 50 percent of the per-device cost of replacing blood irradiation devices covered by the programs;

"(3) allows for the United States to pay up to 100 percent of the cost of removing and disposing of cesium sources retired from service by the programs; and

"(4) replaces such devices with x-ray irradiation devices or other devices approved by the Food and Drug Administration that provide significant threat reduction as compared to cesium chloride irradiators.

"(c) DURATION.—The Administrator shall carry out the covered programs until December 31, 2027.

"(d) REPORT.—Not later than 180 days after the date of the enactment of this Act [Aug. 13, 2018], the Administrator shall submit to the appropriate congressional committees a report on the covered programs, including—

"(1) identification of each cesium chloride blood irradiation device in the United States, including the number, general location, and user type;

"(2) a plan for achieving the goal established by subsection (a);

"(3) a methodology for prioritizing replacement of such devices that takes into account irradiator age and prior material security initiatives;

"(4) in consultation with the Nuclear Regulatory Commission and the Food and Drug Administration, a strategy identifying any legislative, regulatory, or other measures necessary to constrain the introduction of new cesium chloride blood irradiation devices;

"(5) identification of the annual funds required to meet the goal established by subsection (a); and "(6) a description of the disposal path for cesium

"(6) a description of the disposal path for cesium chloride sources under the covered programs.

"(e) ASSESSMENT.—The Administrator shall submit an assessment to the appropriate congressional committees by September 20, 2023, of the results of the actions on the covered programs under this section, including—

"(1) the number of replacement irradiators under the covered programs;

"(2) the life-cycle costs of the programs, including personnel training, maintenance, and replacement costs for new irradiation devices;

"(3) the cost-effectiveness of the covered programs; "(4) an analysis of the effectiveness of the new irradiation devices' technology; and

"(5) a forecast of whether the Administrator will meet the goal established in subsection (a).

(f) DEFINITIONS.—In this section:

(1) APPROPRIATE CONGRESSIONAL COMMITTEES.—The term 'appropriate congressional committees' means—

"(A) the Committee on Appropriations, the Committee on Armed Services, and the Committee on Energy and Commerce of the House of Representatives; and

"(B) the Committee on Appropriations, the Committee on Armed Services, the Committee on Energy and Natural Resources, and the Committee on Health, Education, Labor, and Pensions of the Senate.

"(2) COVERED PROGRAMS.—The term 'covered programs' means the following programs of the Office of Radiological Security of the National Nuclear Security Administration:

rity Administration: "(A) The Cesium Irradiator Replacement Program.

gram. ''(B) The Off-Site Source Recovery Program.''

"Congressional Defense Committees" Defined

Congressional defense committees has the meaning given that term in section 101(a)(16) of Title 10, Armed

Forces, see section 3 of Pub. L. 108-375, Oct. 28, 2004, 118 Stat. 1825. See note under section 101 of Title 10.

§2570. Silk Road Initiative

(a) Program authorized

(1) The Secretary of Energy may carry out a program, to be known as the Silk Road Initiative, to promote non-weapons-related employment opportunities for scientists, engineers, and technicians formerly engaged in activities to develop and produce weapons of mass destruction in Silk Road nations. The program should—

(A) incorporate best practices under the Initiatives for Proliferation Prevention program; and

(B) facilitate commercial partnerships between private entities in the United States and scientists, engineers, and technicians in the Silk Road nations.

(2) Before implementing the program with respect to multiple Silk Road nations, the Secretary of Energy shall carry out a pilot program with respect to one Silk Road nation selected by the Secretary. It is the sense of Congress that the Secretary should select the Republic of Georgia.

(b) Silk Road nations defined

In this section, the Silk Road nations are Armenia, Azerbaijan, the Republic of Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.

(c) Funding

Of the funds authorized to be appropriated to the Department of Energy for nonproliferation and international security for fiscal year 2005, up to \$10,000,000 may be used to carry out this section.

(Pub. L. 108-375, div. C, title XXXI, §3133, Oct. 28, 2004, 118 Stat. 2168.)

CODIFICATION

Section was enacted as part of the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005, and not as part of the Atomic Energy Defense Act which comprises this chapter.

§2571. Nuclear Nonproliferation Fellowships for scientists employed by United States and Russian Federation

(a) In general

(1) From amounts made available to carry out this section, the Administrator for Nuclear Security may carry out a program under which the Administrator awards, to scientists employed at nonproliferation research laboratories of the Russian Federation and the United States, international exchange fellowships, to be known as Nuclear Nonproliferation Fellowships, in the nuclear nonproliferation sciences.

(2) The purpose of the program shall be to provide opportunities for advancement in the nuclear nonproliferation sciences to scientists who, as demonstrated by their academic or professional achievements, show particular promise of making significant contributions in those sciences.

(3) A fellowship awarded to a scientist under the program shall be for collaborative study and training or advanced research at(A) a nonproliferation research laboratory of the Russian Federation, in the case of a scientist employed at a nonproliferation research laboratory of the United States; and

(B) a nonproliferation research laboratory of the United States, in the case of a scientist employed at a nonproliferation research laboratory of the Russian Federation.

(4) The duration of a fellowship under the program may not exceed two years, except that the Administrator may provide for a longer duration in an individual case to the extent warranted by extraordinary circumstances, as determined by the Administrator.

(5) In a calendar year, the Administrator may not award more than—

(A) one fellowship to a scientist employed at a nonproliferation research laboratory of the Russian Federation; and

(B) one fellowship to a scientist employed at a nonproliferation research laboratory of the United States.

(6) A fellowship under the program shall include— $\ensuremath{\mathsf{--}}$

(A) travel expenses; and

(B) any other expenses that the Administrator considers appropriate, such as room and board.

(b) Definitions

In this section:

(1) The term "nonproliferation research laboratory" means, with respect to a country, a national laboratory of that country at which research in the nuclear nonproliferation sciences is carried out.

(2) The term "nuclear nonproliferation sciences" means bodies of scientific knowledge relevant to developing or advancing the means to prevent or impede the proliferation of nuclear weaponry.

(3) The term "scientist" means an individual who has a degree from an institution of higher education in a science that has practical application in the nuclear nonproliferation sciences.

(c) Funding

Amounts available to the Department of Energy for defense nuclear nonproliferation activities shall be available for the fellowships authorized by subsection (a).

(Pub. L. 108-375, div. C, title XXXI, §3134, Oct. 28, 2004, 118 Stat. 2169.)

CODIFICATION

Section was enacted as part of the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005, and not as part of the Atomic Energy Defense Act which comprises this chapter.

PROGRAM ON SCIENTIFIC ENGAGEMENT FOR NONPROLIFERATION

Pub. L. 112–239, div. C, title XXXI, §3122, Jan. 2, 2013, 126 Stat. 2176, as amended by Pub. L. 113–66, div. C, title XXXI, §3125, Dec. 26, 2013, 127 Stat. 1063; Pub. L. 114–328, div. C, title XXXI, §3137(b), Dec. 23, 2016, 130 Stat. 2771, provided that:

"(a) PROGRAM REQUIRED.—

"(1) SCIENTIFIC ENGAGEMENT.—The Secretary of Energy, acting through the Administrator for Nuclear Security, shall carry out a program on scientific engagement in countries selected by the Secretary for purposes of the program to advance global nonproliferation and nuclear security efforts.

"(2) ELEMENTS.—The program under paragraph (1) shall include the following elements:

"(A) Training and capacity-building to strengthen nonproliferation and security best practices. "(B) Engagement of scientists of the United

"(B) Engagement of scientists of the United States with foreign counterparts to advance nonproliferation goals.

^{(;}(3) DISTINCT PROGRAM.—The program required by this subsection shall be a distinct program from the Global Initiatives for Proliferation Prevention program.

(b) LIMITATION.-

"(1) REPORT ON COMMENCEMENT OF PROGRAM.—Of the funds authorized to be appropriated by this Act [see Tables for classification] or otherwise made available for fiscal year 2013 or any fiscal year thereafter for the National Nuclear Security Administration, not more than 50 percent may be obligated or expended under the program under subsection (a) until the date on which the Administrator submits to the appropriate congressional committees a report setting forth the following:

"(A) For each country selected for the program as of the date of such report—

"(i) a proliferation threat assessment prepared by the Director of National Intelligence; and "(ii) metrics for evaluating the effectiveness of

"(ii) metrics for evaluating the effectiveness of the program.

"(B) Accounting standards for the conduct of the program approved by the Comptroller General of the United States.

"(2) FORM.—The report under paragraph (1) may be submitted in unclassified form and may include a classified annex.

(c) REPORTS ON MODIFICATION OF PROGRAM.— ((1) IN GENERAL.—Not later than 30 days before

"(1) IN GENERAL.—Not later than 30 days before making any modification in the program under subsection (a) (including selecting a new country for the program, ceasing the selection of a country for the program, or modifying an element of the program), the Administrator shall submit to the appropriate congressional committees a report on the modification.

"(2) NEW COUNTRY.—If the modification covered by a report under paragraph (1) consists of the selection for the program of a country not previously selected for the program, the report shall include, for each such country, the matters described in subsection (b)(1)(A).

(3) WAIVER.—The Administrator may waive the requirement under paragraph (1) to submit a report on a modification in the program under subsection (a) not later than 30 days before making the modification if the Administrator—

``(A) determines that the modification is urgent and necessary to the national security interests of the United States; and

"(B) not later than 30 days after making the modification, submits to the appropriate congressional committees—

"(i) the report on the modification required by paragraph (1); and

"(ii) a justification for exercising the waiver authority under this paragraph.

"(4) FORM.—Each report submitted under paragraph (1) or (3)(B) may be submitted in unclassified form and may include a classified annex. "(d) REPORT ON COORDINATION WITH OTHER U.S. NON-

"(d) REPORT ON COORDINATION WITH OTHER U.S. NON-PROLIFERATION PROGRAMS.—Not later than 180 days after the date of the enactment of this Act [Jan. 2, 2013], the Administrator shall submit to the appropriate congressional committees a report describing the manner in which the program under subsection (a) coordinates with and complements, but does not duplicate, other nonproliferation programs of the Federal Government.

"(e) TERMINATION.—The authority to carry out the program under subsection (a) shall expire on September 30, 2016.

"(f) APPROPRIATE CONGRESSIONAL COMMITTEES DE-FINED.—In this section, the term 'appropriate congressional committees' means the following:

"(1) The congressional defense committees [Committees on Armed Services and Appropriations of the Senate and the House of Representatives].

"(2) The Committee on Foreign Affairs of the House of Representatives and the Committee on Foreign Relations of the Senate."

§ 2572. International agreements on nuclear weapons data

The Secretary of Energy may, with the concurrence of the Secretary of State and in coordination with the Secretary of Defense, the Secretary of Homeland Security, and the Director of National Intelligence, enter into agreements with countries or international organizations to conduct data collection and analysis to determine accurately and in a timely manner the source of any components of, or fissile material used or attempted to be used in, a nuclear device or weapon.

(Pub. L. 107-314, div. D, title XLIII, §4307, as added Pub. L. 110-181, div. C, title XXXI, §3129(a)(1), Jan. 28, 2008, 122 Stat. 584.)

§ 2573. International agreements on information on radioactive materials

The Secretary of Energy may, with the concurrence of the Secretary of State and in coordination with the Secretary of Defense, the Secretary of Homeland Security, and the Director of National Intelligence, enter into agreements with countries or international organizations—

(1) to acquire for the materials information program of the Department of Energy validated information on the physical characteristics of radioactive material produced, used, or stored at various locations, in order to facilitate the ability to determine accurately and in a timely manner the source of any components of, or fissile material used or attempted to be used in, a nuclear device or weapon; and (2) to obtain access to information described

in paragraph (1) in the event of—

(A) a nuclear detonation; or

(B) the interdiction or discovery of a nuclear device or weapon or nuclear material.

(Pub. L. 107-314, div. D, title XLIII, §4308, as added Pub. L. 110-181, div. C, title XXXI, §3129(a)(1), Jan. 28, 2008, 122 Stat. 584.)

§2574. Enhancing nuclear forensics capabilities

(a) Research and development plan for nuclear forensics and attribution

(1) Research and development

The Secretary of Energy shall prepare and implement a research and development plan to improve nuclear forensics capabilities in the Department of Energy and at the national laboratories overseen by the Department of Energy. The plan shall focus on improving the technical capabilities required—

(A) to enable a robust and timely nuclear forensic response to a nuclear explosion or to the interdiction of nuclear material or a nuclear weapon anywhere in the world; and

(B) to develop an international database that can attribute nuclear material or a nuclear weapon to its source.

(2) Reports

(A) The Secretary of Energy shall submit to the congressional defense committees—

(i) not later than 6 months after October 14, 2008, a report on the contents of the research and development plan described in paragraph (1), and any legislative changes required to implement the plan; and

(ii) not later than 18 months after October 14, 2008, a report on the status of implementing the plan.

(B) The Secretary shall submit each report required by this subsection in unclassified form, but may include a classified annex with such report.

(b) Omitted

(c) Presidential report

(1) In general

Not later than 90 days after October 14, 2008, the President shall submit to the appropriate committees of Congress a report on the involvement of senior-level executive branch leadership in nuclear terrorism preparedness exercises that include nuclear forensics analysis.

(2) Appropriate committees of Congress

In this subsection, the term "appropriate committees of Congress" means—

(A) the Committee on Appropriations, the Committee on Armed Services, and the Committee on Homeland Security of the House of Representatives; and

(B) the Committee on Appropriations, the Committee on Armed Services, and the Committee on Homeland Security and Governmental Affairs of the Senate.

(Pub. L. 110-417, div. C, title XXXI, §3114, Oct. 14, 2008, 122 Stat. 4756.)

CODIFICATION

Section is comprised of section 3114 of Pub. L. 110-417. Subsec. (b) of section 3114 of Pub. L. 110-417 amended section 3129(b) of Pub. L. 110-181, div. C, title XXXI, Jan. 28, 2008, 122 Stat. 585.

Section was enacted as part of the Duncan Hunter National Defense Authorization Act for Fiscal Year 2009, and not as part of the Atomic Energy Defense Act which comprises this chapter.

"Congressional Defense Committees" Defined

Congressional defense committees has the meaning given that term in section 101(a)(16) of Title 10, Armed Forces, see section 3 of Pub. L. 110-417, Oct. 14, 2008, 122 Stat. 4372. See note under section 101 of Title 10.

§ 2575. Defense nuclear nonproliferation management plan

(a) Plan required

The Administrator shall develop and annually update a five-year management plan for activities associated with the defense nuclear nonproliferation programs of the Administration to prevent and counter the proliferation of materials, technology, equipment, and expertise related to nuclear and radiological weapons in order to minimize and address the risk of nuclear terrorism and the proliferation of such weapons.