

109<sup>TH</sup> CONGRESS  
1<sup>ST</sup> SESSION

# H. R. 2689

To increase the security of radiation sources, and for other purposes.

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IN THE HOUSE OF REPRESENTATIVES

MAY 26, 2005

Mr. MARKEY introduced the following bill; which was referred to the  
Committee on Energy and Commerce

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## A BILL

To increase the security of radiation sources, and for other  
purposes.

1       *Be it enacted by the Senate and House of Representa-*  
2       *tives of the United States of America in Congress assembled,*

3       **SECTION 1. SHORT TITLE.**

4       This Act may be cited as the “Dirty Bomb Prevention  
5 Act”.

6       **SEC. 2. RADIATION SOURCE PROTECTION.**

7       (a) AMENDMENT.—Chapter 14 of the Atomic Energy  
8 Act of 1954 (42 U.S.C. 2201 et seq.) is amended by add-  
9 ing at the end the following new section:

10       “SEC.       170C.       RADIATION       SOURCE  
11 PROTECTION. —

1       “a. NUCLEAR REGULATORY COMMISSION AP-  
2 PROVAL.—Not later than 180 days after the date of enact-  
3 ment of this section, the Nuclear Regulatory Commission  
4 shall issue regulations prohibiting a person from—

5           “(1) exporting a radiation source unless the  
6 Nuclear Regulatory Commission has specifically  
7 found, with respect to that export, that—

8           “(A) the appropriate regulatory agency in  
9 the recipient country—

10           “(i) has been informed of the pro-  
11 posed export; and

12           “(ii) has determined that the proposed  
13 export will be made in accordance with the  
14 recipient nation’s laws and regulations;

15           “(B) the recipient nation has the appro-  
16 priate technical and administrative capability,  
17 resources, and regulatory structure to ensure  
18 that the radiation source will be managed in a  
19 safe and secure manner; and

20           “(C) the person exporting the radiation  
21 source has made arrangements to retake pos-  
22 session of it when the recipient is no longer  
23 using it;

1           “(2) importing a radiation source unless the  
2       Nuclear Regulatory Commission has specifically  
3       found, with respect to that import, that—

4           “(A) the proposed recipient is authorized  
5       under law to receive the shipment; and

6           “(B) the shipment will be made in accord-  
7       ance with all applicable Federal and State laws  
8       and regulations; and

9           “(3) selling or otherwise transferring ownership  
10      of a radiation source unless the Nuclear Regulatory  
11      Commission has specifically found, with respect to  
12      that sale or transfer, that—

13           “(A) the proposed recipient is authorized  
14      under law to receive the radiation source; and

15           “(B) the transfer will be made in accord-  
16      ance with all applicable Federal and State laws  
17      and regulations.

18      “b. TRACKING SYSTEM.—Not later than 180 days  
19      after the date of enactment of this section, the Nuclear  
20      Regulatory Commission shall issue regulations estab-  
21      lishing a mandatory tracking system for all radiation  
22      sources in the United States. Such system shall—

23           “(1) enable the identification of each radiation  
24      source by serial number or other unique identifier;

1           “(2) require reporting within 24 hours of any  
2           change of geographic location or ownership of a ra-  
3           diation source, including any change of geographic  
4           location that occurs while the radiation source is  
5           being transported;

6           “(3) require reporting within 24 hours of any  
7           loss of control of or accountability for a radiation  
8           source; and

9           “(4) provide for reporting through a secure  
10          Internet connection.

11          “c. PENALTY.—Each violation of regulations issued  
12          under subsection a. or b. shall be punishable by a civil  
13          penalty of up to \$1,000,000.

14          “d. NATIONAL ACADEMY OF SCIENCES STUDY.—Not  
15          later than 60 days after the date of enactment of this sec-  
16          tion, the Nuclear Regulatory Commission shall enter into  
17          an arrangement with the National Academy of Sciences  
18          for a study of industrial, research, and commercial uses  
19          for radiation sources. The study shall review the current  
20          uses for radiation sources, identifying industrial or other  
21          processes that utilize radiation sources that could be re-  
22          placed with economically and technically equivalent (or im-  
23          proved) processes that do not require the use of radiation  
24          sources, or that can be used with radiation sources that  
25          would pose a lesser risk to public health and safety in the

1 event of an accident or attack involving the radiation  
2 source. The Nuclear Regulatory Commission shall trans-  
3 mit the results of the study to Congress not later than  
4 24 months after the date of enactment of this section.

5 “e. COMMISSION ACTIONS.—Not later than 60 days  
6 after receipt by Congress and the President of a report  
7 required under subsection f.(3)(B), the Nuclear Regu-  
8 latory Commission, in accordance with the recommenda-  
9 tions of the task force, shall take any appropriate actions,  
10 including commencing revision of its system for licensing  
11 radiation sources, and shall take necessary steps to ensure  
12 that States that have entered into an agreement under  
13 section 274 b. establish compatible programs in a timely  
14 manner.

15 “f. TASK FORCE ON RADIATION SOURCE PROTEC-  
16 TION AND SECURITY.—

17 “(1) ESTABLISHMENT.—There is hereby estab-  
18 lished a task force on radiation source protection  
19 and security.

20 “(2) MEMBERSHIP.—The task force shall be  
21 headed by the Chairman of the Nuclear Regulatory  
22 Commission or the Chairman’s designee. Its mem-  
23 bers shall be the following:

24 “(A) The Secretary of Homeland Security  
25 or the Secretary’s designee.

1           “(B) The Secretary of Defense or the Sec-  
2           retary’s designee.

3           “(C) The Secretary of Energy or the Sec-  
4           retary’s designee.

5           “(D) The Secretary of Transportation or  
6           the Secretary’s designee.

7           “(E) The Attorney General or the Attor-  
8           ney General’s designee.

9           “(F) The Secretary of State or the Sec-  
10          retary’s designee.

11          “(G) The Director of National Intelligence  
12          or the Director’s designee.

13          “(H) The Director of the Central Intel-  
14          ligence Agency or the Director’s designee.

15          “(I) The Director of the Federal Emer-  
16          gency Management Agency or the Director’s  
17          designee.

18          “(J) The Director of the Federal Bureau  
19          of Investigation or the Director’s designee.

20          “(3) DUTIES.—

21                 “(A) IN GENERAL.—The task force, in  
22                 consultation with other State, Federal, and  
23                 local agencies and appropriate members of the  
24                 public, after public notice and an opportunity  
25                 for public comment, shall evaluate and provide

1 recommendations to ensure the security of radi-  
2 ation sources from potential terrorist threats,  
3 including acts of sabotage, theft, or use of such  
4 radiation sources in a radiological dispersal de-  
5 vice.

6 “(B) RECOMMENDATIONS TO CONGRESS  
7 AND THE PRESIDENT.—Not later than 1 year  
8 after the date of enactment of this section, and  
9 not less than once every 3 years thereafter, the  
10 task force shall submit a report to Congress  
11 and to the President, in unclassified form with  
12 a classified annex if necessary, providing rec-  
13 ommendations, including recommendations for  
14 appropriate regulatory and legislative changes,  
15 for—

16 “(i) a list of additional radiation  
17 sources that should be required to be se-  
18 cured under this Act, based on their poten-  
19 tial attractiveness to terrorists and the ex-  
20 tent of the threat to public health and  
21 safety, taking into account radiation source  
22 radioactivity levels, dispersability, chemical  
23 and material form, and, for radiopharma-  
24 ceuticals, the availability of these sub-  
25 stances to physicians and patients whose

1 medical treatments relies on them, and  
2 other factors as appropriate;

3 “(ii) the establishment of or modifica-  
4 tions to a national system for recovery of  
5 radiation sources that have been lost or  
6 stolen;

7 “(iii) the storage of radiation sources  
8 not currently in use in a safe and secure  
9 manner;

10 “(iv) modification to the national  
11 tracking system for radiation sources;

12 “(v) the establishment of or modifica-  
13 tions to a national system to impose fees  
14 to be collected from users of radiation  
15 sources, to be refunded when the radiation  
16 sources are properly disposed of, or any  
17 other method to ensure the proper disposal  
18 of radiation sources;

19 “(vi) any modifications to export con-  
20 trols on radiation sources necessary to en-  
21 sure that foreign recipients of radiation  
22 sources are able and willing to control  
23 United States-origin radiation sources in  
24 the same manner as United States recipi-  
25 ents;

1           “(vii) whether alternative technologies  
2           are available that can perform some or all  
3           of the functions currently performed by de-  
4           vices or processes that employ radiation  
5           sources, and if so, the establishment of ap-  
6           propriate regulations and incentives for the  
7           replacement of such devices or processes  
8           with alternative technologies in order to re-  
9           duce the number of radiation sources in  
10          the United States, or with radiation  
11          sources that would pose a lesser risk to  
12          public health and safety in the event of an  
13          accident or attack involving the radiation  
14          source; and

15          “(viii) the creation of or modifications  
16          to procedures for improving the security of  
17          radiation sources in use, transportation,  
18          and storage, which may include periodic  
19          Nuclear Regulatory Commission audits or  
20          inspections to ensure that radiation  
21          sources are properly secured and can be  
22          fully accounted for, Nuclear Regulatory  
23          Commission evaluation of security meas-  
24          ures, increased fines for violations of Nu-  
25          clear Regulatory Commission regulations

1 relating to security and safety measures  
2 applicable to licensees who possess radi-  
3 ation sources, criminal and security back-  
4 ground checks for certain individuals with  
5 access to radiation sources (including indi-  
6 viduals involved with transporting radi-  
7 ation sources), assurances of the physical  
8 security of facilities that contain radiation  
9 sources (including facilities used to tempo-  
10 rarily store radiation sources being trans-  
11 ported), requirements and a mechanism for  
12 effective and timely exchanges of informa-  
13 tion regarding the results of such criminal  
14 and security background checks between  
15 the Nuclear Regulatory Commission and  
16 States with which the Commission has en-  
17 tered into an agreement under section 274  
18 b., and the screening of shipments to facili-  
19 ties particularly at risk for sabotage of ra-  
20 diation sources to ensure that they do not  
21 contain explosives.

22 “g. DEFINITION.—For purposes of this section, the  
23 term ‘radiation source’ means any sealed or unsealed  
24 source whose activity levels are within Category 1, Cat-  
25 egory 2, or Category 3 as defined under the Code of Con-

1 duct on the Safety and Security of Radioactive Sources,  
 2 approved by the Board of Governors of the International  
 3 Atomic Energy Agency on September 8, 2003.”.

4 (b) TABLE OF SECTIONS AMENDMENT.—The table of  
 5 sections of the Atomic Energy Act of 1954 is amended  
 6 by adding at the end of the items relating to chapter 14  
 7 the following new items:

“Sec. 170B. Uranium supply.

“Sec. 170C. Radiation source protection.”.

8 **SEC. 3. TREATMENT OF ACCELERATOR-PRODUCED AND**  
 9 **OTHER RADIOACTIVE MATERIAL AS BY-**  
 10 **PRODUCT MATERIAL.**

11 (a) DEFINITION OF BYPRODUCT MATERIAL.—Sec-  
 12 tion 11 e. of the Atomic Energy Act of 1954 (42 U.S.C.  
 13 2014(e)) is amended—

14 (1) by striking “means (1) any radioactive” and  
 15 inserting “means—

16 “(1) any radioactive”;

17 (2) by striking “material, and (2) the tailings”  
 18 and inserting “material;

19 “(2) the tailings”; and

20 (3) by striking “content.” and inserting “con-  
 21 tent;

22 “(3)(A) any discrete source of radium that is  
 23 produced, extracted, or converted after extraction,  
 24 before, on, or after the date of enactment of this

1 paragraph for use in commercial, medical, or re-  
2 search activity; or

3 “(B) any material that—

4 “(i) has been made radioactive by use of a  
5 particle accelerator; and

6 “(ii) is produced, extracted, or converted  
7 after extraction, before, on, or after the date of  
8 enactment of this paragraph for use in commer-  
9 cial, medical, or research activity; and

10 “(4) any discrete source of naturally occurring  
11 radioactive material, other than source material,  
12 that—

13 “(A) has been removed from the natural  
14 environment and has been concentrated to lev-  
15 els greater than that found in the natural envi-  
16 ronment due to human activities; and

17 “(B) before, on, or after the date of enact-  
18 ment of this paragraph, is extracted or con-  
19 verted after extraction for use in commercial,  
20 medical, or research activity.”.

21 (b) AGREEMENTS.—Section 274 b. of the Atomic En-  
22 ergy Act of 1954 (42 U.S.C. 2021(b)) is amended—

23 (1) by amending paragraph (1) to read as fol-  
24 lows:

1           “(1) byproduct materials (as defined in section  
2 11 e.);”;

3           (2) by striking paragraph (2); and

4           (3) by redesignating paragraphs (3) and (4) as  
5 paragraphs (2) and (3), respectively.

6           (c) REGULATIONS.—

7           (1) IN GENERAL.—Not later than 1 year after  
8 the date of enactment of this Act, the Nuclear Regu-  
9 latory Commission, after consultation with States  
10 and other stakeholders, shall promulgate final regu-  
11 lations as the Commission considers necessary to im-  
12 plement this Act and the amendments made by this  
13 Act. Such regulations shall include a definition of  
14 the term “discrete” for purposes of paragraphs (3)  
15 and (4) of section 11 e. of the Atomic Energy Act  
16 of 1954 (as added by subsection (a)) that is de-  
17 signed to ensure that byproduct material is con-  
18 trolled in a manner consistent with other materials  
19 that pose the same threat to public health and safety  
20 and the common defense and security.

21           (2) COOPERATION.—The Commission shall co-  
22 operate with the States in formulating the regula-  
23 tions under paragraph (1), and to the extent prac-  
24 ticable shall use existing State consensus standards.

1           (3) TRANSITION.—To ensure an orderly transi-  
2           tion of regulatory authority with respect to byprod-  
3           uct material as defined in paragraphs (3) and (4) of  
4           section 11 e. of the Atomic Energy Act of 1954 (as  
5           added by subsection (a)), the regulations promul-  
6           gated under paragraph (1) shall include a transition  
7           plan, developed in coordination with States, for—

8                   (A) States that have not, before such plan  
9                   is issued, entered into an agreement with the  
10                  Commission under section 274 b. of the Atomic  
11                  Energy Act of 1954 (42 U.S.C. 2021(b)); and

12                  (B) States that have entered into such an  
13                  agreement with the Commission, including, in  
14                  the case of a State that has entered into such  
15                  an agreement and has certified that it has an  
16                  existing State program for licensing of the by-  
17                  product material defined in paragraphs (3) and  
18                  (4) of section 11 e. of the Atomic Energy Act  
19                  of 1954 (as added by subsection (a)) that is  
20                  adequate to protect public health and safety,  
21                  provision for assumption by the State of regu-  
22                  latory responsibility for such byproduct material  
23                  through an administrative process that—

24                          (i) provides interim provisional rec-  
25                          ognition of an existing State program for

1           licensing the byproduct material until  
2           adoption of an amended agreement under  
3           section 274 b.; and

4                   (ii) requires that the byproduct mate-  
5           rial is included in the periodic reviews of  
6           the State programs for adequacy and com-  
7           patibility required under section 274 j.(1).

8           (4)    AVAILABILITY    OF    RADIOPHARMA-  
9    CEUTICALS.—In its promulgation of final rules  
10   under paragraph (1), the Commission shall consider  
11   the impact on the availability of radiopharma-  
12   ceuticals to the physicians and patients whose med-  
13   ical treatment relies on them.

14   (d) WASTE DISPOSAL.—

15           (1) IN GENERAL.—Section 81 of the Atomic  
16   Energy Act of 1954 (42 U.S.C. 2111) is amended  
17   by adding at the end the following: “Byproduct ma-  
18   terial may only be transferred to and disposed of in  
19   a disposal facility licensed by the Commission, if the  
20   disposal facility meets the licensing requirements of  
21   the Commission and is adequate to protect public  
22   health and safety, or a disposal facility licensed by  
23   a State that has entered into an agreement with the  
24   Commission under section 274 b., if the disposal fa-  
25   cility meets requirements of the State that are com-



1 reacquire nuclear fuel described in paragraph  
2 (1) for disposal, giving highest priority to nu-  
3 clear fuel that is—

4 (i) in a location that is not secure; or

5 (ii) in a country that does not have  
6 sufficient resources to either properly dis-  
7 pose of the nuclear fuel or return the nu-  
8 clear fuel to the United States for disposal.

9 (B) AUTHORIZATION OF APPROPRIA-  
10 TIONS.—There are authorized to be appro-  
11 priated to the Secretary of Energy \$50,000,000  
12 for each of the fiscal years 2006 through 2010  
13 for carrying out subparagraph (A).

14 (b) RADIATION SOURCES AND SEALED SOURCES OF  
15 PLUTONIUM.—

16 (1) REPORT.—Not later than 6 months after  
17 the date of enactment of this Act, the Secretary of  
18 Energy shall transmit to Congress a report account-  
19 ing for the location and status of all radiation  
20 sources (as defined in section 170C(g) of the Atomic  
21 Energy Act of 1954, as added by section 1 of this  
22 Act) and sealed sources of plutonium weighing more  
23 than 1 gram that have been exported by the Federal  
24 Government.

25 (2) REACQUISITION.—

1           (A) IN GENERAL.—The Secretary of En-  
2           ergy shall, to the maximum extent practicable,  
3           reacquire radiation sources and sealed sources  
4           of plutonium described in paragraph (1) for dis-  
5           posal that are—

6                   (i) in a location that is not secure; or

7                   (ii) in a country that does not have  
8           sufficient resources to either properly dis-  
9           pose of the radiation sources and sealed  
10          sources of plutonium or return the radi-  
11          ation sources and sealed sources of pluto-  
12          nium to the United States for disposal.

13          (B) AUTHORIZATION OF APPROPRIA-  
14          TIONS.—There are authorized to be appro-  
15          priated to the Secretary of Energy \$30,000,000  
16          for each of the fiscal years 2006 through 2010  
17          for carrying out subparagraph (A).

○