

110TH CONGRESS  
2D SESSION

# H. R. 5929

To improve the Nation's nuclear forensics capability to help deter and respond to nuclear terrorism.

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## IN THE HOUSE OF REPRESENTATIVES

APRIL 30, 2008

Mr. FOSTER introduced the following bill; which was referred to the Committee on Science and Technology, and in addition to the Committees on Armed Services, Foreign Affairs, Homeland Security, and Energy and Commerce, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

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## A BILL

To improve the Nation's nuclear forensics capability to help deter and respond to nuclear terrorism.

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 “Nuclear Terrorism De-  
5 terrence and Detection Act”.

6 **SEC. 2. FINDINGS.**

7 Congress finds the following:

1           (1) Combating the threat of a terrorist deto-  
2 nating a nuclear device on American soil is a critical  
3 security challenge.

4           (2) Nuclear forensics contributes to the Na-  
5 tion's ability to deter and respond to nuclear ter-  
6 rorism through technical analysis of nuclear mate-  
7 rials intercepted intact or retrieved from post-explo-  
8 sion debris.

9           (3) Nuclear forensics, when combined with law  
10 enforcement and intelligence data, contributes to at-  
11 tribution of the nuclear material or nuclear device to  
12 its source.

13           (4) The Nation's nuclear forensics capability  
14 can be improved, as identified in a report from the  
15 American Physical Society and American Association  
16 for the Advancement of Science, with regard to the  
17 following:

18           (A) Workforce: The training of skilled per-  
19 sonnel needs to be accelerated. The Nation is  
20 understaffed in nuclear forensics, with just 35  
21 to 50 experts at United States national labora-  
22 tories and more than half of them likely to re-  
23 tire in the next 10 to 15 years.

24           (B) Equipment: Most of the Nation's field  
25 and laboratory equipment used in nuclear

1 forensics analysis dates to the Cold War. A pro-  
2 gram should be undertaken to develop and  
3 manufacture advanced, automated field-equip-  
4 ment that allows for more rapid and accurate  
5 radiation analysis.

6 (C) International Databases: Nuclear ma-  
7 terial can have a unique signature depending on  
8 its source reactor or fuel facility. A shared and  
9 accessible international database of nuclear  
10 samples can help to more quickly match debris  
11 or an intercepted nuclear device with its origi-  
12 nal source.

13 (D) Independent Evaluation Group: Given  
14 the intelligence community's failings in the as-  
15 sessment of weapons of mass destruction in  
16 Iraq, there may be international skepticism re-  
17 garding any nuclear forensics investigation the  
18 United States might perform. A group of recog-  
19 nized experts not associated with the federal in-  
20 vestigation would provide independent valida-  
21 tion of the forensics analysis.

22 (E) Exercises: Nuclear forensics investiga-  
23 tions take time and the results may not be im-  
24 mediately conclusive. Through realistic drills,  
25 senior leadership can become aware of the

1 strengths and limitations of the nation's nuclear  
2 forensics capability and appropriately incor-  
3 porate the capability into decision making.

4 **SEC. 3. SENSE OF CONGRESS ON NNSA FELLOWSHIP PRO-**  
5 **GRAM FOR GRADUATE STUDENTS IN THE**  
6 **FIELD OF NUCLEAR CHEMISTRY.**

7 It is the sense of Congress that—

8 (1) the Administrator for Nuclear Security  
9 should establish a fellowship program for graduate  
10 students in the field of nuclear chemistry, which  
11 should—

12 (A) support no fewer than 6 Ph.D.s per  
13 year; and

14 (B) require graduate students to spend two  
15 summers in a national laboratory over the  
16 course of the program; and

17 (2) the fellowship program should receive fund-  
18 ing in an amount not less than—

19 (A) \$1,000,000 for fiscal year 2009;

20 (B) \$2,000,000 for fiscal year 2010;

21 (C) \$3,000,000 for fiscal year 2011;

22 (D) \$4,000,000 for fiscal year 2012; and

23 (E) \$5,000,000 for fiscal year 2013.

1 **SEC. 4. SENSE OF CONGRESS ON NNSA RESEARCH AND DE-**  
2 **VELOPMENT FOR NUCLEAR FORENSICS**  
3 **FIELD RADIATION-MEASUREMENT EQUIP-**  
4 **MENT.**

5 It is the sense of Congress that—

6 (1) the Administrator for Nuclear Security  
7 should carry out research and development with a  
8 targeted goal of improving the speed and accuracy  
9 of nuclear forensics radiation-measurement equip-  
10 ment; and

11 (2) the research and development should receive  
12 funding in an amount not less than \$5,000,000 for  
13 each of fiscal years 2009 through 2013.

14 **SEC. 5. ADDITIONAL INFORMATION TO BE INCLUDED IN**  
15 **REPORT ON NUCLEAR FORENSICS CAPABILI-**  
16 **TIES.**

17 Section 3129(b) of the National Defense Authoriza-  
18 tion Act for Fiscal Year 2008 (Public Law 110–181; 122  
19 Stat. 585) is amended—

20 (1) in paragraph (2) by striking “and” at the  
21 end;

22 (2) in paragraph (3) by striking the period at  
23 the end and inserting “; and”; and

24 (3) by adding at the end the following:

25 “(4) any legislative, regulatory, or treaty ac-  
26 tions necessary to facilitate international cooperation

1 in enhancement of international nuclear-material  
2 databases and the linking of those databases to en-  
3 able prompt data access.”.

4 **SEC. 6. NUCLEAR FORENSICS ADVISORY PANEL.**

5 (a) ESTABLISHMENT.—The Secretary of Defense, the  
6 Secretary of Energy, and the Secretary of Homeland Se-  
7 curity shall establish a joint independent Nuclear  
8 Forensics Advisory Panel of recognized experts not di-  
9 rectly associated with the Federal laboratories. The func-  
10 tion of the panel shall be to provide independent validation  
11 of any Federal nuclear forensics analysis.

12 (b) REPORT.—Not later than 180 days after the date  
13 of the enactment of this Act, the Secretaries referred to  
14 in subsection (a) shall submit a report on the structure  
15 and membership of the panel required by subsection (a).  
16 The report shall be submitted to—

17 (1) the Committee on Appropriations, Com-  
18 mittee on Armed Services, and Committee on Home-  
19 land Security of the House of Representatives; and

20 (2) the Committee on Appropriations, Com-  
21 mittee on Armed Services, and Committee on Home-  
22 land Security and Government Affairs of the Senate.

1 **SEC. 7. PRESIDENTIAL REPORT ON INVOLVEMENT OF CABI-**  
2 **NET-LEVEL LEADERSHIP IN CERTAIN EXER-**  
3 **CISES THAT INCLUDE NUCLEAR FORENSICS**  
4 **ANALYSIS.**

5 Not later than 90 days after the date of the enact-  
6 ment of this Act, the President shall submit a report on  
7 the involvement of Cabinet-level leadership in planned nu-  
8 clear terrorism preparedness exercises that have nuclear  
9 forensics analysis as a component of the exercise. The re-  
10 port shall be submitted to—

11 (1) the Committee on Appropriations, Com-  
12 mittee on Armed Services, and Committee on Home-  
13 land Security of the House of Representatives; and

14 (2) the Committee on Appropriations, Com-  
15 mittee on Armed Services, and Committee on Home-  
16 land Security and Government Affairs of the Senate.

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